



# IMPROVE RETENTION, IMPROVE LIVES



**MARBLE STATE**  
COMMUNITY COLLEGE

*This study used pseudonyms for the name of the Historically Black Community College, the names of informational interview participants, and the location of the college in recognition that confidentiality and anonymity are paramount in academic consultative research.*

Applied Doctoral Project

Stacie Hughes

In Partial Fulfillment of the  
Requirements for the Degree of  
Doctorate of Business Administration  
at Indiana Wesleyan University



IMPROVE RETENTION, IMPROVE LIVES

Stacie Hughes

This Applied Doctoral Project has been approved for the degree of Doctor of Business Administration.

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# DEDICATION

I dedicate this work in loving memory of my nephew, Aaron Brady Phillips.

# ACKNOWLEDGMENTS

I express my sincerest gratitude to my research chair, Dr. Debbie Philpott, who has been with me every step. Her boundless knowledge, guidance, support, patience, and encouragement made this work not only possible but enjoyable. I could not have asked for a better research chair, mentor, and friend. I am a better scholar, practitioner, and person because of her.

Thank you to my partner organization, which has requested anonymity in publication. While I cannot mention the individuals within the organization by name, I am eternally grateful for their willingness to support and assist with this project.

I want to thank my mother for being a strong, beautiful role model and always believing in me, even when I did not believe in myself. Thank you to my brother, Eric, for the late-night talks and for ensuring my four-legged family had someone caring to spend time with when I was busy studying and writing. My sincere thanks to Jim for the friendship, support, encouragement, and laughs that kept me going.

Finally, I want to express love and gratitude to my four-legged pack, Archer, Buttercup, Baxter, Harley, and Ellie. The unconditional love, nonstop antics, and pure joy gave me comfort and motivation every day of this journey.

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# ABBREVIATIONS

<b>Abbreviation</b>	<b>Name</b>
AACC	American Association of Community Colleges
ACCS	Alabama Community College System
ACHE	Alabama Commission on Higher Education
ACUE	Association of College and University Educators
ADP	Applied doctoral project
APA	American Psychological Association
AY	Academic year
CCCSE	Center for Community College Student Engagement
CCSSE	Community College Survey of Student Engagement
CM	Change management
Marble State	Marble State Community College
FTE	Full-time-equivalent
FTIC	First-time-in-college
GPA	Grade point average
GSU	Georgia State University
HBCC	Historically Black Community College
HBCU	Historically Black Colleges and Universities
HPT	Human Performance Technology
IEBC	Institute for Evidence-Based Change
IPEDS	Integrated Postsecondary Education Data System
MOOC	Massive Open Online Course
NAICS	North American Industry Classification System
NCCBP	National Community College Benchmark Project
NSO	New Student Orientation
PBCC	Predominantly Black Community College
POC	Point of contact
SDT	Self-determination theory
STEM	Science, technology, engineering, and mathematics
USF	University of South Florida
VFA	Voluntary Framework of Accountability



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# APA MODIFICATIONS

This paper uses *The Publication Manual of the American Psychological Association, Seventh Edition* style format. As an applied doctoral project (ADP), there are instances in which a modification of the American Psychological Association (APA) style format is appropriate. The following describes those modifications.

**Endnotes.** Endnotes are used throughout this ADP to identify information provided by the partner organization, Marble State Community College. They are designated by the use of Arabic numbers. The content is single-spaced and located at the end of the document.

**Figures.** Figures are modified from APA. The figure number and title are included below the image. In addition, the figure number, title, and note are single-spaced.

**Footnotes.** Footnotes are used throughout this ADP to provide supplemental information. They are formatted using Roman numerals and single spacing.

**Spacing.** Single line spacing is used throughout this ADP, with double line spacing between paragraphs. This limits the length and evidences a scholar-practitioner approach.

**Tables.** Tables are modified from APA in this ADP. In this report, the table number and title are included below the image. In addition, the table number, title, and note are single-spaced.

# EXECUTIVE SUMMARY

## Introduction

Marble State Community College (Marble State) is a two-year, public, HBCU community college located in Marble City, Alabama. Marble City is a national technology leader, and Marble State is its primary workforce development education and training provider. The institution is focused on training students for employment in career technical programs and university transfer. To that end, the institution identified retention as a strategic plan focus and anticipates the research in this study will support leadership and provide suggestions that can be implemented to better serve its students.

## Significance and Purpose of the Study

Community colleges provide invaluable services and resources that support and sustain society, including:

- preparing skilled workers to fill industry positions,
- awarding 88% of emergency medical technician certificates,
- awarding 74% of associate degrees for nurses, 74% for clinical laboratory technicians, and 70% for clinical laboratory technologies (Juszkiewicz, 2020),
- educating workers that contribute over \$800 billion in income to the national economy,
- educating workers that provide over \$46 billion in social service savings,
- helping break cycles of poverty and improve income gap (Blagg & Blom, 2018; EMSI, 2014), and
- providing taxpayers with a 14.3% return on their investment (EMSI, 2014).

When institutions do not retain students through to completion, those critical societal needs cannot be realized, and individual students can suffer personal, professional, economic, and social losses. Community college retention lags significantly behind that of four-year institutions. Retention rates at Marble State fall below the average for other Alabama Community College System institutions and public two-year institutions in the United States. Marble State understands the extent to which its students and community rely on its vital contributions and has made improving student retention an integral component of its institutional priorities and strategic plan. The purpose of this study is to assist Marble State in that pursuit.

## Research Question

The persistent retention issue at community colleges places the well-being of students, two-year institutions, and society at risk. That risk, coupled with declining enrollment, expected demographic cliffs, and policymakers' use of retention as a success indicator, puts increasing pressure on Marble State to improve its retention rates. This study aimed to assist Marble State with improving its retention rates and used the following research question as a guide:

Based on a gap analysis, what innovative and student-centered solutions will secure and sustain higher retention year over year at Marble State Community College, enabling the institution to fulfill its mission?

The researcher developed ten guiding questions to explore potential solutions to the research question, focusing on four primary topics. Those topics included current retention and intervention practices at Marble State, theoretical and conceptual frameworks that inform retention practices, best practices and benchmarks in retention and intervention, and gap analysis as a methodology.

## **Data Collection and Methodology**

A comprehensive review of available literature provided insight into frameworks, best practices and benchmarks, and gap analysis. Current practices and metrics at Marble State were addressed by examining internal and external institutional documents and information-gathering interviews with key retention personnel at Marble State.

A customized methodology framework was developed to holistically analyze the data, evaluate potential solutions, and answer the research question. The human performance technology model was used as a guiding framework to facilitate gap analysis, multiple perspective solution evaluation, and identification of the optimal solution. A TOWS matrix informed the actual and desired state of retention at Marble State. A gap analysis identified potential solutions, and each solution was evaluated using the McKinsey 7-S framework, examined for its ability to contribute to the institution's social capital, and assessed for risk.

## **Recommended and Selected Solution**

The optimal solution determined by the methodological analysis is to:

Increase student success resources by adding staff to support current and expand future retention and intervention efforts and mitigate risk to operations.

Representatives of Marble State unanimously agreed that the solution identified by the researcher would be the most effective retention solution. Factors leading to this decision included that there is currently a single student success specialist and that the role is heavily involved in many retention and intervention practices. Current staffing limits retention and intervention efforts and puts current practices at risk due to a lack of backup and succession planning.

Adding staff in this area would mitigate risk to operations and expand practices aimed at retention and intervention. The researcher conducted a force field analysis to examine the forces for and against the change and more thoroughly inform the change management plan.

