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Impact on Retention for Students Participating in Supplemental Instruction at a Community College

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
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Walden University
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Professional Administrative Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Title III Strengthening Institutions Program is a supplemental grant that was designed to help eligible higher education institutions improve and strengthen academic quality, institutional management, and fiscal stability of eligible institutions. A community college in the Midsouth region was the focus of this quantitative study. Graduation and retention rates have steadily declined, and there are significant achievement gaps in terms of ethnicity and race, program completion, and failure rates in high-enrolled courses among first-year students. Using the retention model, this study involved examining the impact on retention for students participating in supplemental instruction upon entering college during their freshman year. The purpose of this quantitative case study was to determine the impact on retention for first-year students participating in supplemental instruction upon entering college up to their sophomore year. This study involved evaluating the results of those first-year students who utilized SI in conjunction with preexisting data of other students at the college during an academic calendar year. Data were collected from three sources: a quantitative five-point Likert scale survey via SurveyMonkey, public data from the college, and campus archived and current student data. A survey link was emailed to two SI leaders to distribute via email to 30 to 40 of their students enrolled in two subject areas: English and math. The results of this study showed that the SI program has been an effective tool and has positively impacted student retention at the college in spite of the enrollment and retention rates. These findings will positively impact social change by providing avenues for students to become public leaders and officials to impact change within their communities.

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Dedication

This is dedicated to my loving mother, who has always stated that she wanted to see me complete this degree and participate in the ceremony so she would be able to attend once more. I would also like to dedicate this to my one and only son, Assistant Professor Anthony A. Larry, II. You have supported me throughout this entire process, and I love and appreciate you. You have accomplished so much in such a short time. Although it was not always easy, you managed to come out victorious every time. I am so proud of you, and it is because of you that I was determined to complete this degree. You will always be my blessing and keep reaching for higher heights and let nothing stop you from moving forward with your life.

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I have learned so much along this journey, and several people supported me along the way. The first person I would like to acknowledge is my committee chair and professor, Dr. Karel Kurst-Swanger for the leadership and guidance you have provided me along the way and up to the completion of my study. Thank you, Dr. Kristin Dailey for your encouraging words and for accepting the invitation to serve as a member of my committee and professor. The next person I would like to acknowledge is Dr. Burnett Joiner whom I have known for over 20 years. Thank you for taking the time to provide your guidance, expertise, and the encouragement that I needed and at the time when I needed it the most.

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Section 1: Introduction to the Problem

Colleges and universities are creating strategies to increase retention once students are enrolled in their academic programs. The organization is a small comprehensive multicultural public open-access college that serves a city's diverse population and the surrounding Midsouth region which has two main campuses and five centers. I discussed in Section 1 the problem that is currently facing the community college among first-year students where retention rates are too low, especially during the COVID-19 pandemic. I also addressed gaps in gatekeeper courses. As retention rates have declined, students are also taking longer to complete their programs due to struggles involving high-enrollment and high-failure rate gateway courses. This low retention rate is caused by significant gaps and academic barriers and high failure rates in high-enrollment courses.

This decline has increased the demand for accountability in higher education, and retention of students has become significant for administrators. This quantitative case study involved exploring the impact on retention for students participating in supplemental instruction (SI) upon entering college from their freshman to sophomore year. The study consisted of data that were collected from three types of sources: a five-point Likert scale survey via SurveyMonkey, public data from the college's website, and campus archived and current student data. This provided insights regarding the impact of the SI program on retention rates. Findings of this study provided the organization with information to improve the student retention rate at the college. Results of this study

might bring about social change by fostering an avenue for students to become public leaders and officials to impact positive social change within their communities.

Problem Statement

The problem currently facing this college and its students is that retention rates are low, especially during the COVID-19 pandemic. Since 2016, enrollment and retention rates have declined by 60%, although they remain the second highest enrolled college in the state. This low retention rate is caused by significant gaps and academic barriers existing in high-enrolled and high-failure gatekeeper courses. A factor contributing to the decrease in student retention is that many first-year students are first-generation. Among those students, many enter college for the first time with low ACT scores, lack of income, and trouble adjusting to college life. These variables lead to high failure rates in high-enrollment gateway courses, resulting in a low GPA, poor grades (D, F, W), and lack of classes that are available to fit students' schedules.

I proposed to do this study at a small community college located in the Midsouth region with two main campuses and other centers that totaled over 7,000 students, and objectives of this study were relevant based on factors that impact student retention. The college focuses on improving retention rates at the college and is committed to providing necessary support for students to become successful and overcome challenges involving gateway courses. Ways were provided to engage students in cooperative or collaborative teaching and learning strategies such as SI.

Embedding SI within weekly learning leads to group and individual assistance when needed, and SI students remained connected to the learning environment to be successful. SI has been used successfully in academic settings to limit attrition in challenging programs, especially among females (Priem, 2019). If students attend SI sessions, their grades are likely to increase, and they are consequently more likely to persist (Skoglund et al., 2018). While SI session activities can improve student learning and grades, peer influence in these activities also plays an important role in terms of persistence (Skoglund et al., 2018, p. 117).

This project may hold significance for other similar public colleges and universities that share similar concerns about retention. However, this project may have significant relevance to other public administrators and leaders who oversee projects related to the delivery of adult education programs that may be impacted as well. Improving quality of education has been a top priority of state policymakers in recent years. Policymakers attention has focused on strengthening academic performance of schools and students in the K-12 system, financially assisting more students who enroll in higher education, and increasing student transfer rates from community colleges to four-year colleges and universities (Sherriff, 2003). Equally important but drawing less attention has been a need to provide educational assistance to adults who may no longer participate in the formal education system but lack the skills needed to adequately sustain themselves (Sherriff, 2003).

State-funded adult education programs provide services and multiple programs with inconsistent indicators of program outcomes (Sherriff, 2003). Adult education and literacy are in a new and crucial era since the time of the Great Recession (Cherewka & Prins, 2022). However, as the demand for adult education services continues to grow and available resources are increasingly limited, policymakers and program operators could explore ways to deliver services more efficiently based on objective data (Sherriff, 2003).

The Workforce Innovation and Opportunity Act (WIOA) was signed into law on July 22, 2014 (Workforce Innovation and Opportunity Act | U.S. Department of Labor, n.d.). WIOA is designed to help job seekers access employment, education, training, and support services to succeed in the labor market and to match employers with the skilled workers they need to compete in the global economy (Workforce Innovation and Opportunity Act | U.S. Department of Labor, n.d.). College prevention and awareness programs provide health and wellness, anti-bullying, substance abuse prevention, and financial literacy for students. These grant-funded programs are significant tools in that they offer creative and effective ways to deliver powerful messages to college students, keep them engaged, and maintain retention.

Prevention programs provide funding to the Local Education Agency (LEA) to increase their capacity to identify, assess, and serve students exposed to pervasive violence, helping to ensure that affected students are offered mental health services for trauma or anxiety, support conflict resolution programs, and implement other school-based violence prevention strategies to reduce the likelihood that these students will later

commit violent acts (Project Prevent Grant Program, n.d.) Every Student Succeeds Act (ESSA) provided the opportunity for funding support through the Strengthening Institutions Title III grant to support the college's ongoing efforts. Even with this, there were still some organizational structure challenges while implementing SI. The college implemented Navigate, which is a new student management program and comprehensive technology tool that brings together administrators, faculty, advisors, and staff to support students from enrollment to graduation and beyond to assist with these challenges. The focus has been on getting administrators and faculty to buy into the new program. Administrators may hesitate to provide additional funding for which faculty have not voiced support. Faculty members are unlikely to invest time and energy in something that has no support from the administration (Wilcox, 2002). Getting faculty to buy in allow instructors to provide student support and create learning environments for students to build academic communities (Arendale, 1994).

This study was designed to improve the student retention rate at this community college. Investigation of student retention in commuter colleges and universities was of great importance to faculty, administrators, policymakers, students, and other stakeholders who were concerned with issues involving quality, equity, learning, and accountability in higher education. This study also provided a plan to increase successful completion of students' educational goals, which included graduation and transferring to a university of their choice. I measured impact on retention for students participating in

SI upon entering college during their freshman year and its effectiveness and significance.

This study was also essential to field public administration by allowing students to build character that transcends beyond the classroom. It will foster opportunities for them to become public leaders and officials to impact positive social change within their communities. This study was significant to public policy in that it will create better managers of organizations who participate in decision-making processes. Although there was plenty of data to support this claim, as researchers conduct more generalized studies regarding the impact of SI on retention, more data and best practices can be adjusted to support SI and its impact.

Purpose of the Study

The purpose of this quantitative case study was to determine the impact on retention for students participating in SI upon entering college up to the sophomore year. This provided insights regarding impact of the SI program on retention rates. College and university administrators will use these findings to improve student retention and success rates at the college. Administrators will also use these findings to relay the importance of continuing the SI program at the college and provide necessary funding to support the program. These funds enabled the SI program to be staffed with more qualified SI leaders to provide services to at-risk students. It also provided opportunities for staff to attend professional development programs and provide funds to purchase supplies and equipment. These findings included information needed for students to become social

change agents and public leaders and officials to impact positive social change within their communities. Results of the study were communicated to the college through a recommendation memo, which consisted of a summary of research and recommendations. The letter of support authorizing the college as my college was provided by a previous administrator from the college.

There are significant gaps in research regarding efficacy of SI on retention, and college administrators are interested to learn whether their investment in these programs is having the intended impact. The purpose of SI was to fill gaps that are associated with student learning, such as at-risk course and performance gaps among disadvantaged minority students. Ansell (2011) referred to the achievement gap in education as the disparity in academic performance between African-American and Hispanic students and their non-Hispanic white peers. The achievement gap involves differences in scores on state or national achievement tests between various student demographic groups (Anderson et al., 2007). This study involved exploring the reasons why these achievement gaps in the organization exist and contributing to a solution. The research question that this study addressed was: What is the impact on retention for students participating in SI upon entering college during their freshman year? I proposed to use a quantitative case design involving first-year students who used SI. I explored preexisting student data during the period of an academic calendar year.

I addressed potential gaps in student retention for students entering college during their freshman year by targeting at-risk courses instead of at-risk students. Gegenheimer

et al. (2017) stated that when implementing SI into large enrollment courses that have a high likelihood of students receiving a D, F, or W, it has been shown to have great success.

Nature of the Administrative Study

The quantitative method was the best approach to use for this case study. This approach provided me the opportunity to understand how the quality and implementation processes of SI were related and provided to students attending at-risk courses at the college. In order to explore the quality of the program and how it served the student population, data were collected from 31 students who were enrolled in two gatekeeper courses.

I used a quantitative case study design with three types of quantitative data. Data were gathered via a five-point Likert scale survey (see Appendix A) that was emailed to two content area classes (English and math) via SurveyMonkey by two SI leaders to a population of approximately 30 to 40 students. Quantitative data provided valuable information from students who attended classes regarding their perceptions of SI leaders and sessions. Overall, I addressed how well the SI program is doing from the perspective of students and a rationale for financial institutional support for the program.

The second type of quantitative data was public data from the college which included general enrollment by demographics, program, and Enrollment as well as by student types (dual enrollment) and measures of student success (student retention and graduation rates). Aggregated data were reported for this college specifically and

included enrollment, retention, and graduation rates. A chart was provided to the college that consisted of state data involving institutional trends over a 10-year period of time. Variables included number of students graduating from surrounding high schools, age ranges, number of students enrolled each fall, and number of students who were retained and graduated. I also compared total enrollment rates of students at the college to all community colleges in the same region, which was beneficial to the college.