## **Limitations and Generalizability**

One primary limitation is the generalizability of the findings. While not immediately generalizable, the results can inform retention efforts at other higher education institutions, particularly community and technical colleges. The study can guide practitioners and scholars in retention research methods and future studies. Institutional and environmental changes could impact the viability of the change management plan. For this reason, another limitation is that the study results are applicable for a limited time.

## **Change Management Plan**

A comprehensive change management plan was developed to implement the selected solution. Following Kotter's 8-step process for leading change, the primary components of the plan are the implementation of interventions, vision statement, communication plan, evaluation measures, reinforcement strategies, scenario planning, strategy map, and an action plan to drive the change. The detailed action plan includes a list of actions, responsible parties, and a timeline. The project start date is August 1, 2022, and the end date is October 31, 2023. This timeline will facilitate budget policies and procedures and support the systematic and successful implementation of the plan.

# SECTION 1: PROBLEM IDENTIFICATION AND INVESTIGATION

Marble State Community College<sup>i</sup> is a two-year, public, HBCU community college and part of the education industry, specifically the North American Industry Classification System Code 611210, community colleges. Retention is a persistent issue at Marble State and impacts its ability to fulfill its mission. Continued poor retention rates coupled with declining enrollments and looming enrollment cliffs could be detrimental to the institution. It could also significantly impact society through a lack of qualified individuals to fill industry positions, lack of skilled health care workers and first responders, economic losses, higher societal costs, and continuing or increasing income gaps and poverty rates.

This study identified factors and practices that impact student retention at community colleges and strategies for improving retention at Marble State. Using the DeVoe problem-based learning model, the study developed a change management plan to assist Marble State with implementing a solution to improve its retention rates. This section includes an organization overview, problem scenario, discovery and identification of the problem, the significance of the problem, broader implications of the problem, purpose of the project, and significance of the project.



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<sup>i</sup> The partner organization of this applied doctoral project requested confidentiality of identity in any work published by the author. The names of the institution and its location and employees were changed to honor that request. No other information was altered.

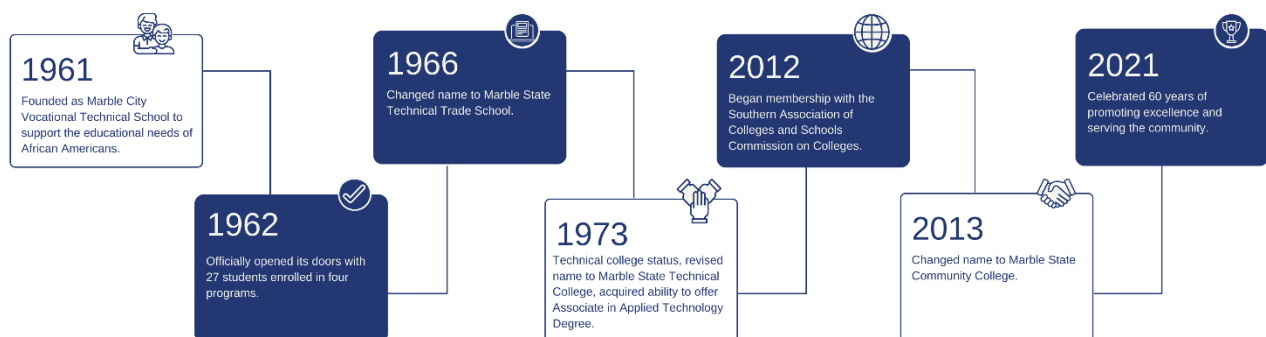
# ORGANIZATION OVERVIEW

## ABOUT MARBLE STATE COMMUNITY COLLEGE

Marble State Community College is a two-year public institution of higher education located in Marble City, Alabama. It is part of the education industry, specifically the North American Industry Classification System (NAICS) Code 611210, community colleges. The institution is a member of the Alabama Community College System (ACCS) and accredited by the Southern Association of Colleges and Schools Commission on Colleges to award associate degrees and certificates. It has an average fall enrollment of approximately 960 students<sup>ii</sup>.

Marble State is a Historically Black College or University (HBCU) focused on training students for current and future employment in career technical programs and university transfer. The institution had a fall 2021 student body of 872 (ACHE, n.d. -b) and employs 72 full-time and 52 part-time employees<sup>1</sup>. It has a strong reputation for having a diverse student body, serving the needs of underrepresented individuals, and combining traditional academics with robust hands-on learning.<sup>2</sup>

### A HISTORY



Originally founded in 1961, Marble State was established as a vocational technical school to support African Americans' technical and vocational career education needs. In 1973, Marble State earned technical college status and began offering its first associate degree. It next achieved community college status in 2012, along with the ability to continue its technical trade programs and operate as a traditional two-year community college.

Marble State began operations with 27 students enrolled in four programs: auto mechanics, cosmetology, electronics, and masonry.<sup>3</sup> By 2021, the student body grew to over 870 students in 22 programs. Each program at Marble State consists of an associate degree, certificate, or both. The institution also offers students a university parallel program, allowing students to complete the first two years of a baccalaureate degree while earning an associate degree. The college designed this program to prepare students for transfer to a four-year college or university.<sup>4</sup>

By fiscal year 2021, Marble State had total revenues of approximately \$16.2 million. The college derived the majority of its revenue from federal grants (45.6%), state appropriations (42.1%), and state grants (3.8%).<sup>iii</sup> The remaining revenue resulted from tuition and fees (7.2%) and other categories (1.3%).<sup>5</sup>

<sup>ii</sup> Average fall enrollment for the ten-year period of fall 2012 through fall 2021 is 959 students.

<sup>iii</sup> Federal and state funding in fiscal year 2021 was higher than normal primarily due to COVID-related relief funds.

# MARBLE STATE COMMUNITY COLLEGE STRATEGIC PLAN

## MISSION

Marble State Community College offers flexible, affordable university-transfer and technical degrees, certificates, adult and continuing education, and customized skills training to fulfill the diverse workforce needs of employers.

To provide innovative and student-centered solutions to empower those we serve.

## VISION

## VALUES

Scholarship, Integrity, Accountability, Excellence, Collaboration, Student-Focused

Serving more students, promoting student success, strengthening curriculum, and expanding resources and infrastructure.

## PRIORITIES

## OBJECTIVES

Connecting students to more resources, increasing presence in the community, expanding dual enrollment programs, modifying adult education to meet the post-COVID-19 environment, integrating emerging technology, and improving library infrastructure and holdings.

## PROBLEM DESCRIPTION

Marble State Community recently reviewed and updated its strategic plan. Several activities linked to the strategic plan focus on improving the retention of students because it will also positively impact completion, job placement, and certification/licensure rates. The college is currently implementing some retention strategies, such as participating in the Caring Campus Initiative through the Institute for Evidence-Based Change. Additionally, the college has a new Dean of Students and Assistant Dean of Student Success. The research related to retention will aid these individuals in providing better leadership in retention while providing the college with suggestions that could be implemented to better serve its students.<sup>7</sup>

## QUESTIONS POSED BY MARBLE STATE LEADERSHIP

- 1 What factors most impact students' motivation and ability to complete their studies (through transfer or graduation)?
- 2 What inherent or structural barriers most impede students' ability to complete their studies (through transfer or graduation)?
- 3 What type of self-assessment would be most effective in determining internal areas for improvement in retention and completion?
- 4 What strategies are most effective for improving retention and completion?<sup>8</sup>



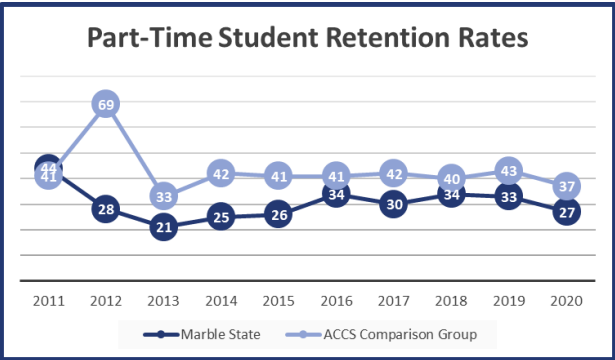
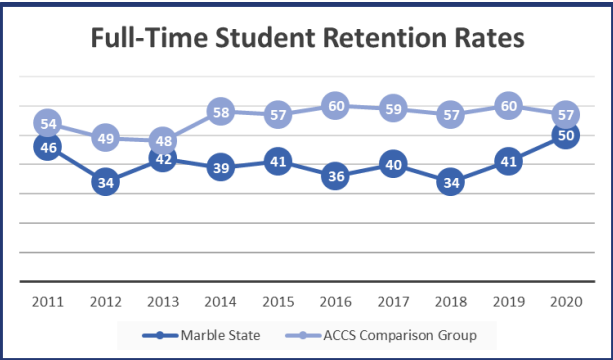
**MARBLE STATE**  
COMMUNITY COLLEGE



# PROBLEM SCENARIO

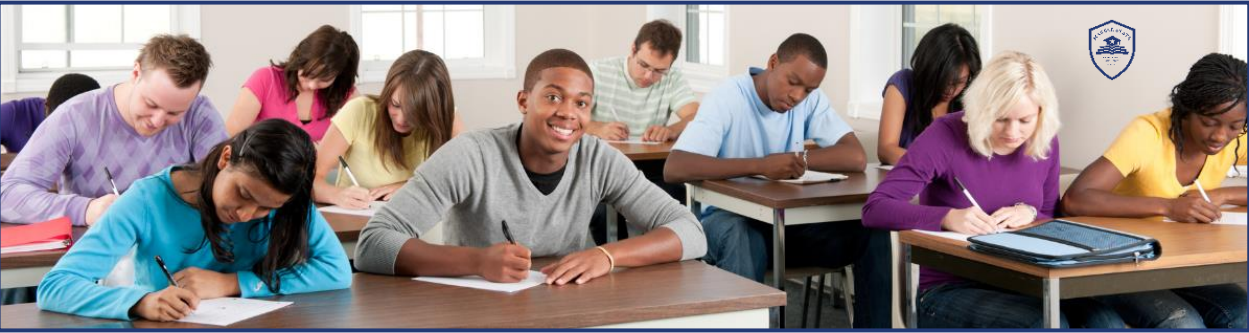
Retention at Marble State has been a persistent issue, with retention rates that consistently fall below the average for other community colleges in the ACCS. Figure 1 shows the percentage of full-time students retained from one year to the next at Marble State compared to all other community colleges in the ACCS<sup>iv</sup>. Figure 2 shows the retention percentages of part-time students for the same populations. Marble State provides invaluable services and resources to its community while serving some of the most vulnerable populations, including a significantly larger percentage of minority students than other community colleges in the ACCS. Poor retention rates negatively impact the institution’s ability to effectively meet the needs of its students and community.

Funding is a vital resource needed to continue and expand the school’s mission. One factor impacting that funding is the school’s retention and persistence rates. In addition to lost tuition and fees, beginning in the 2018-2019 academic year, the ACCS implemented a performance-based funding model to distribute a portion of the state’s budget to its 23 community colleges (Sell & Beck, 2019). While funding is a serious consideration for the institution, poor retention rates can negatively impact its image, reputation, and ability to fulfill its mission. In addition to being imperative to the institution’s success, improved retention can provide significant economic and social benefits to individuals and communities. Much research has been conducted about ways to improve retention and the impact retention can have on the success of schools, students, and communities. To date, retention research has not been found that addresses the unique needs of Marble State and its students and community.



**Figure 1.** Full-Time student retention rates for academic years 2011–2020. The “ACCS Comparison Group” is all community colleges in the ACCS, except Marble State. Retention data sourced from the Integrated Postsecondary Education Data System (IPEDS) of the National Center for Education Statistics (NCES).

**Figure 2.** Part-Time student retention rates for academic years 2011–2020. The “ACCS Comparison Group” is all community colleges in the ACCS, except Marble State. Retention data sourced from the Integrated Postsecondary Education Data System of the National Center for Education Statistics.



<sup>iv</sup> Retention rates are calculated as the percentage of first-time, full-time students who return to the same institution the following fall in Figure 1. Retention rates are calculated as the percentage of first-time, part-time students who return to the same institution the following fall in Figure 2.

# DISCOVERY & IDENTIFICATION OF THE PROBLEM

Retention at Marble State has been a persistent issue and concerns the institution as retention impacts its ability to fulfill its mission and vision. The director of institutional effectiveness at Marble State confirmed that retention is not merely a goal of the institution but an essential pillar needed to reach a multitude of goals for the students, the institution, and the community. When the college cannot retain students through to completion, whether in the form of graduation or transfer, the students can lose personal, professional, economic, and social opportunities.

Poor retention can lead to employers facing a lack of qualified individuals to fill industry positions and a lack of skilled health care workers and first responders. Marble State is well-positioned to meet those needs. Figure 3 presents Marble State’s top five majors in fall 2021, which included medical and clinical assistant, computer and information systems, and manufacturing engineering technology.

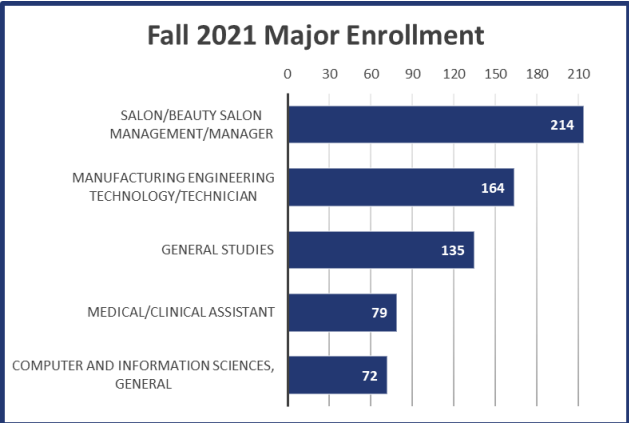


Figure 3. Fall 2021 major enrollment. Includes the top five majors at Marble State in the fall 2021 term. Enrollment data sourced from the Alabama Commission on Higher Education.

Meeting those workforce needs is only possible if Marble State can retain students through to completion. Figure 4 presents the fall 2020 enrollment by race, ethnicity, and gender as a percentage of the total student body at Marble State compared to all other community colleges in the ACCS.

Enrollment in community colleges has been steadily declining for years and is expected to worsen due to an impending drop in the college-age population. Add to that the impact that remote instruction during the coronavirus pandemic may have on high school dropout rates, and it places an even greater urgency on Marble State’s retention problem. If not addressed, declining enrollment coupled with lower-than-average retention rates and a performance-based funding model can put the institution in a precarious financial position.