The third type of data was campus data which included archived information and current student data that included information retrieved from Banner, navigate reports, and midterm and final grades from both English and math courses, as well as SI summary reports that are prepared each semester. A quantitative analysis of data was used to further explore SI and the impact it has on retention for students participating upon entering college during their freshman year.

SI is an effective tool for increasing student retention. SI leaders are a group of trained professionals and peers who have already mastered the content material in the class. They facilitate group sessions which would generally be required after the classroom lecture. Sessions are facilitated via social media platforms such as Teams, Zoom, Facebook, Paws, Chat, and email to discuss important concepts and learning strategies. These sessions have been done remotely due to COVID-19 but have returned to their normal operations. Sources of quantitative data for this case study included 31 participant responses to a quantitative five-point Likert scale survey (see Appendix A). Details of these methods are discussed later in Section 3.

Significance of the Study

This study was designed to give administrators at the college information about their current operations concerning the student retention rate within the college to make better data-informed decisions for students entering college during their first year. This investigation of student retention in commuter colleges and universities is of great importance to faculty, administrators, policymakers, students, staff, and other stakeholders who are concerned with issues of quality, equity, learning, and accountability in higher education. Understanding why the dynamics of student retention is significant to public policy as a whole is important for policymakers to ensure that what the state and the federal government spend on higher education protects students and their families from fraud and abuse. Also, it ensures that all members of the public, including the marginalized, have access to high-quality education.

Furthermore, policymakers should invest in colleges that are committed to providing access and opportunities; conversely, they should act against colleges and universities where earning a degree is rare and unlikely to pay off. This study also includes a plan to increase successful completion of students' educational goals, which include graduation and transferring to a university of their choice. This study involved measuring the impact on retention for students participating in SI upon entering college during their freshman year and its effectiveness and significance.

There were potential contributions and implications for positive change. This study was designed to improve the student retention rate within the college. The

contribution of this study was also essential to field public administration by allowing students to build character that transcends beyond the classroom.

Education makes students aware of the rights of citizens and imbues them with a sense of civic duty and responsibility (Morris, 2017). Through lessons about public figures and leaders, education is used to develop leadership qualities in students and inspire them to become future leaders (Morris, 2017). Education counteracts superstition and parochialism, both of which are obstacles to positive social change (Morris, 2017). The education system of any society is related to its overall social system, and goals and needs of a society are reflected in its education system (Morris, 2017). As researchers conduct more generalized studies involving the impact of SI on retention, more data and best practices can be adjusted to support SI and its impact.

Summary

In Section 1, I introduced and presented the problem that currently exists within many colleges today and targeted one college in the Midsouth region. Retention rates are low in many colleges and universities, and the impact of COVID-19 has caused additional decreases. I identified the type of quantitative research method that was used as well as the significance of the study, purpose and nature, and potential contributions and implications for social change. In Section 2, I presented a broader perspective of the conceptual approach and background information, models and theories, relevance to the organization, and scholarly literature involving the organization's background and recommendations for improvements.

Section 2: Conceptual Approach and Background

Introduction

The problem currently facing this college and its students is that retention rates are too low, especially during the COVID-19 pandemic. The purpose of this quantitative case study was to determine the impact on retention for students participating in SI upon entering college up to the sophomore year. I analyzed effects of those first-year students who used SI on student retention. This descriptive research involved exploring and analyzing preexisting student data over of an academic calendar year. This section includes the rationale for concepts used in the study. My relationship with the organization was explored and I described how the project team was used.

Concepts, Models, and Theories

This study was grounded in the theory of social development learning. According to Culatta (2022), social interaction plays a fundamental role in the development of cognition. Every function in the child's cultural development appeared twice: first, on the social level, and later, on the individual level; first, between people (interpsychological) and then inside the child (intrapsychological); (Culatta, 2022). This applied equally to voluntary attention, logical memory, and formation of concepts.

The second aspect of Vygotsky's theory was that the potential for cognitive development depends upon the zone of proximal development (ZPD), a level of development attained when children engage in social behavior (Culatta, 2022). Full development of the ZPD depended upon full social interaction. The range of skills that

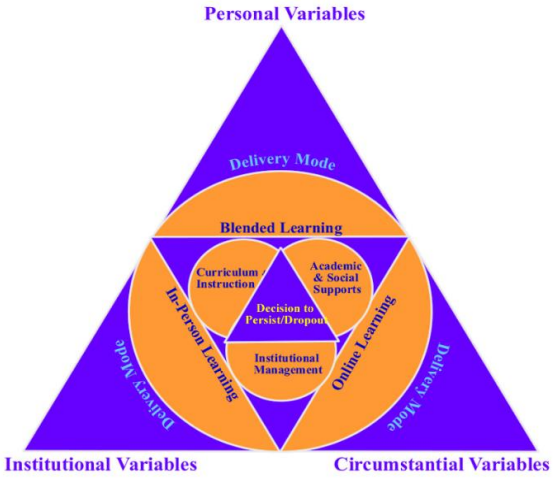
can be developed with adult guidance or peer collaboration exceeds what can be attained alone (Culatta, 2022). Peer interaction is conducive to cognitive development due to promotion of critical conflicts (Marhaya, 2014). Social constructivism is the idea that learning happens best when students construct their knowledge as peers (Marhaya, 2014). Vygotsky's theory was used for my study in terms of integration of skills, content, and peer collaboration.

The Sustainable Retention Model Including E-Learning conceptual framework was selected because of its usefulness in terms of organizing data and study outcomes. Variables affecting student retention were identified and clustered into three main categories: personal, institutional, and circumstantial. These categories were divided into six groups: demographics, individual attributes, organization characteristics, academic and social characteristics, institutional interactions, and external interactions. The six categories were identified using various variables, including age, race, gender, parent's educational level, and expectations.

I selected the Sustainable Retention Model Including E-Learning conceptual framework (Figure 1) to evaluate and organize data and study outcomes. This model was designed to assist institutions in terms of planning interventions, address student dropout, and increase student retention. It was flexible and represented a comprehensive set of factors related to student retention, and could be used by institutions, departments, individual faculty, or students.

Figure 1

Sustainable Retention Model Including E-Learning



Note: (Berge & Huang, 2004)

This Sustainable Intervention Retention Model framework was used to identify personal, institutional, and circumstantial variables that affect student retention at the college (Berge & Huang, 2004). Variables in this Sustainable Retention Model Including E-Learning framework that were identified as affecting student retention were clustered into three main categories: personal, institutional, and circumstantial (Table 1). Students and institutions could identify specific variables within these three groups when making decisions to persist or when developing programs leading to persistence that was highly contextual to the student, institution, and event (Snow, 2016).

This study evaluated three types of quantitative data sources which were a 5-point Likert scale survey (Appendix A), public data from the institution's website, and archived information and current student data. It focused on three aspects of dimension: personal,

institutional, and circumstantial. Section 3 provided a detailed discussion of how operationalizing the conceptual framework works. I organized the data collection around these six groups: demographics, individual attributes, organization characteristics, academic and social characteristics, institutional interactions, and external interactions categories (Fraser et al., 2018).

The institutional aspect was related to the ability of the institution to provide appropriate support to students during the education years, both academically and socially (Atif et al., 2013). The 5-point Likert scale survey (Appendix A) was designed to observe and relate to these three aspects and the six groups of dimensions focusing particularly on the institutional aspect. The survey took approximately one minute to complete and was analyzed in conjunction with other pre-existing student data for the period of an academic calendar year.

According to Atif et al. (2013), research showed that issues related to course availability, content, and instruction affect a student's ability to persist. However, support such as tutoring, mentoring, and career counseling also helped a student to survive (Atif et al., 2013). In addition, a flexible set of programs that the institute offers could also help to meet the diverse needs and attributes of individual students (Atif et al., 2013). The institutional factors were directly related to the environment because it was the institute that formed the foundation for a student's learning success by participating in and supporting students' academic and social development (Atif et al., 2013).

Key Terms

The following key terms were identified and defined for this study:

Academic success: The accomplishment of the learning process; gaining subject knowledge; and developing employability skills (Cachia et al., 2018).

Achievement gap: Differences in scores on state or national achievement tests between various student demographic groups (Anderson et al., 2007).

Attrition: The action or process of gradually reducing the strength or effectiveness of someone or something through sustained attack or pressure.

College: A professional person or organization is a person or company that receives a service from them in return for payment.

Faculty buy-in: Faculty responding to the idea of being sold something that could significantly change their environment (Mullaney, 2018).

SI leaders: Group of trained professionals and peers who have already mastered the content material in the class. SI Leaders facilitate group sessions, which would generally be required after the classroom lecture.

SI sessions: Facilitated activities that assist students in learning how to study course material.

Supplemental Instruction (SI): Nontraditional method of tutoring that provided group study support outside the classroom through discrete study sessions to supplement the in-class lessons.

Relevance to Public Organizations

Student retention could relate to public organizations by identifying key factors and problems that may influence students' decisions to either discontinue or continue their educational programs. There has been growing interest to predict student academic performance and retention within higher education since the 1980s (Atif et al., 2013). This growing interest has led others to construct their assessments, models, and theories (Atif et al., 2013). According to Campbell (2007), for nearly six decades, researchers have been studying the issues of student persistence and retention in higher education. Despite decades of research and projects to improve retention, overall retention figures have remained between 45% and 50% (Campbell, 2007). Research on retention has investigated the factors affecting student retention as well as validated the effect of these factors on various student populations (Atif et al., 2013)

Numerous studies have sought to identify models and sets of variables to explain what causes students to persist or depart from higher education (Atif et al., 2013). For most students, deciding to leave higher education is not the result of a single factor. Rather, it is the result of a combination of complex and interconnected factors that develop over time (Atif et al., 2013) There are several foundational student retention models and theories. The literature on student retention and attrition described an extensive collection of theories and models that could be used alone or used in combination to explain why students leave educational institutions (Atif et al., 2013).

One of four foundational retention theories started with Tinto. Tinto (1975) began the study of student retention where he examined the characteristics of student drop-out. Atif et al. (2013) stated that Tinto's (1975) theory of student departure was the first and perhaps the most cited theory of student retention. It was developed in 1975 and later updated in which it explained in more detail the reasons students withdraw from college too soon (Atif et al., 2013). The model emphasized two main variables, goal commitment, and institutional commitment, and was conditioned by academic integration and social integration (Atif et al., 2013). Both academic and social integration depend on input variables of the student's pre-entry attributes, the family environment, and institutional experiences (Atif et al., 2013).

Integration has increased both academically and socially. The student's commitment to educational goals and participation within the institution has also increased (Tinto, 1975). Since then, the research has transformed from the study of drop-out characteristics to the development of holistic models of retention and attrition from the perspective of student-institution interaction (Atif et al., 2013). Research has proven that student retention has been evaluated from different perspectives, including various student populations of students entering college for the first time or seniors, from traditional students to non-traditional (Atif et al., 2013). It has also been evaluated from many institutional settings: such as (students attending for two or four years). Atif et al. (2013) concluded that retention influenced three attributes of the student cohort, namely, institution types (public, private, vocational).

Bean's (1908) theory of student retention was influential in that it examines the turnover rates at institutions and the psychological theories such as attitude-behavior theory, coping behavioral theory, self-efficacy theory, and attribution theory which lead to academic and social integration. Bean (1980) proposed that four sets of variables influence student retention GPA, intent to leave, background, and environment and finances. Students had to maintain a minimum grade point average to avoid probation or suspension. The second set of variables concerns the student's intention to leave, which was expected to be influenced by psychological outcomes, institutional quality, satisfaction, goal commitment, stress, and academic variables (Bean, 1980).

Background variables included the student's high school performance and educational goals. The last set of variables was environmental factors that influenced student retention consisting of finances, employment, family relationship and responsibilities, and transfer options. The four categories of variables had a direct effect on the reason a student will not remain enrolled at the college and make the decision to leave.

Astin (1985) presented an involvement theory proving that students learn better by becoming involved in school activities. His theory emphasized that the factors that were important to student retention were effective in terms of the degree to which a student was involved in the institution. According to Fraser et al. (2018), the focus of the study was to assess the feasibility of successfully recruiting participants and to elevate the technical aspects of the online survey process. Although the study provided a precursor,

there were some limitations. The study was confined to two undergrad programs at one institution and data were collected from the same institution. According to Fraser et al., (2018), this could limit generalizing the plot findings to other populations.

Organization Background and Context

The institution referred to in the study is a comprehensive, multicultural, public, open-access College that resulted from a merger between two institutions. This merger reduced the expenses of both institutions and increased academic and technical education. It is one of the largest two-year colleges operated in the region. The college is accredited by the Commission of Colleges of the Southern Association of Colleges and Schools. There are many instructional sites in which this public two-year college exists while serving its diverse population. In efforts to improve student success outcomes, the institution was awarded a prestigious status from the national Achieving the Dream Network (ATD). The mission of the college is to provide all students attending with a high-quality and affordable post-secondary education. Students will be prepared to leave the college successfully having earned associate degrees, future educational opportunities, and successful employment.

The enrollment for fall 2018 was 9,347, with an undergraduate transfer-in enrollment of 562 students (U.S. Department of Education, 2018). According to the public data found on the institution's website, the enrollment for the Fall of 2019 was 9,653. The majority of the students attending were Black, totaling 6,150, White at 2,302, Hispanic at 705, and other races at 496. However, 35% of the students in the Fall of 2019

were adults aged 25 and older. The public data retrieved from the institution's website showed 11% of students in the Fall of 2019 were dual-enrolled high school students. Pell grant recipients in the Fall of 2019 totaled 50%.

The college's enrollment and retention rates have declined, especially during the mid-spring semester and during the Covid-19 pandemic. Students have taken longer to complete their academic program due to struggling in high-enrolled gateway courses. I discovered that more of its top 20 highest-enrolled high-failure courses had an overall average failure rate of 38.1% in 2018 (U.S. Department of Education, 2018). This failure rate included academic achievement gaps between ethnicities and races at the college.

Due to the increased demand for accountability in higher education, the retention of students has become a significant focus for administrators (Weaver, 2018). Consequently, many community colleges implemented strategies to improve the retention of students (p. 14). This especially applied to those who were from socio-economically low backgrounds and single-parent households. The focus has shifted to increasing student retention by ensuring that students were not only accepted into the institution of their choice but remained and were successful throughout their program until completion.

This college is committed to the mission of student success. Avenues offered to students to ensure academic success include offering innovative, student-centered support systems in advising, academic support, career services, counseling, and social services, student disability services, student development, and testing services, which will aid in increased retention and student success for the college and community. Focus was placed

on the college holistically to develop, support, monitor, and support student success and retention initiatives that aligned with the college mission.

One contributing factor to these high failure rates in these gateway courses was retention gaps, which are barriers that hinder student academic success. Another factor was financial aid, where students often depleted their funds early due to the placement of support classes in the first semester instead of enrolling in college-level courses that allowed them to complete them on time. Graduation rates could be measured over different lengths of time. Normal time is the amount of time it takes full-time students to complete their program (U.S. Department of Education, 2018). A reasonable amount of time for a student to complete an associate's degree program is two years. According to the U.S. Department of Education (2018), not all students complete within the normal time, so graduation rates were measured by other lengths of time as well (for example - three years for a two-year program) (Department of Education, 2018).

The longer students stretch out their studies, the more life intervenes, and the more likely students will not finish (Ward, 2017). Some colleges tend to screen students and weed them out of certain programs. Students should never be seen as seeds with a predetermined yield (Koch, 2020). DeBoer (2020) explained that one in three students who started as an engineering major finished with the degree and that early courses in the major were designed to be weeded out of classes. DeBoer (2020) stated that it was far better for them to drop the courses early before they had accumulated a lot of credits and risked running out of financial aid and consider it an act of mercy.

Ward (2017) stated that students can enroll in too many courses that do not count toward a degree. It was the opposite for other students signing up for too few courses in certain semesters and do not earn enough credits in time (Ward, 2017). Some students have to work to pay for their college without financial assistance from their parents, which could be a barrier to studying. Ward (2017) stated that such delays added up. An additional year of school in a public four-year college will cost $22,826, on average. There was a loss of income to consider when students stayed in school for an additional year. Earnings and long-term careers were impacted, and they missed out on about $45,327 in salary, on average (Ward, 2017).

Students with low ACT scores were enrolled in support classes for the first two semesters. New students do not often enroll in enough credits and therefore extend the number of semesters to complete. The results bring financial burdens, and a degree that takes too long becomes too expensive and accumulates student loan debt. Supplemental Instruction is funded by the Title III Program (U.S. Department of Education, 2019). Title III is a supplemental grant that is designed to help eligible higher education institutions become self-sufficient and expand their capacity to serve low-income students by providing funds to improve and strengthen the academic quality, institutional management, and fiscal stability of eligible institutions (U.S. Department of Education, 2019).

Simply graduating from high school does not ensure that a student is ready for college-level (Rooney, 2003). The problem of confusing academic assessments was a

major deterrent to a high-school student's ability to succeed in college (Rooney, 2003). The academic requirements they work to satisfy in high school, particularly statewide exams, which can be numerous, often bear little resemblance to the work they are expected to do in college (Rooney, 2003).

In 2014, the governor signed the statewide legislative proposal known into law and it became the TN Promise Scholarship Act in 2014 (Staff, 2014). Excess lottery reserve funds are being used to create an endowment to strategically redirect existing resources and to keep the program sustainable over time. This is a scholarship program designed to help more high school graduates attend college. This state became the first in the nation to offer high school graduates the opportunity to attend the first two years of community college tuition-free.

Role of the DPA Student Researcher

The role of the researcher as it relates to the study is to discover or confirm, in a responsible manner, evidence-based knowledge that can benefit society or the world (Ulz, 2022). The main overarching responsibility of a researcher is to do no harm (Ulz, 2022). It is about protecting the safety and well-being of research subjects and behaving in a proper manner (Ulz, 2022). My role includes hiring qualified staff, training, planning, and facilitating observations. I attend required mandatory training sessions, maintain tutoring software records, and work as a team member with a diverse population of students, staff, faculty, and community members. I effectively communicate and partner with students, faculty, and staff when visiting classes and offices.

This collaboration includes students from all socioeconomic and psychosocial backgrounds. I ensure study sessions are properly led by the team members and students are tutored in the top 20 high-enrolled courses, including English, and mathematics. I am constantly motivated each day to work to advance the new program and to determine the efficacy of SI on the retention of students in historically difficult courses. Seeing the success rate of the students attending SI encourages me. My study was designed to prove that SI has a positive effect on student retention. If the study proves otherwise, my employment is not at risk.

The department is prepared to continue to expand, grow, and advance the SI program at the college. Since this study was closely related to my employment, the data collected and analyzed was reviewed by the college's Equity and Compliance policy regarding conflict of interest to ensure there were no conflicts and unbiased reflections attached to my employment. I was aware of the possible limitations and challenges during the process of implementation. I was familiar with the useful tools and techniques that were considered effective with the SI program. These techniques could influence my perception. Every effort was made to remain neutral and unbiased during the study.

Summary

In Section 2, I explained concepts, model, and theory used in the study, as well as definitions of terms, and literature related to the conceptual frameworks used in the study project. My relationship with the college was explored, and I described how the project was used. Section 2 also includes background information about the college. I identified

key factors and problems that influenced SI students' decisions to either discontinue or continue their educational programs. In Section 3, The data collection process and research method that was used during the process data analysis will be presented.

Section 3: Data Collection Process and Analysis

The college's mission is to provide citizens of surrounding counties and the Midsouth region with a high-quality and affordable post-secondary education that prepares them for associate's degrees, future educational opportunities, and successful employment. In pursuing this mission and goal, retention rates have declined during the mid-spring semester of 2020 and the recent COVID-19 pandemic. Therefore, the problem the college is currently facing is that retention rates are too low. Students are taking longer to complete their program due to struggles involving high enrollment gateway courses with high failure rates. The college also experienced high failure rates with the top 20 gatekeeper courses (U.S. Department of Education, 2018). This involves academic achievement gaps in terms of ethnicities and races; however, the college is committed to closing those gaps by embedding SI in high-enrolled gatekeeper courses.

To address the rising problem, a quantitative case study was conducted. The purpose of this quantitative case study was to determine the impact on retention for students participating in SI upon entering college up to the sophomore year. Quantitative data were collected and analyzed for the case study. This study was conducted using a five-point Likert scale survey (see Appendix A), public data from the college, and

archived information and current student data. First, the survey was distributed to participants who were enrolled in English and Math classes and participate in SI.

Second, the public data from the college were collected involving demographics, dual enrollment, student retention, and graduation rates. Third, types of data collected were archived information and current student data that included information such as SI reports. I presented the data collection process and research methods that were used in the process of analyzing data that were studied. I introduce the practice-focused question, sources of evidence, and archival data that were generated for the study.

Practice-Focused Questions

The problem that is facing the college and its students is that retention rates are too low, especially during the COVID-19 pandemic. I addressed potential gaps in retention for students entering college during their freshman year by focusing on targeting at-risk courses instead of at-risk students. This study involved answering the question: What is the impact on retention for students participating in SI upon entering college during their freshman year? The purpose of this study was to determine the impact on retention for students participating in SI upon entering college up to the sophomore year. This provided insights regarding the impact of the SI program on retention rates.

Sources of Evidence

Sources of evidence for this study were collected from a five-point Likert scale survey (see Appendix A), public data, archived information, and current student data. The

purpose of this quantitative case study was to determine the impact on retention for students participating in SI upon entering college up to the sophomore year. Findings will provide college administrators with opportunities to improve student retention decision-making and continue to support the program. The survey process and how it was conducted, archival and operational data, and evidence generated for the study are discussed in detail.

Archival Data for the Study

The first source of evidence was a five-point Likert scale survey (see Appendix A) targeting students who participate in SI, which was the primary source of data collection due to COVID-19. The second source of evidence was archived and operational information which was already public data that was listed on the institution's website. The third source of evidence was campus data which included archived information and current student data from the college.

Archival and Operational Data

Data were retrieved from archived and operational information that was already public data posted on the college's website. Data included demographics, dual enrollment, and student retention and graduation rates.

Evidence Generated for the Administrative Study

Evidence generated for this administrative study enabled me to observe the way processes changed with time, adjust to emerging ideas and issues, contribute to the development of new theories, and gather natural and not artificial data. Participants were

two SI leaders and a total population of 31 students from the college. The five-point Likert scale survey link was emailed to the two SI leaders. SI leaders distributed the survey link via email to a total population of approximately 30 to 40 students who were enrolled in the subject areas of English and math. A total of 31 student participants responded to the survey. These two courses and SI leaders were selected because they were two of the highest-enrolled freshmen-level courses offered. It was designed to gain additional knowledge about students and their SI experiences, and provide ways to better serve and understand the SI students. It consisted of five questions that were centered around Sustainable Retention Model Including E-learning conceptual framework.