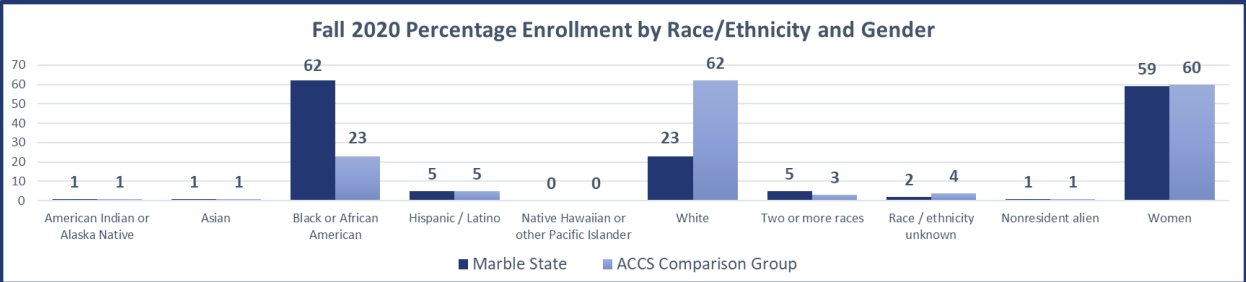


Figure 4. Fall 2020 percentage enrollment by race/ethnicity or gender. The “ACCS Comparison Group” is all community colleges in the ACCS, except Marble State. Enrollment data sourced from the Integrated Postsecondary Education Data System of the National Center for Education Statistics.

# SIGNIFICANCE OF THE PROBLEM

Higher education has been anticipating a “demographic cliff” for years due to the drop in birth rate that began in 2008. This cliff could result in as much as a 15% drop in college-age first-year students starting in 2025 (Schroeder, 2021). Birth rates dropped again in 2020, partly due to the COVID-19 pandemic, creating an additional cliff expected to begin in 2037. In the meantime, the remote instruction required for high school students during the pandemic is expected to result in a spike in high school dropouts (Adams, 2020). In addition, there is an increasing hesitancy to enroll in college due to a combination of the rising costs of attending college and staggering student loan debt (Schroeder, 2021).

Most institutions can do little to combat demographic cliffs or increasing high school dropout rates. Institutions like Marble State have little to no control over the cost of attending college as the ACCS governs its tuition rates. Tuition and fees at Marble State are among the lowest in the state and account for only 7% of its revenue in the fiscal year 2021, with local, state, and federal grants and appropriations accounting for 92%.<sup>9</sup> Higher education institutions depend on student bodies to carry out their missions, and enrollment prospects are increasingly bleak, placing a heightened sense of urgency on retaining students who do enroll.

Beyond financial viability, a lack of students translates to a lack of educated, qualified individuals to meet the needs of the institutions’ stakeholders. In fall 2020, 39% of all undergraduate students in the U.S. were enrolled in community colleges (AACC, 2022). The American Association of Community Colleges (AACC) created a national accountability system for and by community colleges, the Voluntary Framework of Accountability (VFA). The ACCS adopted metrics from the VFA to help measure how well two-year institutions fulfill their missions, and retention is one of the five metrics (ACHE, n.d.-a)<sup>v</sup>.

Community colleges shoulder immense societal burdens and are responsible for workforce development, technical and vocational training, economic development, community service, and human capital formation (Mintz, 2019). Many factors impact community colleges’ ability to operate properly, including retention. When community colleges do not function properly, individuals and society can pay the price through a lack of qualified individuals to fill industry positions, an unhealthy society, adverse economic impacts, increased societal costs, widening income gaps, and increased poverty.

Employers have a vested interest in Marble State’s ability to retain students to completion. Marble State’s hometown of Marble City, Alabama, is a national technology leader recently ranked as one of the best in the country for high-tech jobs (Gore, 2019). The largest city in the state, Marble City is home to one of the largest research parks in the nation, national space agency offices, United States Army technology command centers, and advanced auto manufacturing facilities (“Marble City, Alabama,” 2021). Marble State is its community’s primary workforce development education and training provider. Its Workforce Development Division includes two major components: (a) training for existing business and industry and (b) continuing education and adult skills training.<sup>10</sup> Marble State supports a diverse workforce which can make businesses more effective, successful, and profitable (Shemla, 2018).

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<sup>v</sup> The ACCS adopted the following five metrics developed by the AACC as part of the VFA: credit hour attainment, students still enrolled in year two (retention), outcome success rates, six-year graduation rates, and number of students and awards.

Marble State contributes to its community by helping reduce societal costs and improving the economy. Educated citizens are found to commit fewer crimes and utilize fewer government benefits, including unemployment, health care, and welfare. EMSI (2014) estimated the U.S. will benefit from \$46.4 billion in social savings due to community colleges' impact on the national economy. Community college students can expect to earn \$469.3 billion in increased earnings over their working lives, and society benefits from the increased taxes paid on those earnings (EMSI, 2014). Community colleges receive funding from federal, state, and local taxpayers, and EMSI (2014) found that those taxpayers recognize an average internal rate of return on their investment of 14.3%. Much of that return is only realized when community colleges retain students through to completion.

Community colleges confer the majority of emergency medical technician certificates and associate degrees for clinical laboratory technicians, clinical laboratory technologists, and nurses (Juszkiewicz, 2020). Society benefits from the skills and availability of health care workers, laboratory technicians, and first responders. Community colleges play a substantial role in maintaining an adequate supply of trained professionals and providing continuing education for those professionals. With the looming demographic cliffs, retention will be vital to ensuring there is no shortage of health care workers available to meet communities' needs.

Many factors impact the cycle of poverty for families, and education can help break that cycle but comes with its own complications. Almost one-third of undergraduate students in the country are first-generation. These students are more likely to attend a community college than a four-year university or private college and choose careers that allow them to give back to their communities (EAB, 2018). Unfortunately, they are also less likely to graduate on time, have a mentor, or make as much as their peers (EAB, 2018). First-generation students have the potential to break their cycle of poverty and help those in their communities. Without properly functioning community colleges, many students, particularly first-generation and low-income, will not have easy access to the tools needed to make those systemic changes.

Representation impacts the success and well-being of underserved communities. A study on the impacts of same-race teachers found that Black students with at least one Black teacher in elementary school are 19% more likely to enroll in college and 32% more likely if they have more than one Black teacher (Gershenson et al., 2021). Greenwood et al. (2020) published a study showing that Black babies die three times more often than White babies during hospital stays, but their mortality rate is cut in half when cared for by Black doctors. As an HBCU, Marble State supports representation in the community by educating and training a large proportion of Black students who become, among other things, teachers and medical professionals that contribute to the health and success of the Black community.

Marble State is one of 101 HBCUs in the United States and one of only 12 such 2-year institutions (UNCF, 2021). It is located in one of the most high-tech cities in the country and serves some of the most underrepresented individuals in its community, including minorities and first-generation students. Marble State has an open admissions process and a significantly limited budget, both of which present additional retention challenges. A review of retention literature and an in-depth study of the practices at Marble State have the potential to result in a meaningful change management plan that will (a) allow the institution to understand its students' motivations, abilities, barriers, and impediments to completion, (b) identify areas for improvement at Marble State, and (c) implement strategies and processes that will be effective in improving retention and completion.

# BROADER IMPLICATIONS OF THE PROBLEM

This study has the potential to offer practical, accessible processes to the broader higher education community that can facilitate improved retention rates, particularly in underserved, at-risk populations of students. Performance indicators, such as retention, continue to be critical success factors, including as they relate to performance-based funding. This study can provide higher education administrators and policy makers with assessment and accountability practices to measure and demonstrate institutional performance and effectiveness.