Berge and Huang's (2004) Sustainable Retention Model Including E-learning conceptual framework was designed to assist institutions in terms of planning for interventions, addressing student dropout, and increasing student retention. It was flexible and represented a comprehensive set of factors related to student retention, categorized in meaningful ways.

The Sustainable Retention Model Including E-learning (see Figure 1) showed the range of variables affecting student retention and is used to identify three main categories: personal, institutional, and circumstantial. The five questions listed on the five-point Likert scale survey (Appendix A) corresponded with the three primary areas of the Sustainable Retention Model Including E-learning conceptual framework triangle.

Personal Variables

Personal variables encompassed a spectrum of student factors like the demographic variables of characteristics of age, gender, ethnicity/race, family income/socioeconomic status, parental educational level and parental expectation, and individual attributes. The first question listed on the 5-point Likert scale survey represented personal variables.

> You are comfortable attending SI sessions with classmates and your peer SI Leader.

Institutional Variables

Institutional variables included factors such as organizational characteristics, the prevailing institutional attitude, values, and beliefs; academic characteristics like structural and normative systems and integrations; and social characteristics such as the degree of congruency and integration between the individual student and the social system of the institution. The next two questions that were listed in the 5-point Likert scale survey (Appendix A) represented institutional variables.

> Attending your SI sessions help you to socially connect more with the college and campus activities.
>
> You believe that students who participate in SI are more successful than students who did not participate.

Circumstantial Variables

Circumstantial variables involved factors such as institutional interactions, academic interactions, and social interactions, as well as interactions external to the institution such as life, work, and family circumstances, and perceived stress, responsibilities, and levels of satisfaction. The last questions that were listed in the 5-point Likert scale survey (Appendix A) represented circumstantial variables:

SI has had a positive effect on your social life, work, or family circumstances.

You are very satisfied with your overall SI experience.

The third source of data was campus data which included campus archived information and current student data. This campus data also corresponded with both institutional and circumstantial variables as described in Sustainable Retention Model Including E-learning conceptual framework that was previously discussed in Section 2. It included information retrieved from navigate, student data, and SI reports. Supplemental Instruction is an effective tool for increasing student retention. SI Leaders were a group of trained professionals and peers who had already mastered the content material in the class. SI Leaders facilitated group sessions, which would generally be required after the classroom lecture. However, this was done partly remotely and in person due to the Covid-19 pandemic.

The scope of the study was conducted on one specific campus and two subject areas as previously stated in Section 2 with a total population of 31student participants They contributed evidence to address the issues the college faced with student retention.

This process took place after approval from Walden's IRB and permission from the campus IRB committee board and chair. Quantitative data used could explore SI and the impact it has on retention for students participating upon entering college during their freshman year. These instruments provided the validity and reliability of the existing data. The timeline to collect the primary data ranged during one academic term.

Table 1 showed the three main components of the operationalization of the Sustainable Retention Model Including E-learning conceptual framework proposed by Berge and Huang. It was divided into the three main elements which were personal, institutional, and circumstantial. The elements were broken down into six groups and characteristics: demographics, individual attributes, organization characteristics, academic and social characteristics, institutional interactions, and external interactions. The attributes provided a description of the characteristics and the measurement described how each element operated in relation to Sustainable Retention Model Including E-learning conceptual framework.

The college created a privacy statement to protect the privacy of the students and the college. The college website provided information for gathering and disseminating of practices regarding stakeholders.

Table 1

Operationalization Retention Model

Elements of Conceptual Framework	Characteristics	Attributes	Measurement
Personal	Demographics characteristics	Age	5-point Likert scale Question1Appendix A Public Institution Data
		Ethnicity/race	Public Institution Data
		Gender	Public Institution Data
		Parental educational level	Public Institution Data
		Parental expectations	Public Institution Data
	Individual attributes	Academic skills and abilities	5-point Likert scale Question1 Appendix A
		Learning strategies	5-point Likert scale Question1 Appendix A
		Motivation	5-point Likert scale Question1 Appendix A
		Prior educational experiences	Public Institution Data
		Self-efficacy for learning and performance	5-point Likert scale Question1 Appendix A
		Task value	5-point Likert scale Question1 Appendix A
Institutional	Organization characteristics	Institutional attitudes:	5-point Likert scale Question2 Appendix A Public Institution Data
		Beliefs	5-point Likert scale Question3 Appendix A
		Values	5-point Likert scale Question3 Appendix A
	Academic and social Characteristics	Degree of similarity between the needs of individual students and the philosophical	5-point Likert scale Question3 Appendix A Public Institution Data Archived and Operational Data

		leanings of the institution	
		Learner support	5-point Likert scale Question3 Appendix A
		Normative systems process	Archived and Operational Data
Circumstantial	Institutional interactions	Social interactions with students	5-point Likert scale Question4 Appendix A
		Academic interactions	5-point Likert scale Question4 Appendix A
		Course design and facilitation	Archived and Operational Data
	External interactions	Students:	
		Family circumstances	5-point Likert scale Question4 Appendix A Public Data
		Responsibilities and perceived stress	5-point Likert scale Question4 Appendix A
		The learner's life	5-point Likert scale Question4 Appendix A
		Levels of satisfaction/Work	5-point Likert scale Question5 Appendix A

It was the policy of the State Board of Regents and its institutions to comply with the Family Educational Rights and Privacy Act (FERPA). This allowed the confidentiality of personally identifiable information to remain protected and educational records of students and former students. These measures were placed by the institution and college to ensure the ethical protection of each student participant and their right to withdraw from participating at any time.

As an employee of the institution and because I was conducting human subjects research, I went through both Institutional Review Board processes at Walden University

and the organization to ensure the ethical protection of the students. The institution's policies stated that all human subjects research activities come under the purview and oversight of the Office of Institutional Effectiveness and the Institutional Review Board (IRB), irrespective of whether the research is funded or non-funded, minimal risk or more. The Human Subjects Protection policy applied to all of the college's faculty, staff, and students conducting human subjects research on or off-campus (domestic or international sites) as well as visitors conducting research at the college.

The college provided a Human subjects' protection in a collaborative effort by the researcher and the college. The Institutional Review Board was charged with the responsibility of protecting the rights and welfare of human subjects involved in research. The composition of the IRB and the number of members on the committee were operating in accordance with federal regulations. Any questions regarding IRB policies and procedures were directed to the Institutional Review Board Committee Chair.

Analysis and Synthesis

The quantitative analysis approach consisted of seven steps. This quantitative data and analysis approach were used to explore SI and the impact it had on retention for students entering college during their freshman year. The system used for recording, tracking, organizing, analyzing the data, and answering the research question was a descriptive statistical product and service solutions SPSS. This small sample descriptive analysis addressed the practice-focused question in Section 3 and provided some feedback from a student's perspective regarding the value of campus retention strategies.

It was analyzed data from three sources the 5-point Likert scale survey (Appendix A) participants, public data, archived information, and current student data that focused on interpreting and understanding data as previously discussed in Section 2. Quantitative research was outlined as a scientific investigation of phenomena by gathering quantitative information and activity applied mathematics, or procedure techniques (Pedamkar, 2022). This case study used three types of quantitative data.

The first source of quantitative data that was used to explore the impact of SI on retention was the 5-point Likert scale survey (Appendix A). The survey corresponded with each of the three elements listed in Table 1 from the Sustainable Retention Model Including E-learning conceptual framework. A survey link was emailed to two SI Leaders to distribute via Survey Monkey to a total population of approximately 30 to 40 students who were enrolled in two gatekeeper courses. The survey collected was analyzed using descriptive statistical analysis and compiled into a report using statistical software like SPSS that allowed researchers to compute averages, the mean, totals, or a correlation between the variables.

The second source of data was public data from the institution's website and was collected on enrollment by demographics, student retention, and graduation rates. This aggregated data was reported on this college specifically and was beneficial to the college by evaluating the enrollment, retention, and graduation rates. The third source of data was campus archived information and student data that included information retrieved from the current student data. This data included current students who were enrolled in SI, and

SI reports. The analysis report provided insight into the efficacy of the program and suggested how improvements could be made. The focus of the data included variables such as the number of students graduating from the surrounding high schools, age ranges, number of students enrolled each fall, and number of students retained, and graduated. It also showed a comparison of data collected on the total enrollment of students at the college to all of the region's community colleges which was beneficial to the college.

The analysis process Figure 2 provided a visual of how data was used to gather valuable information from students who attend the classes regarding their perception of the SI program, the SI Leader, and the sessions attended. It determined how the data connected and provided a summary of the results without any biases. The researcher was able to determine the success of the SI program and provide a rationale for financial institutional support. A chart was provided to the college that consisted of archived data and public state data that evaluated the enrollment institutional trends over a ten-year period of time. An analysis of the results concluded with outreach intervention recommendations and summary remarks presented to the college in a report documenting the outcome and recommendations of the study.

Summary

Section 3 included the data collection process and analysis that was used during the research process. I section introduced and addressed the problem. A quantitative case study approach was used. Data sources for this study were addressed in detail.

I addressed types of quantitative sources, and the data collection process was explained in detail. Evaluation and recommendations are provided in Section 4.

Section 4: Evaluation and Recommendations

The problem currently facing this college and its students is that retention rates are low, especially during the COVID-19 pandemic. Since 2016, enrollment and retention rates have declined by 60%, although the college was the second-highest enrolled college in the state. This low retention was caused by the COVID-19 pandemic, significant enrollment gaps, and academic barriers.

The purpose of this quantitative case study was to determine the impact on retention for students participating in SI upon entering college up to the sophomore year. The intent of this study was to implement the three main components of the Sustainable Retention Model Including E-learning conceptual framework. The question that guided this study was: What is the impact on retention for students participating in SI upon entering college during their freshman year?

Sources of evidence for this study were collected from a five-point Likert scale survey (Appendix A) targeting students who participated in SI, which was the primary source of data collection. I also retrieved public data posted on the institution's website and other sources. The third source of evidence was campus data.

This section includes a review of research findings, sources of evidence that include types of data, implications of the study, strengths, and limitations. I also present recommendations to the organization that could be used to advance the SI program,

recommend new initiatives, and opportunities for part-time and dual-enrolled students, increase retention, and overall advance the mission and goals of the SI program and college.

Findings and Implications

The purpose of this quantitative case study was to determine the impact on retention for students participating in SI upon entering college up to the sophomore year. The following sections include results of the three quantitative data sources, which were responses collected from currently enrolled students participating in SI English and math courses. Data Source 2 consisted of public data collected from the institution's website involving student enrollment demographics, student retention, and graduation rates. Source 3 consisted of campus and archived student data collected from students who were enrolled in SI and the previous SI report.

Findings revealed that SI statistically has a positive impact on students' perspectives of their academic achievement, student retention, and success. The study revealed out of the 31 students enrolled in English and math, two out of three participants strongly agreed or agreed that they were comfortable attending SI sessions with their classmates and their peer SI leader, and it had a positive impact on their ability to learn and become successful in their classes. The study revealed that participants were satisfied with their overall SI experience and would continue to take advantage of it. Although there were enrollment gaps in terms of retention, finding revealed that it trended upward with dual enrollment being the center of the increase in enrollment.

Data Source 1: SQ1-5 Responses

The first source of data was a five-point Likert scale survey targeted at students who participated in SI and were enrolled in English and math gatekeeper courses. Participants were two SI Leaders and a total population of 31 students. The five-point Likert scale survey link was emailed to the two SI leaders. SI leaders anonymously distributed the survey link via email, and a total of 31 students responded (Table 2). I created a simple descriptive frequency analysis of data that were collected using SPSS to determine mean, median, mode, minimum, maximum, and standard deviation of variables associated with SQ1-5 and the three variables: personal, institutional, and circumstantial listed in the Sustainable Retention Model Including E-learning conceptual framework.

SQ1-5 included responses from the Descriptive Statistics Frequency Survey analysis (Appendix B). Student responses included feedback about the value of retention strategies and how to better improve them (Appendix B). Participant responses were collected between October 17 and 27, 2022, with one response each on October 17, 18, 22, 23, 25, and 27. On October 19, there were two responses. On October 20, there were six responses, and on October 24, four students responded. Thirteen student participants responded on October 26, totaling 31 responses. There were no additional comments among survey responses (see Appendix C). Each of the survey responses corresponded with the three elements of personal, institutional, and circumstantial that are listed in the

5-point Likert scale survey according to the Sustainable Retention Model Including E-learning conceptual framework.

Table 2

Descriptive Frequency Statistics Measuring Mean, Median, Mode, and Standard Deviation

	1. You are comfortable attending SI sessions with classmates and your peer SI Leader.	2. Attending your SI sessions help you to socially connect more with the college and campus activities.	3. You believe that students who participate in SI are more successful than students who did not participate.	4. SI has had a positive effect on your social life, work, or family.	5. You are very satisfied with your overall experience.
Mean	8387	2.0968	2.1935	2.2258	1.9677
Median	2.0000	2.0000	2.0000	2.0000	2.0000
Mode	2.00	2.00	2.00	3.00	1.00
Std. Deviation	.82044	.74632	.90992	.92050	.83602
Minimum	1.00	1.00	1.00	1.00	1.00
Maximum	4.00	3.00	4.00	4.00	3.00
Percentiles	1.0000	2.0000	1.0000	1.0000	1.0000
	2.0000	2.0000	2.0000	2.0000	2.0000
	2.0000	3.0000	3.0000	3.0000	3.0000

Survey Question one provided the answers from the participant's personal perspective. Personal variables encompassed a spectrum of student factors like demographic, age, gender, ethnicity/race, family income/socioeconomic status, parental educational level and parental expectation, and individual attributes. Questions two and three revealed similar responses for both questions from an institutional perspective of the SI student participants. Questions four and five provided responses from the

participant's circumstantial perspective. The study revealed that the same number of students neither agreed nor disagreed that SI has had a positive effect on their social life, work, or family circumstances however, eleven indicated that they were very satisfied with their overall SI experience.

SQ1: Personal Variable

SQ 1 asked student participants if they were comfortable attending SI sessions with their classmates and peer SI leader. The students overwhelmingly responded in a positive way where the majority strongly agreed and agreed that they are comfortable attending SI sessions with their classmates and their peer leader. All 31 students responded to question one. Twelve students responded that they strongly agreed to the question resulting in 38.7%, thirteen agreed at 41.94%, five neither agreed nor disagreed at 16.13% and there was only one student that disagreed at 3.23%. The result of question one was analyzed and Table 2 showed the minimum range is 1.00, maximum 4.00 median 2.00, mean 1.84, mode 2.00, and standard deviation of 0.82.

SQ2: Institutional Variable

SQ 2 asked participants whether attending their SI sessions helped them to socially connect more with the college and campus activities. Survey question two provided the answers from the participant's institutional perspective and corresponded with the conceptual framework that included factors such as organizational characteristics, the prevailing institutional attitude, values, and beliefs; academic characteristics like structural and normative systems and integrations; and social

characteristics such as the degree of congruency and integration between the individual student and the social system of the institution. Below are the results of question two. There was a total of 31 responses to question two. Seven students responded that they strongly agreed to the question resulting in 22.6%, fourteen agreed at 45.2%, ten neither agreed nor disagreed at 32.3%, and no students totally disagreed. Table 2 shows the minimum range is 1.00, maximum 3.00 median, 2.00, mean 2.10 mode 2.00, and standard deviation of 0.73.

SQ3: Institutional Variable

SQ 3 asked students whether they believed that students who participated in SI are more successful than students who did not participate. Survey question three provided the answers from the participant's institutional perspective as well and corresponded with the conceptual framework that included factors such as organizational characteristics, the prevailing institutional attitude, values, and beliefs; academic characteristics like structural and normative systems and integrations; and social characteristics such as the degree of congruency and integration between the individual student and the social system of the institution. There was a total of 31 responses to question three. Eight students responded that they strongly agreed to the question resulting in 25.8%, eleven agreed at 35.5%, ten neither agreed nor disagreed at 32.3%, and two students disagreed. Table 2 showed the minimum range is 1.00, maximum 4.00 median 2.00, mean 2.19 mode 2.00, and standard deviation of 0.91.

SQ4: Circumstantial Variable

SQ 4 asked student participants whether SI has had a positive effect on their social life, work, or family circumstances. Survey question four provided the answers from the participant's circumstantial perspective as well and corresponded with the conceptual framework that included factors such as institutional interactions, academic interactions, and social interactions, as well as interactions external to the institution such as life, work, and family circumstances, and perceived stress, responsibilities, and levels of satisfaction. There was a total of 31 responses to question four. Eight students responded that they strongly agreed to the first question resulting in 25.8%, ten agreed at 32.3%, eleven neither agreed nor disagreed at 35.5%, and two students disagreed resulting in 6.5%. Table 2 showed the minimum range is 1.00, maximum 4.00 median 2.00, mean 2.22 mode 3.00, and standard deviation of 0.92.

SQ5: Circumstantial Variable

SQ 5 asked whether the SI student participants were very satisfied with their overall SI experience. Survey question five provided the answers from the participant's circumstantial perspective as well and corresponded with the conceptual framework that included factors such as institutional interactions, academic interactions, and social interactions, as well as interactions external to the institution such as life, work, and family circumstances, and perceived stress, responsibilities, and levels of satisfaction. Below are the results of question five. There was a total of 31 responses to question four. Eleven students responded that they strongly agreed to the first question resulting in

35.5%, ten agreed at 32.3%, ten neither agreed nor disagreed at 32.3%, and no students disagreed resulting. Table 2 measured the minimum range is 1.00, maximum 3.00 median, 2.00, mean 1.96 mode 1.00, and standard deviation of 0.83.

Data Source 2: Public Data Available from the Institution's Website

The second source of data was public data from the institution's website and was collected on student enrollment types by race/ethnicity, demographics, and population gender changes. The following three sources of public data were shown in Tables 3-5. Table 3 public data showed changes in enrollment based on the student's race/ethnicity at the college over the past ten years. The data revealed that there were more black students that averaged 5,788 and white students 2,648 enrolled over the ten years than any other race. The least number of students enrolled totaled seven Indian/Native American students in 2020-21 and averaged 24. In comparison to the national average, the overall percentage of college student enrollment has declined per race with Native Americans being the lowest at 13%, Black 8.8%, White 8.5%, Latin Americans 7.3%, and Asians 4.8% (Hanson, 2021).

Table 3

Student Enrollment by Race/Ethnicity Changes

Year	American Indian/Native American	Asian	Black	Hispanic	Native Hawaiian Pacific Island	White	Two More Races
2012-13	36	235	7394	414	10	3570	311
2013-14	23	250	6503	409	13	3184	270
2014-15	39	254	6085	427	9	2891	240
2015-16	27	245	5363	422	11	2665	217
2016-17	28	230	4866	416	8	2472	161
2017-18	23	210	5639	489	12	2381	216
2018-19	17	202	5826	563	12	2389	221
2019-20	19	176	5968	659	11	2269	222
2020-21	7	169	4452	545	12	1920	201
Average	24	219	5788	483	11	2648	229

Table 4 included public data associated with Data Source 2 collected from the institution's website. Table 4 showed the college enrollment rate for 18-21-year-old ranked the highest headcount enrolled and total percentage. The National Center for Education Statistics (2022), stated that the overall college enrollment rate for 18- to 24-year-olds was 40 percent in 2020. The under-18-year-old students included those that were dual-enrolled. The 18-19-year-old students at the college ranked the highest

headcount at 2,023 at 27.42%. Whereas the 22-to-30-year-old student headcount was at mid-range with 22-24 ranking the highest total percentage at 97.90%.

Table 4 also showed that the high-enrolled headcount demonstrated that the majority of the students attending the college 22-24 years old were taking advantage of the opportunity of the last dollar scholarship initiative that was implemented by the former governor in 2014 (Staff, 2014). However, the rate for the 31-to-51-year-old student headcount was over 1,270. These students were basic staff ally non-traditional, full-time working parents, who were returning to college to complete their education or seeking to advance in their jobs.

Table 4

Enrollment Demographics by Age, Headcount, and Total

Age	Headcount	Total %
<18	1100	14.91%
18-19	2023	27.42%
20-21	1113	15.09%
22-24	722	97.90%
25-30	936	12.69%
31-50	1270	17.22%
51+	213	2.89%

Table 5 was the last source of public data associated with Data Source 2 collected from the institution's website that illustrated changes by gender in the student enrollment population by gender at the college for over ten years.

Table 5

Student Enrollment Population Changes by Gender

Year	Total	Men	Women
2012-13	12,220	4,405	7,815
2013-14	10,817	4,102	6,715
2014-15	10,227	3,921	6,306
2015-16	9,135	3,618	5,517
2016-17	8,327	3,236	5,091
2017-18	9,099	3,532	5,567
2018-19	9,347	3,412	5,935
2019-20	9,433	3,279	6,154
2020-21	7,371	2,445	4,926
Average	9,553	3,550	6,003

Data Source 3: Campus Student Data and SI Report

The third source of data was collected from the campus student data and archived sources as demonstrated in Figures 2-5 and Tables 6-7. The data in each source corresponded with the Sustainable Retention Model Including E-learning conceptual

framework from the personal, institutional, and circumstantial perspectives demonstrating the trends in student enrollment for full-time enrolled and full-time equivalency trends, college enrollment trends, the dual-enrolled, first-time at college and other students' trends, the first-year gateway course completion over a ten-year period of time, student Navigate data, and SI report.

The first of Data Source 3 campus sources was reflected in the Figure 2 analysis over a ten-year period that included insights into the efficacy of the program and how improvements could be made. Figure 2 provided a breakdown of the headcount of the fall student enrollment and full-time equivalency trends at the end of the term for the college for a period of ten years. It also showed a significant decline in the headcount in comparison to the full-time equivalency according to the linear headcount line.