Higher retention rates mean that community colleges can be better equipped to meet societal and workforce needs. Declining enrollment places an even greater emphasis on the need for institutions to retain students through to completion. This study has the potential to improve community colleges’ ability to continue providing societal benefits including preparing the workforce that protects and cares for citizens, providing accessible education, developing a skilled and knowledgeable workforce that meets employers’ needs, supporting and developing communities, and supplying businesses with a diverse workforce.

According to the United States Census Bureau (2020), the country’s poverty rate is just over ten percent. As seen in Figure 5, poverty in the U.S. disproportionately includes minorities, young people, women, individuals living in the South, those with no high school or college, and those who do not work or only work part-time.

Higher education, and community colleges in particular, can provide individuals a path out of poverty while addressing the specific needs of groups that experience disproportionate poverty levels. The ACCS consists of 24 community and technical colleges, and the state has a poverty rate above the national average. Identifying solutions to improve retention can assist Marble State and other community colleges in addressing poverty in their communities.

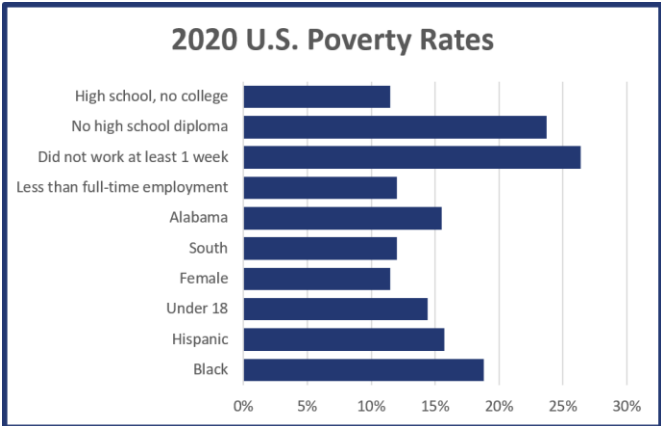


Figure 5. The 2020 U.S. poverty rates. Includes demographics with higher-than-average poverty rates. Poverty data sourced from the United States Census Bureau.

Retention is improved when institutions understand the barriers that students face and assist in removing those barriers. When institutions retain students to completion, the students have access to better personal, professional, economic, and social opportunities. It also benefits society through the preparation of skilled health care workers and first responders, accessible education, workforce development, community support and development, and diversity in the workforce.

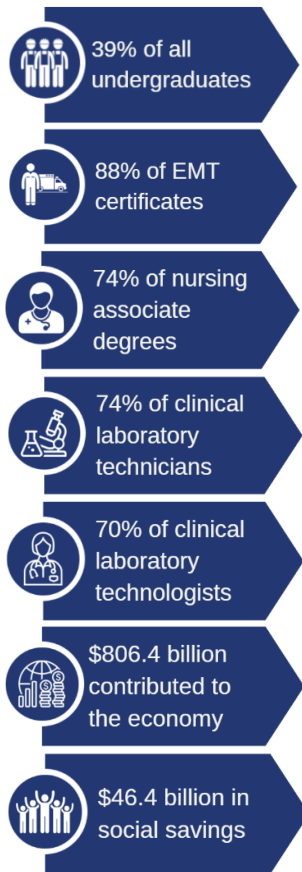
# PURPOSE OF THE PROJECT

The purpose of the project is to identify factors and practices that impact student retention at community colleges and strategies for addressing and improving the poor retention rates at Marble State, a two-year, public, HBCU community college in Alabama. The project analyzes retention and intervention best practices and Marble State’s current practices.



# SIGNIFICANCE OF THE PROJECT

Much research has been conducted on the impact retention can have on the success of higher education institutions and their stakeholders. Even with existing research, retention is still a troubling issue and becoming more critical with declining enrollment and looming enrollment cliffs, particularly for community colleges. When community colleges are unable to retain students through to completion, society can pay the price in many ways, including a lack of qualified individuals to fill industry positions, lack of workforce that protects and cares for citizens, economic losses, societal costs, and continuing or worsening income gaps and poverty levels.



## Qualified Individuals to Fill Industry Positions

Community colleges in the United States educate approximately 39% of all undergraduates (AACC, 2022). When community colleges fail to retain those students through to completion, it could lead to a significant shortage of skilled workers to fill industry positions.

## Workforce that Protects and Cares for Citizens

The COVID-19 pandemic has highlighted the importance of skilled health care workers and first responders (JFF's Policy Leadership Trust, 2020). The AACC indicated that community colleges awarded 88% of all emergency medical technician certificates in the 2018–19 academic year (Juszkiewicz, 2020). During that same time frame, community colleges conferred 74% of associate degrees in nursing, 74% for clinical laboratory technicians, and 70% for clinical laboratory technologists (Juszkiewicz, 2020). Laboratory technicians and technologists are crucial to our well-being, a fact highlighted during the COVID-19 pandemic (Rohde, 2020). Society benefits from the skills and availability of health care workers, laboratory technicians, and first responders. Community colleges play a substantial role in maintaining an adequate supply of trained professionals and providing continuing education for those professionals.

## Economic Support

Educated citizens support the economy by earning higher incomes and paying higher taxes. EMSI (2014) found that workers educated at community colleges contributed an additional \$806.4 billion in income to the national economy. To realize that additional income and resulting taxes, community colleges must retain students through to completion.

## Societal Savings

Educated citizens are found to commit fewer crimes and utilize fewer government benefits, including welfare, unemployment, and health care. EMSI (2014) found that workers educated at community colleges provided society with an additional \$46.4 billion in social savings. A less quantifiable cost to society is the lack of civic engagement that results from a less educated population. When community colleges do not retain students, the costs to society and our democracy can be significant.

## Income Gap and Poverty

Many factors impact the cycle of poverty for families, and education can help break that cycle. First-generation students are more likely to attend a community college and choose careers that allow them to give back to their communities (EAB, 2018). Without understanding the barriers these students face and enacting processes to retain them through to completion, those individuals may remain in poverty and be unable to give back to their communities.



When students cannot complete their studies, they can suffer personal, professional, economic, and social losses. Millions of students leave college without a degree but with debt they struggle to pay (Nadworny & Lombardo, 2019). The combination of debt and no degree frequently leaves those students worse off than when they started college. Students who did not complete their education have a default rate three times that of students who did (Nadworny & Lombardo, 2019). The effects of defaulting on student loan debt can hold those individuals back for years in the form of lower credit scores, higher borrowing interest rates, and an inability to qualify for additional student loans to return to school and complete a degree.

To date, retention research has not been found that addresses the unique needs of Marble State and its stakeholders. There is limited site-based research available to assist small, public, HBCU community colleges in assessing, developing, and implementing retention strategies.

By investigating retention and intervention practices aimed at improving retention, the results of this study have the potential to help Marble State improve retention, serve more students, and continue to support society through betterments for individuals, the workforce, local and national economies, and society as a whole. In short, the significance of this project is in its goal to help Marble State **Improve Retention, Improve Lives**.

## SUMMARY

Marble State provides vital services and resources to its students and community, including some of the most underserved populations. Poor retention rates can negatively impact the institution's funding, image, reputation, and ability to fulfill its mission. Declining enrollment and anticipated demographic cliffs are placing greater urgency on addressing the retention concerns.

Community colleges address the critical needs of students, employers, communities, and society, and when those institutions are unable to carry out their mission, those needs may go unmet. Those needs include human capital, workforce development, technical and vocational training, diversity, community service, economic development, and health care and first responder workforces. Community colleges have a unique ability to assist those disproportionately impacted by poverty in the U.S. In addition, improving retention will help prevent students from leaving school with student loan debt and no degree or credential, a combination that puts students in perilous financial conditions.

This study seeks to develop a meaningful change management plan that informs the institution's problem and provides concrete steps to implement strategies and processes that are effective in improving retention and completion. The following section delves deeper into the problem by developing the problem statement. To that end, the section analyzes the environment, industry, and organization and identifies known facts, assumptions, knowledge gaps, and potential solutions.

## SECTION 2: DIAGNOSING THE PROBLEM

This study sought to develop a change management plan that effectively addresses Marble State's retention problem. Before the problem could be addressed, it had to be clearly and precisely defined. To that end, this section includes the development of a detailed problem statement, overarching question, and guiding questions for exploring potential solutions to the problem.

Developing the problem statement and questions required an analysis of the environment, industry, and organization. These analyses provide an understanding of current conditions and trends that aid in determining the short-term and long-term aspects of the problem. This section also identified known facts, assumptions, knowledge gaps, and solution ideation related to the problem. Finally, this section examined the scope of the study, including assumptions, externally-imposed limitations, and internally-imposed delimitations.

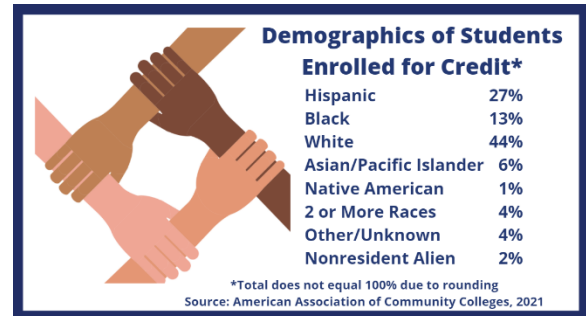
### PRESENTING PROBLEM

In reviewing and updating its strategic plan, Marble State noted that many of its aims and institutional priorities were directly or indirectly related to the need to improve student retention. Improving retention can positively impact completion, job placement, and certification/licensure rates, all of which are significant priorities of the institution. A failure to address the retention problem will impair Marble State's ability to meet the needs of its students, the college, and the community. The research related to the retention problem at Marble State will aid the institution in providing better leadership while supplying the college with processes that could be implemented to better serve its students. Environmental, industry, and organization analyses assist in examining the problem.

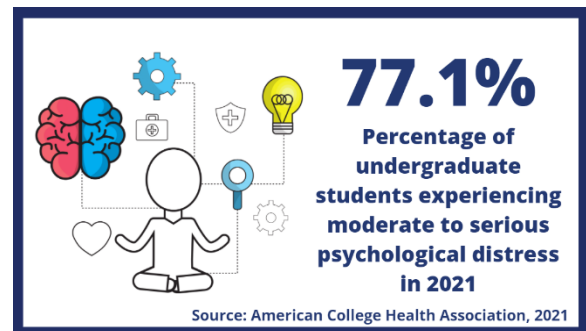


# ENVIRONMENTAL ANALYSIS AT-A-GLANCE

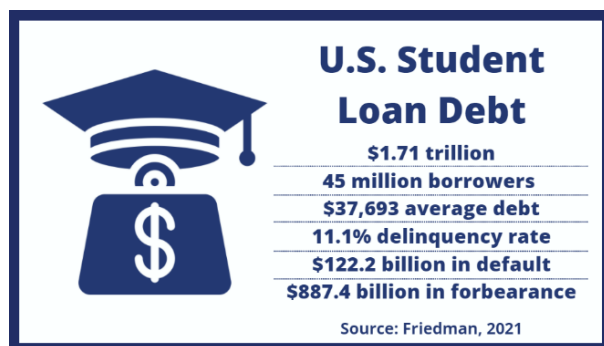
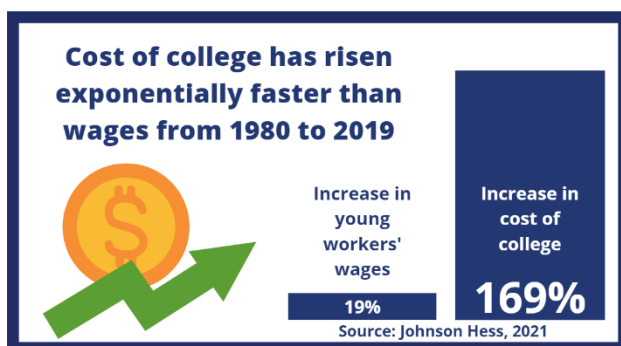
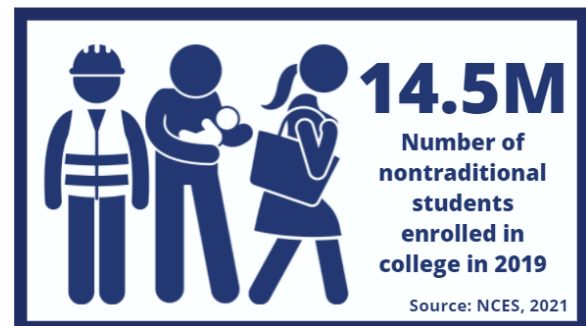
**Socio-cultural.** Community colleges have a responsibility to address the needs of society as a whole and a specific subset of society. This responsibility includes fostering diversity and inclusivity to meet the demands of an increasingly diverse population and workforce (Bouchrika, 2020). These institutions must address the growing number of nontraditional students<sup>vi</sup> and college students' mental health challenges (Bouchrika, 2020).



**Technological.** Community colleges face pressure to deliver performance, meet the changing needs of students and the workforce, and address increasing competition. Technology can assist with these pressures, and failing to keep up with technological trends can be detrimental to the institutions' goals. Technological trends driving changes in the industry include online learning, blockchain, big data, artificial intelligence, and virtual reality (Bui, 2020).



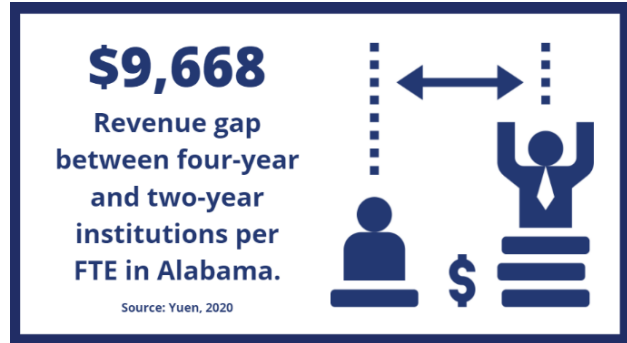
**Economic.** Economic factors can have lasting effects on the future of higher education and impact the way community colleges operate. Economic trends that they must address include student loan debt, increasing costs of higher education, decreasing government funding, climate change, and changing workforce needs. Failure to adequately address these trends may lead to continued declines in government and industry funding (EDUCAUSE, 2020).



<sup>vi</sup> The U.S. Department of Education defines nontraditional students using three sets of criteria: a) enrollment patterns (do not enroll immediately following high school and attend full time); b) financial and family status (single parent, working full-time, having dependents other than spouse, financially independent from parents); and c) high school graduation status (GED recipients or those who received a high school certificate of completion).

**Environmental.** Environmental factors and how consumers react to those factors impact the community college industry. Each institution must consider its impact on the environment, resource availability, and climate change. Community colleges must also stay abreast of the skills needed to address the environmental challenges in the workforce to stay relevant and competitive.

**Political.** Government and politics impact the community college industry through funding and regulation. A decrease in government funding and individuals' perceived value of higher education force community colleges to review and revise their business models and seek additional financing sources. The current political polarization creates difficulties on campus by stifling the healthy sharing of diverse ideas and off campus by creating obstacles to funding and legislation (EDUCAUSE, 2020).