Figure 2

Fall Enrollment and Full-Time Equivalency Trends

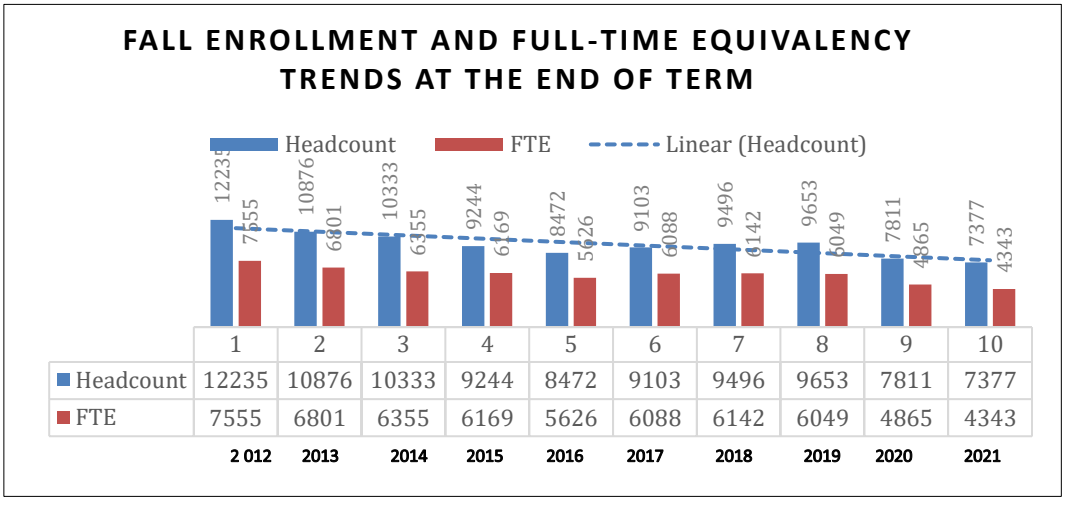


Table 6 was the second campus data source collected below showed a ten-year college trend of data collected from 2012-2021 on the total fall enrollment, day 14 enrollment, enrolled by student type, and ten-year graduation and retention rates of full-time and part-time students which were beneficial to the college based on the institutional perspective. The data revealed that the average retention rate of the last ten years was 49.56% for full-time students and 33.22% for part-time students. Although enrollment had fallen significantly, the retention rates for full-time students have trended upward over the ten-year period at 54% with 44% being the lowest in 2012. The part-time student retention rates remained stable however, the overall enrollment trended downward to 31% in 2020 from a headcount of 12,063 in the Fall of 2012 to 6,069 in 2021 which is about half.

The average graduation rate for the last ten years averaged 8.44% and the 2020-21 academic year rate was 11%. The changes in data indicated that there was a 10% difference in women at 8.44% who completed their program over the men at 8.33%. The highest graduation rates were in the year of 2019-20 at 14% for women and 12% for men graduates among the total graduates at 13%. However, the lowest percentage of graduates was in the year of 2012-13 with women being the lowest at 4% and men at 5%.

The data revealed that the high school dual enrollment students provided an avenue to determine the success of the SI program and will provide a rationale for continued financial institutional support.

Table 6

Ten-Year College Enrollment Trends

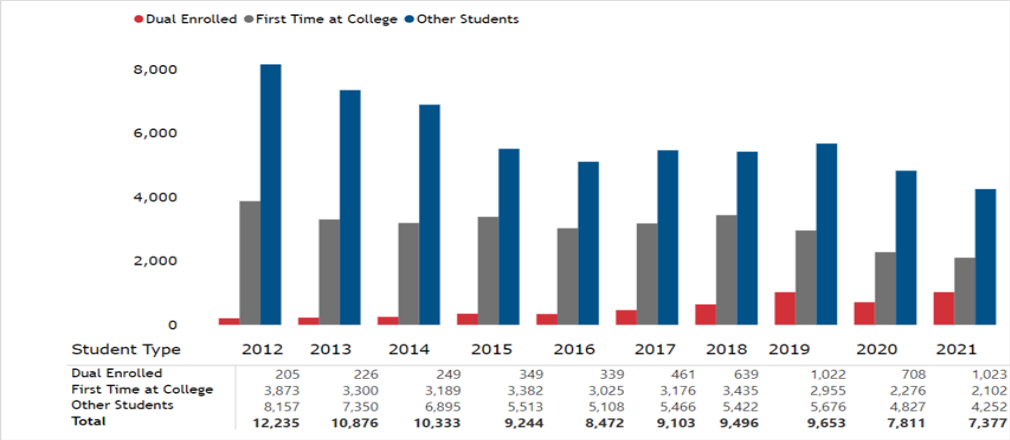
10-Year Fall Enrollment Trends		Day 14 of Enrollment		Enrollment By Student Type			10 Year Average Graduation Rates				Retention Rates		
Fall Year	Headcount	Year	Headcount	HS Dual Enroll	First Time College	Other Students	Year	Total	Men	Women	Year	Full-Time	Part-time
2012	12,235	2012	12,063	205	3,873	8,157	2012-13	5%	5%	4%	2012-13	44%	34%
2013	10,876	2013	10,556	226	3,300	7,350	2013-14	6%	7%	5%	2013-14	47%	32%
2014	10,333	2014	9,564	249	3,189	6,895	2014-15	5%	5%	5%	2014-15	54%	38%
2015	9,244	2015	8,956	349	3,382	5,513	2015-16	5%	5%	4%	2015-16	47%	30%
2016	8,472	2016	7,763	339	3,025	5,108	2016-17	10%	11%	9%	2016-17	45%	30%
2017	9,103	2017	7,752	461	3,176	5,466	2017-18	10%	9%	11%	2017-18	54%	35%
2018	9,496	2018	7,731	639	3,435	5,422	2018-19	11%	11%	12%	2018-19	49%	31%
2019	9,653	2019	8,135	1,022	2,995	5,676	2019-20	13%	12%	14%	2019-20	52%	38%
2020	7,811	2020	8,088	708	2,276	4,827	2020-21	11%	10%	12%	2020-21	54%	31%
2021	7,377	2021	6,069	1023	2,102	4,252							
							Average	8.44%	8.33%	8.44%	Average	49.56%	33.22%

Figure 3 provided the third campus data source collected that included data for the dual-enrolled, first time at college, and other students ranging from 2012 to 2021. This data revealed a different outlook on high school dual enrollment in detail and from a different perspective comparing the first-time at college and other students. Since the Fall of 2012, there was a study increase in the high school dual enrollment students from 205 to a total of 1,023 students in 2021. The largest increase in dual enrollment was for the Fall 2019 semester at 1,022 but suffered the largest decrease of 314 students during the 2020 Covid-19. The dual enrollment quickly regained those students the next Fall of 2021 with an increase of 315 students. However, the data revealed that there was a constant decline in enrollment for the students entering college for the first time from 3,873 Fall of 2012 to 2,102 in the Fall of 2021 with a decrease of 1,771 students and

other students from 8,157 to the Fall of 2021 at 4,252. The data showed that dual-enrolled students were significant to the entire college and have impacted enrollment and retention for the past ten years.

Figure 3

Dual-Enrolled, First Time at College, and Other Students



Student Type	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Dual Enrolled	205	226	249	349	339	461	639	1,022	708	1,023
First Time at College	3,873	3,300	3,189	3,382	3,025	3,176	3,435	2,955	2,276	2,102
Other Students	8,157	7,350	6,895	5,513	5,108	5,466	5,422	5,676	4,827	4,252
Total	**12,235**	**10,876**	**10,333**	**9,244**	**8,472**	**9,103**	**9,496**	**9,653**	**7,811**	**7,377**

The fourth campus data source Figure 4 ranged for over a five-year trend from 2015 to the year 2020 for the first-year gateway English and Math courses. This data trend was significant to observe due to the two SI courses that were selected to conduct the study. The data revealed that there was an increase from 2016-2019 for the English students who successfully completed class but decreased significantly from 70% in 2019 to 57% in 2020 a decrease of 13% due to the pandemic. The Math completers maintained a steady flow ranging from 41% in 2015 to 41% in 2020 in spite of the pandemic. The largest increase was in 2016 at 48%.

Figure 4

First-Year Momentum: Gateway Course Completion

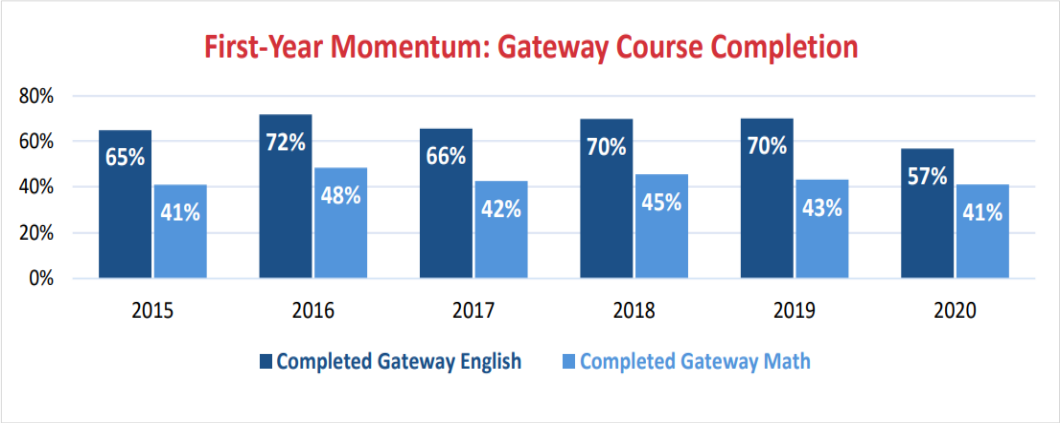


Table 7 was the fifth campus data source which provided appointment details for the SI Leaders serving students for Fall 2022. The SI program was implemented in the Fall of 2020 two weeks prior to the onset of the Covid-19 pandemic and onsite closing. The campus implemented different learning modalities such as virtual classrooms and online learning to accommodate the students during that period of time. The SI Leaders utilized all social media platforms to continue to serve the students. As of Fall 2022, There was a total of 540 appointments scheduled from August 1, 2022 – November 8, 2022. There was a total of 1,022 total attendees, 482 of those appointments scheduled were distinct students (students who are displayed regardless of attendance), and 434.77 scheduled hours.

Table 7

SI Leaders Appointment Detail for Fall 2022

Staff	Appointments	Distinct Students	Total Attendees	Scheduled Hours
1	3	10	21	4.00
2	74	34	74	109.29
3	29	50	241	14.20
4	253	59	253	216.83
5	33	23	33	22.00
6	71	33	71	34.25
7	5	5	5	3.75
8	10	5	10	8.55
9	14	41	266	3.50
10	48	30	48	18.40
Total	540	482	1,022	434.77

The last of Data Source 3 campus data was from the campus SI report. A total of 920 students scheduled appointments and participated in SI sessions at all locations between August - May 2022. 483 participated in SI online and 88 scheduled online sessions to total 571. A total of 300 students scheduled sessions with only SI Leaders. Of the 300 students, 41 students increased one letter grade from midterm to final grades reporting. A total of 22 students increased two letter grades from midterm to final grade

reporting. A total of five students increased three letter grades from midterm to final grade reporting.

A total of three students increased four letter grades from midterm to final grade reporting. A total of 95 students maintained their midterm grades. Next, 27 students' grade dropped one letter grade from midterm to final grade reporting. A total of 18 students' grades dropped at least two letter grades. A total of six students' grade dropped at least three letter grades. Only one student's grade dropped at least four-letter grades. Only three "I" grades were reported for students as final grades so that no change could be measured from midterm to final grade. A total of 79 students participated in SI but were not listed on the final grade report.

Therefore, the students that took advantage of SI either maintained or increased one letter grade from mid-term to final despite any challenges they may have faced. The semester was challenging for some entering as new students adapting to hybrid schedules and committing to attendance. Some non-traditional students as well as traditionally faced challenges in adapting to online learning. With the continued support from the SI program, SI instructors, and SI leaders, the campus still expected the best from students who took advantage of SI.