**Legal.** The volume and complexity of regulations applicable to higher education exert significant legal pressures on community colleges. The external legal factors include regulations governing equal access to education, disability accommodations, public information requests, intellectual property rights, student records, employee relations, diversity, discrimination, student safety, and federal student financial aid programs (Stellman, 2016). As Stellman (2016) indicates, today's society is increasingly litigious, which puts increased pressure on community colleges to ensure regulatory compliance.



**Ethical.** Institutions of higher education can set their ethical standards but most often acknowledge and address the values and ethics of society. The changing landscape of society is one that community colleges must consider to remain viable and competitive. Generation Z is a populous, diverse, and socially conscious generation with progressive ethical ideas. Community colleges must consider this demographic's values and needs to remain a viable education option for them.

**Who is Gen Z?**

- Born 1997 to 2012
- 67.06 million, accounting for over 20% of U.S. population
- 52% White, 25% Hispanic, 14% Black, 4 % Asian
- Face growing mental health challenges
- Pragmatic, financially-minded
- Digital natives
- Shrewd consumers
- Socially conscious
- Politically progressive

Source: Annie E. Casey Foundation, 2021b

**What does Gen Z care about?**

- Health care
- Mental health
- Higher education
- Economic security
- Civic engagement
- Race equity
- Environment

Source: Annie E. Casey Foundation, 2021a

# EDUCATION INDUSTRY ANALYSIS



## OVERVIEW

Marble State Community College operates in the education industry serving the higher education needs of individuals in Marble City, Alabama, and surrounding areas. It is part of the North American Industry Classification System Code 611210, community colleges. NAICS (n.d.) defines the industry with the following:

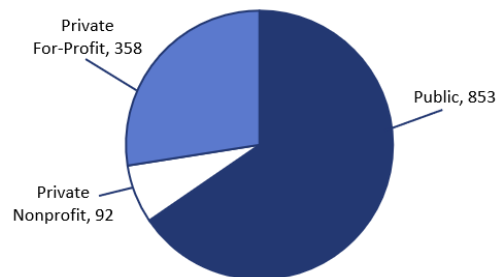
This industry comprises establishments primarily engaged in furnishing academic, or academic and technical, courses and granting associate degrees, certificates, or diplomas below the baccalaureate level. The requirement for admission to an associate or equivalent degree program is at least a high school diploma or equivalent general academic training. Instruction may be provided in diverse settings, such as the establishment's or client's training facilities, educational institutions, the workplace, or the home, and through diverse means, such as correspondence, television, the Internet, or other electronic and distance-learning methods. The training provided by these establishments may include the use of simulators and simulation methods. (para. 1)

The community college industry provides accessible education, workforce development, community support, community development, and diversity in the workforce. It also prepares a workforce that protects and cares for citizens by training the majority of healthcare workers, laboratory technicians, and first responders.

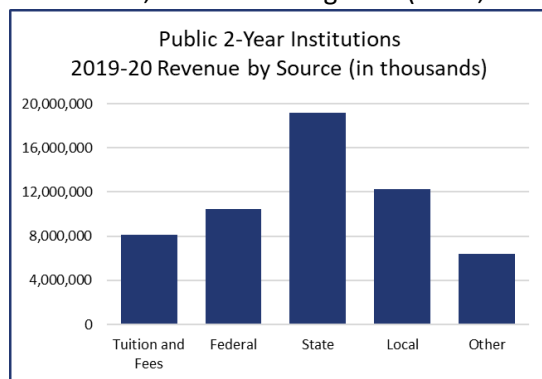
## INDUSTRY FACTS AT-A-GLANCE

Community colleges are also referred to as junior colleges, two-year colleges, technical colleges, or vocational colleges. In the United States, there are a total of 1,303 community colleges. Sixty-five percent of community colleges are public, with the remainder being private for-profit and nonprofit institutions, as shown in Figure 6 (NCES, n.d.-b).

**Community Colleges in the United States**



**Figure 6.** Community colleges in the United States. Data sourced from the Integrated Postsecondary Education Data System of the National Center for Education Statistics.



**Figure 7.** Public 2-year institutions 2019-20 revenue by source. Data sourced from the Integrated Postsecondary Education Data System of the National Center for Education Statistics.

The public community college industry relies heavily on government support. In the 2019-20 academic year, public community colleges reported total revenue of more than \$56 billion, with the majority resulting from government appropriations, contracts, and grants, as indicated in Figure 7 (NCES, n.d.-b).

<b>1,303</b>	<b>39%</b>	<b>59%</b>	<b>5.6M</b>	<b>\$64B</b>	<b>564,000</b>
Number of Community Colleges	All U.S. Undergraduates	Students Receiving Financial Aid	Total Fall 2019 Enrollment	Total 2018-19 Revenue	Number Employed by Community Colleges
Source: NCES, n.d.	Source: NCES, n.d.	Source: NCES, n.d.	Source: NCES, n.d.	Source: NCES, n.d.	Source: NCES, n.d.



## INDUSTRY TRENDS<sup>vii</sup>

<p><b>Expanding Distance Learning</b></p> <p>Online courses improve accessibility and flexibility and offer the same quality as traditional courses. The number of online courses and programs is increasing among community colleges.</p>	<p><b>Increasing Veteran Enrollment</b></p> <p>Many war veterans need programs that are accessible and can prepare them to enter the workforce. Community colleges are designing programs to focus on those needs and goals.</p>
<p><b>Focusing on Dual-Enrollment</b></p> <p>Dual-enrollment benefits students by completing both high school and college credits and encourages them to continue their education.</p>	<p><b>Partnering with Four-Year Schools</b></p> <p>Partnerships with four-year institutions provide assurance to community college students their credits will transfer to the four-year institution.</p>
<p><b>Reverse Transfer Students</b></p> <p>Reverse transfer provides opportunities to students who want to improve their GPA, earn new skills, or sharpen existing skills.</p>	<p><b>Increasing Globalization Response</b></p> <p>Adapting programs and entering agreements with the Global Corporate College allow community colleges to increase their globalization response.</p>
<p><b>Being Mobile-Friendly</b></p> <p>Almost everyone owns a mobile phone device. Community colleges are extending their reach by expanding their social media presence and ensuring their websites are mobile-friendly.</p>	<p><b>Offering Baccalaureate Degrees</b></p> <p>While community colleges have not traditionally done so, they are now offering baccalaureate degrees to help address accessibility and labor shortages.</p>
<p><b>360° Virtual Tours Online</b></p> <p>Virtual tours allow community colleges to expand recruitment efforts and realize a 25% return on investment.</p>	<p><b>Increasing Business Partnerships</b></p> <p>Business partnerships allow community colleges to understand employers' needs and prepare students to meet those needs.</p>

2020 Fall Enrollment	
Public	4,702,657
Private For-Profit	178,874
Private Nonprofit	32,252
Total	4,913,783
2018-19 Degrees and Certificates Awarded	
Associate Degree	878,900
Certificate	619,711

**Figure 8.** The 2020 fall enrollment and 2018-19 degrees and certificates awarded at community colleges in the United States. Data sourced from NCES.

Figure 8 shows that fall 2020 enrollment at community colleges was approximately 4.9 million. During the 2018-19 academic year, community colleges conferred 878,900 degrees and 619,711 certificates. Figures 9 and 10 depict a steady decline in community college enrollment between 2011 and 2020, averaging a loss of approximately 3.5% per year (NCES, n.d.-b). While already a troubling pattern for the industry, the COVID-19 pandemic has exacerbated the issue. Community college enrollment is down almost 15% since 2019 (Sedmak, 2021).