Implications of the Findings

Findings of this study revealed that there is a need for SI to continue serving the students at the college due to the declining enrollment, retention, and graduation gaps over a ten-year period. The results of this study have proven that for the past two years

that the SI program has been in operation, it has been an effective tool and has positively impacted student retention at the college in spite of the enrollment and retention rates.

Retention Rates

The retention rate is the percentage of students who return to college for their sophomore year. A high retention rate is an indicator of the quality of education the student receives. Nationwide, the average retention rate for students who return for their sophomore year is 78% (Trivette, 2022). At this college specifically, the average retention rate is 49.56% for full-time students and 33.22 % for part-time students last year (See Table 6). Its retention rate is relatively lower than the average rate when comparing similar community colleges in the same region at 59.54% in average (College Graduation Rates by State 2023, n.d.). However, the overall top ten states with the lowest college graduation rates are Tennessee 27%, Wyoming 27%, Alabama 26%, Oklahoma 26%, Nevada 25%, Kentucky 24%, Louisiana 24%, Arkansas 23%, Mississippi 22%, and West Virginia being the lowest at 21% (College Graduation Rates by State 2023, n.d.).

In totality, Massachusetts reports the highest college retention rates by state at 44% while West Virginia ranks lowest at 21% (College Graduation Rates by State 2023, n.d.). Low retention rates are a major concern at the college in comparison to the nationwide average at 78% and the college at 49.56% showing a difference of almost 30%. In actuality, there may be more college-aged students that are opting out of attending college after high school due to the growing social medial trends and the many colleges in the region. SI will continue to positively connect with the students to bridge

this gap. Based on the results of this study, SI could improve the retention rates at the college by continuing to provide the necessary support for students to overcome challenges in gateway courses. SI has had a positive impact on students' beliefs of the institution, perspective of the institution, their values, and bridge the learning gap as indicated in Table 1. Additionally, the SI program could contribute to reducing the challenges new students may face by providing the support needed, developing intervention strategies, and by being proactive by discovering potential issues and conflicts early on and issuing early alerts.

Survey Findings Implications

The first source of data resulting from the 5-point Likert scale survey revealed that the entire SI program and SI Leaders are meaningful to the college. The campus administrators should utilize the results of the survey to examine how to better serve the students, expand the program, and in their decision-making when funding the SI program in the future. Of the 31 students who were enrolled in English and Math gatekeeper courses, all overwhelmingly strongly agreed that they have been in attendance and have benefited from the SI program. The survey results also revealed that students strongly agreed that they were comfortable attending SI sessions with their classmates and their peer SI Leader which aligns with the personal variable from Berge and Huang's (2004) conceptual framework.

The participants also agreed from an institutional perspective that attending the SI sessions helped them to socially connect more with the college and more students do

believe that students who participate in SI gain the knowledge to become successful in their courses. Overall from the student's circumstantial perspective, SI has had a positive effect on them and they revealed that they were very satisfied with their overall SI experience and would continue to take advantage of the services.

Public Data Implications

The second source of public data supports the institutional and circumstantial variables of Berge and Huang's (2004) conceptual framework and was collected from the institution's website. It evaluated ten-year trends of data collected from 2012-2021 on the total enrollment, enrolled by student type, ten-year graduation and retention rates of students at the college. The findings revealed that there were more black and white students enrolled over the ten years than any other race and the least number of students enrolled totaled to seven Indian/Native Americans in 2020-21. It also revealed that more women return and graduate from their program than men at the college in comparison to the national average.

Campus Data Implications

The third source campus data revealed that from the institutional perspective that there was a study increase in the high school dual-enrolled students from 205 to a total of 1,023 students in 2021 and these students are significant to the entire college. Although dual enrollment has impacted enrollment and retention for the past ten years at the college, the part-time student's retention rates remained stable. However, the findings revealed the overall enrollment trended downward to 31% in 2020 from a headcount of

12,063 in the Fall of 2012 to 6,069 in 2021 which is about half. Campus data also revealed that according to last year's SI report, the students that took advantage of SI either maintained or increased one letter grade from mid-term to final despite any challenges they may have faced.

Implications for Social Change

The success of this study could promote positive social change by creating better community leaders and managers of organizations for those participating in the decision-making processes. There are so many colleges today that face the risk of student dropout due to students facing external pressures such as financial hardships, family obligations, and working full-time jobs. As indicated in Table 1, the circumstantial perspective of the conceptual framework, recognizing these barriers early and providing mental support as well as positive social interactions with students, will possibly reduce distractions and minimize perceived stress. Building a community of learning environments for students will help them to know and understand the levels of satisfaction in giving back to their communities. The use of these findings will positively impact social change by providing avenues for students to become public leaders and officials to impact change within their communities.

Recommendations

After completing the study in order to improve the quality of the SI program, how it served the student population for those participating in SI, and to enhance its effectiveness, the following recommendations were made. The recommendations

implemented the three main components of the Sustainable Retention Model Including E-learning conceptual framework that focuses on personal, institutional, and circumstantial elements.

Recommendation 1

Personal Perspective. This college is committed to the mission of student retention and academic success. So, based on the findings, the college should: Continue to invest in SI and provide funds, and support from administrators, faculty, staff, and its students. Educational leaders can incorporate the SI program strategies into various college activities, including innovative faculty classroom instructions, to enhance course grades. Also, from the personal perspective, recommendations are for the college to implement strategies and create initiatives that are intended to improve the quality of the student's experience that will motivate students to develop their personal traits, increase their knowledge, skills, and characteristics, develop strategies for learning, and self-efficacy and improve their individual perception of their college experience. The campus should create additional avenues for students to personally bond with the college by offering innovative, student-centered support systems and resources for students which will aid in increased retention and student success for the college.

Recommendation 2

Institutional Perspective. Based on the results of the study, recommendations from the institutional perspective to the college include: planning for interventions, addressing declining enrollment, gaps in enrollment, and increasing student retention. It is important

to identify the student's needs early on and ensuring that the college prepares students to become successful academically and socially through academic integration and preparation. Research shows that between 30 and 40 percent of all entering freshmen are unprepared for college-level reading and writing and approximately 44 percent of all college students who complete a two or four-year degree had enrolled in at least one remedial/developmental course in math, writing, or reading (Honu, 2022).

Recommendations to the college are to provide intervention strategies to address the 14-day enrollment drop starting from day one to bridge the retention gap, and to increase high school dual enrollment recruitment, which the findings revealed had a high impact on enrollment and providing campus activities for them to develop a social connection. Precollege programs provide an opportunity for the campus to work actively with elementary and secondary students (Swail, 2004). I also recommend creating ways to better connect with the part-time students that struggle with retention by offering on-campus activities during and after classes.

Recommendation 3

Circumstantial Perspective. The college is currently undergoing a new Redesign, Reinvent, and Reset: Workforce effort and is anticipating it to become the region's largest go-to resource for providing quality training for anyone who is seeking to enter the workforce. The comprehensive student support component of this redesign is charged with creating ways to provide academic student support and increase student retention. Based on the findings, Recommendations are for the college to: create awareness of SI to

encourage support across the campus among faculty, staff, and administrators. The campus could provide an avenue to help students cope with a variety of external challenges and academic challenges. This effort will identify achievement gaps in service and identify issues that can affect students' ability to complete their programs much earlier. I recommend the college to provide additional mentoring and coaching as an avenue to significantly improve student retention for new students and dual-enrolled. Next, providing student outreach intervention strategies could be beneficial to the college by implementing an SI volunteer mentoring services to bridge enrollment gaps, create a bond, and to identify potential barriers new students face before entering their first year of college.

Using the SI program in this capacity will provide the intervention new high school students will need to be successful that goes beyond the college campus and the classroom. This mentoring program serves all of the area's schools with students who qualified for the last dollar promise scholarship program implemented by the governor in 2014 and discussed in Section 1. This promise scholarship is designed to help more mid-south region high school graduates attend college.

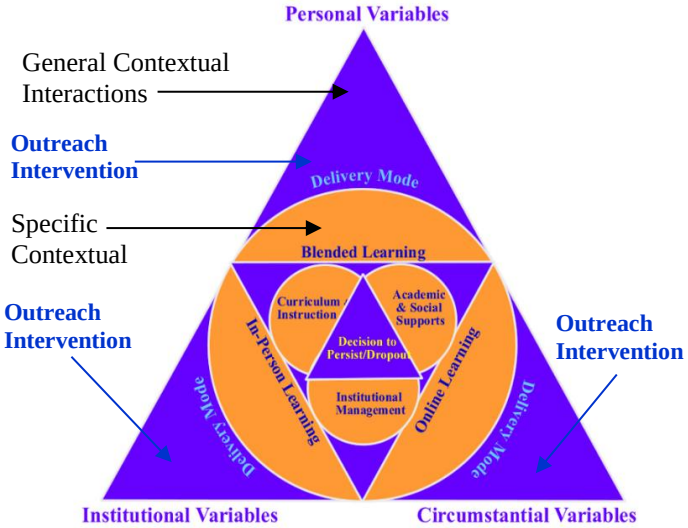
The benefits of SI partnering with this volunteer mentoring program will allow new dual-enrolled and high school students to already become familiar with the college, allow the SI Leader and student to safely interact, and build trust, and a relationship through an online platform before entering the classes. The research findings prove that the high school dual-enrolled students increased the retention rate each year. Providing

this outreach will not only build a relationship but will benefit the college overall and increase enrollment. The SI Leader will gain access to resources that can be helpful to provide to students as they transition from high school to college, and overall advance the mission and goals of the SI program.

The Sustainable Retention Model Including E-learning conceptual framework model, which is a flexible comprehensive model, is designed to assist institutions in planning for interventions, to address student dropout, and to increase student retention. Figure 5 shows how outreach interventions can be applied to the personal, institutional, and circumstantial delivery modes even before the student enters college. The SI Leader will be significant to the student's smooth transition from high school to college.

Figure 5

Revised Sustainable Outreach Intervention Retention Model



Strengths and Limitations of the Project

The strength of this study is its contribution to the literature on supplemental instruction and its impact on retention. SI is a higher-education academic support program that targets challenging college courses and uses peer-led review sessions to develop academic skills, improve grades, influence persistence, and ultimately increase student retention (Arendale, 2001). The variables used in this study were pertinent to the effectiveness of the study. This study provided insight into retention and recommendations for future use. Specific data with details were provided from the results of the surveys and from students who were enrolled in SI courses. The high school dual-enrolled students at the college have had a major impact on retention through partnering with the K-12 schools and community.

Limitations can be classified as deficiencies and circumstances that are beyond the researcher's control. Creswell (2012) stated that limitations are potential weaknesses identified in a study. However, there were some limitations to this study such as the small sample size and the location of the study. The study was limited to two undergraduate courses therefore, the data and findings were collected from one campus. I was aware of some limitations and challenges that may have arisen during the process of implementing this project. It was limited to a single case study with a small sampling of participants. Although the results of this study could likely offer benefits to the college, I have concluded that it cannot be successful without the support of the administrators, faculty who buy in, SI Leaders, and students.

Summary

This study was conducted under the assumption that all of the data collected were true, exact, and without any biases or errors. The instruments used to conduct the study provided the validity and reliability of the existing data. Some included limited access to some campus archived data and a small sample collection from limited sources which possibly limited the interpretation of my findings. Some of the findings were limited to the data that was already provided on the institution's website and campus data. However, the quantitative data could possibly be used for future projects addressing the same or similar topics and using similar methods. Although this study provided some insight into the problem the college is facing, a detailed assessment of the SI program's impact on retention could possibly be considered in the future. Section 5 of the study details the dissemination plan and the method of deliverable.

Section 5: Dissemination Plan

Final dissemination and recommendations for the college include a chart that will be provided to the college consisting of state data involving institutional trends over a 10-year period of time. Ten-year data trends include variables such as general enrollment demographics, number of students enrolled each fall, and number of students who are retained and graduated. I also showed comparisons of data involving total enrollment of students at the college with all community colleges in the region, which will be beneficial to the college. Analysis of results includes intervention recommendations and summary remarks presented to the college in a report documenting outcomes and recommendations

of the study. A copy of the completed case study will be published on Walden University's website for viewing.

PAS Deliverable

I constructed a recommendation document consisting of the findings of the study that will be beneficial to the entire college (Appendix D). The document included a chart consisting of state data that evaluated institutional trends over a 10-year period of time. The document included survey results, public data, and campus data such as general enrollment demographics, the number of students enrolled each fall, and number of students who were retained and graduated. I involved administrators and faculty in my dissemination efforts to make sure the study was clearly understood and delivered.

Results of this research project were useful to my college for future decision-making involving funding and advancing the SI program and providing insights regarding its effectiveness in terms of increasing enrollment and retention. Intervention recommendations and summary remarks were presented to the college in a report documenting outcomes and recommendations. To mitigate any obstacles or challenges, a plan of action was included in the document with recommendations for my college if needed.

Summary

This study revealed evidence that SI has a positive impact on student retention for students entering college during their first year. The purpose of this quantitative case study was to determine the impact on retention for students participating in SI upon

entering college up to the sophomore year. The problem this college and its students faced was low retention rates, especially in the aftermath of the COVID-19 pandemic. This study involved identifying significant enrollment gaps and academic barriers associated with high-enrolled gatekeeper courses. I focused on providing student interventions and using SI volunteers to provide mentoring and outreach services to bridge these gaps and identify potential barriers new students face before and during their first year of college. Using the SI program in this capacity could help high school students before entering college reach their promise.

Personal, institutional, and circumstantial benefits of partnering SI with this volunteer mentoring program will allow new high school students to already become familiar with the college. These benefits will allow the SI leader from the college and new student to socially connect and interact academically, build trust, increase their learning and academic abilities, and build successful relationships through online platforms before entering classes. Providing outreach will create a bond that new students will need to be successful that go beyond the college campus and classroom. Outreach interventions are tools provided to new students that will allow barriers to be identified early on so individual student needs can be addressed, leading to increase enrollment. The SI leaders will gain access to resources that can be helpful involving transitioning from high school to college and overall advance the mission and goals of the SI program.

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Appendix A: 5-point Likert Scale Survey

INSTRUCTIONS: Please rate your level of agreement with the following statements in the survey with whether you strongly disagree, disagree, neutral, agree, or strongly agree regarding your SI experience.

5-point Likert Scale Survey

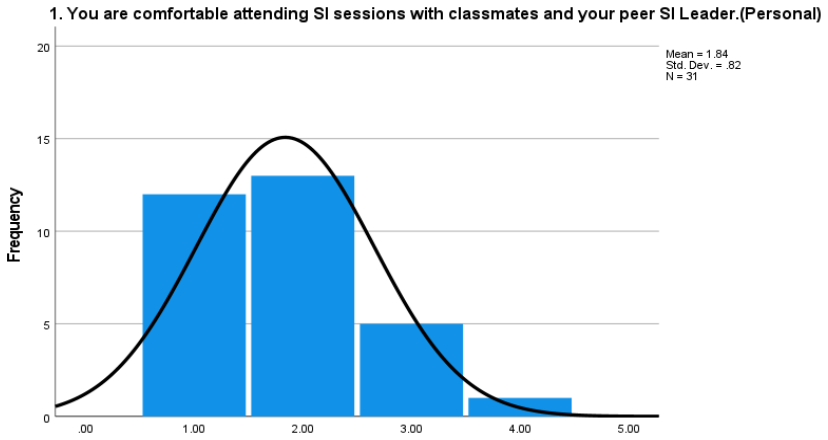
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
You are comfortable attending SI sessions with classmates and your peer SI Leader. (Personal)	○	○	○	○	○
Attending your SI sessions helps you to socially connect more with the college and campus activities. (Institutional)	○	○	○	○	○
You believe that students who participate in SI are more successful than students who did not participate. (Institutional)	○	○	○	○	○
SI has had a positive effect on your social life, work, or family circumstances. (Circumstantial)	○	○	○	○	○
You are very satisfied with your overall SI experience. (Circumstantial)	○	○	○	○	○

Appendix B: Descriptive Statistics Frequency Survey Results

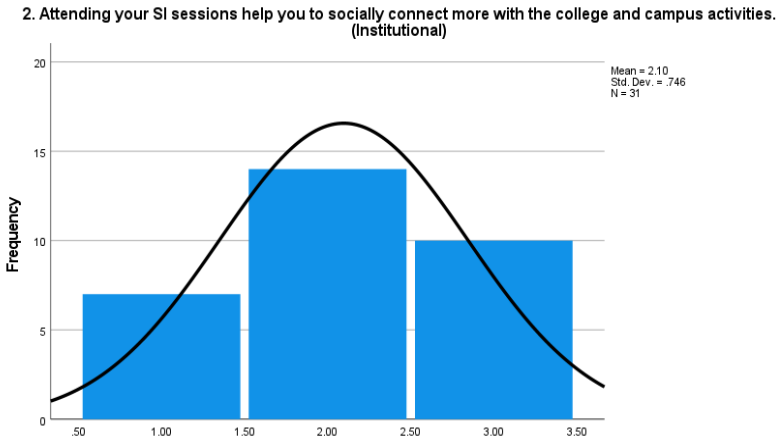
	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Total
You are comfortable attending SI sessions with classmates and your peer SI Leader. (Personal)	12 38.7%	13 41.9%	5 16.1%	1 3.2%	0	31
Attending your SI sessions helps you to socially connect more with the college and campus activities. (Institutional)	7 22.6%	14 45.2%	10 32.3%	0	0	31
You believe that students who participate in SI are more successful than students who did not participate. (Institutional)	8 25.8%	11 35.5%	10 32.3%	2 6.5%	0	31
SI has had a positive effect on your social life, work, or family circumstances. (Circumstantial)	8 25.8%	10 32.3%	11 35.5%	2 6.5%	0	31
You are very satisfied with your overall SI experience. (Circumstantial)	11 35.5%	10 32.3%	10 32.3%	0	0	31

Appendix C: Frequency Histogram Charts

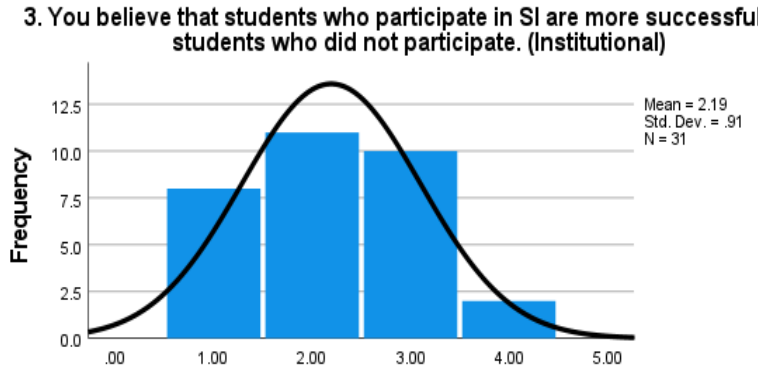
A. Survey Question 1



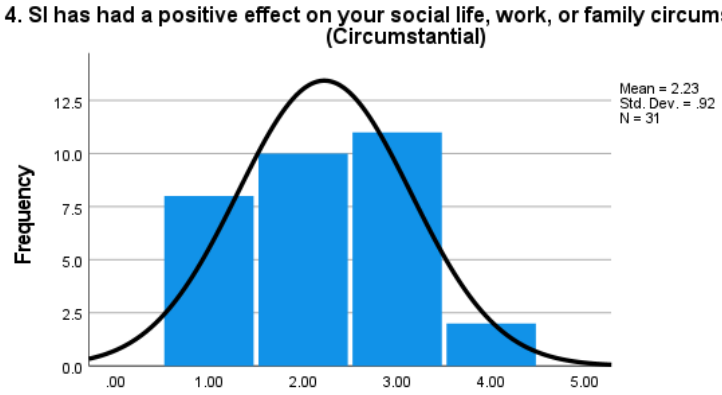
B. Survey Question 2



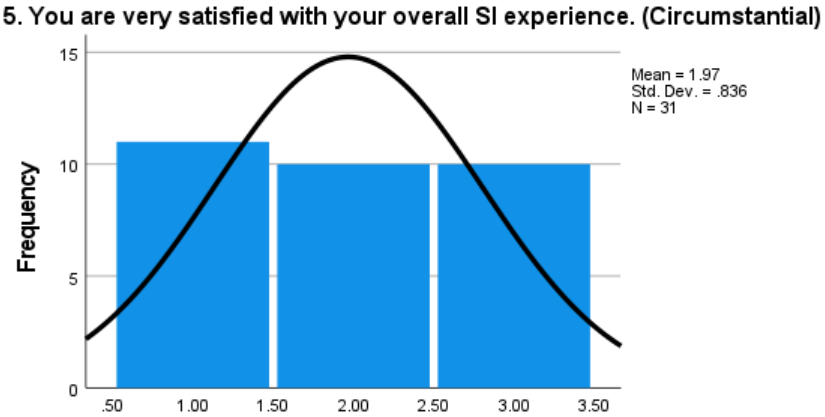
C. Survey Question 3



D. Survey Question 4



E. Survey Question 5



Appendix D: Dissemination Plan Chart

10-Year Fall Enrollment Trends		Day 14 of Enrollment		Enrollment By Student Type			10 Year Average Graduation Rates				Retention Rates		
Fall Year	Headcount	Year	Headcount	HS Dual Enroll	First Time College	Other Students	Year	Total	Men	Women	Year	Full-Time	Part-time
2012	12,235	2012	12,063	205	3,873	8,157	2012-13	5%	5%	4%	2012-13	44%	34%
2013	10,876	2013	10,556	226	3,300	7,350	2013-14	6%	7%	5%	2013-14	47%	32%
2014	10,333	2014	9,564	249	3,189	6,895	2014-15	5%	5%	5%	2014-15	54%	38%
2015	9,244	2015	8,956	349	3,382	5,513	2015-16	5%	5%	4%	2015-16	47%	30%
2016	8,472	2016	7,763	339	3,025	5,108	2016-17	10%	11%	9%	2016-17	45%	30%
2017	9,103	2017	7,752	461	3,176	5,466	2017-18	10%	9%	11%	2017-18	54%	35%
2018	9,496	2018	7,731	639	3,435	5,422	2018-19	11%	11%	12%	2018-19	49%	31%
2019	9,653	2019	8,135	1,022	2,995	5,676	2019-20	13%	12%	14%	2019-20	52%	38%
2020	7,811	2020	8,088	708	2,276	4,827	2020-21	11%	10%	12%	2020-21	54%	31%
2021	7,377	2021	6,069	1023	2,102	4,252							
							Average	8.44%	8.33%	8.44%	Average	49.56%	33.22%