Community colleges distribute educational services in two main formats, in-person and online. The majority of offerings are provided in person, primarily during the day, but also at night and on weekends to meet the needs of students. These institutions are continuously expanding their offerings in the online format through robust learning management systems that have a wide range of capabilities and are able to cope with stresses and errors without failure. These learning management systems also allow community colleges to track data for measuring the effectiveness of courses and programs.

<sup>vii</sup> Linchpin SEO. <https://linchpinseo.com/trends-in-community-college-marketing-recruitment-strategies/>



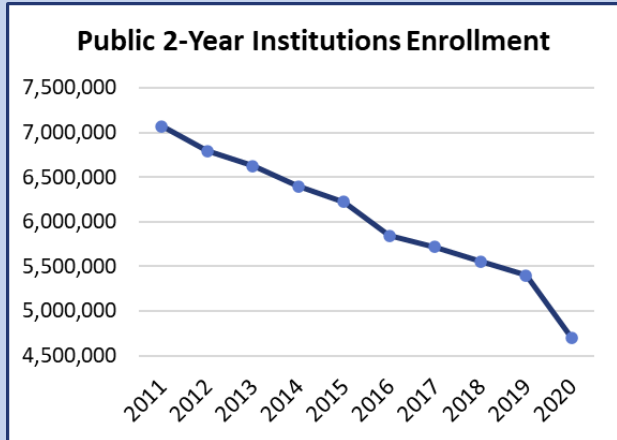


Figure 9. Public 2-year institutions enrollment for academic years 2011–2020. Data sourced from the Integrated Postsecondary Education Data System of the National Center for Education Statistics.

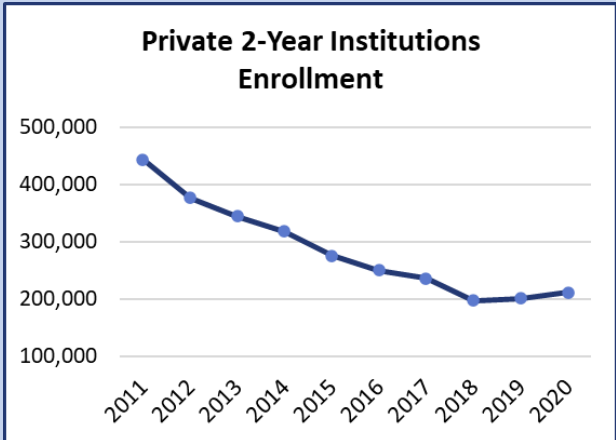
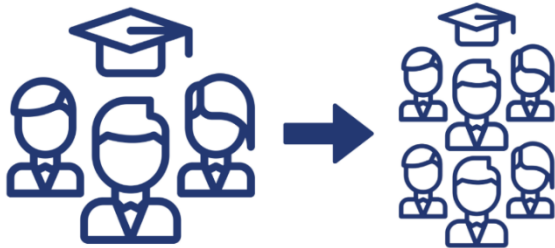


Figure 10. Private 2-year institutions enrollment for academic years 2011–2020. Data sourced from the Integrated Postsecondary Education Data System of the National Center for Education Statistics.



Economies of scale opportunities exist in the industry, with the most notable being that class size could be increased by combining sections of the same course. An increase in class size would increase revenue from those classes with little to no increase in monetary costs. The nonmonetary costs often prevent community colleges from making significant class size changes, particularly when small class size is a competitive advantage for the institution.

## PORTER’S FIVE FORCES

**Barriers to Entry.** Barriers to entry are high due primarily to the following requirements: substantial capital investments, federal and state regulations, licensing, and accreditation. Brand recognition and reputation also impede new entrants.

**Supplier Power.** Supplier power is strong and rests primarily with academics that provide instruction, research, and administrative functions. The main distribution channels are online and in-person.

**Competitors.** Community colleges compete primarily for students, government funding, and faculty. The increase in online education has expanded competitors to include community colleges, four-year colleges and universities, and for-profit institutions throughout the country.

**Buyer Power.** Buyers include students, students’ parents, and employers. The power of these buyers is increasing due to the increase in available substitutes and the recent trend of employers no longer requiring degrees.

**Substitutes.** The principal substitutes for the industry are massive open online course (MOOC) services, professional certificates and badges, and on-the-job training. An increasing number of companies are hiring individuals with no college degree, including for lucrative technical and professional positions (Bouchrika, 2021).

Select companies that no longer require degrees.



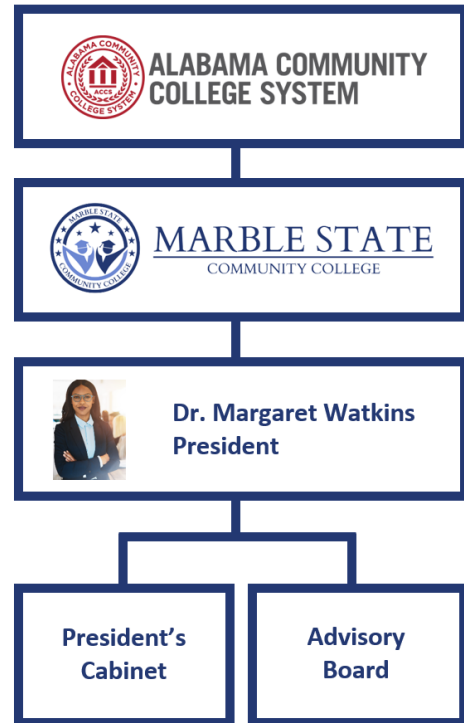
# ORGANIZATIONAL ANALYSIS AT-A-GLANCE

## MISSION, VISION, VALUES

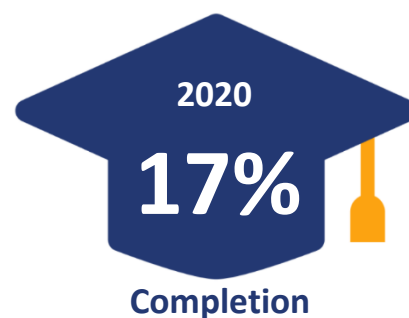
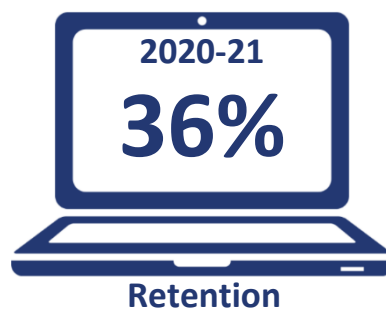
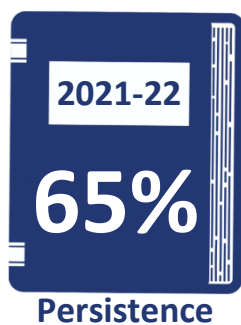
Marble State’s mission explains what the institution is doing. It is posted prominently on its website and numerous institution publications and serves as the foundation for its vision, values, strategic plan, and operations. The institution’s vision statement is viewed as its destination and is the driving force behind its values and strategic plan. Marble State developed its values to help deliver the institution to its desired destination. The mission, vision, and values were used to create a list of institutional priorities, and those priorities are the foundation for the strategic plan and the strategic initiatives.<sup>11</sup> Marble State developed specific, measurable, achievable, realistic, and timely objectives for each institutional priority. Marble State’s strategic planning team develops strategic implementation plans in three-year increments, reviews the objectives routinely, tracks each objective’s budget and status, and makes adjustments as necessary. The institution communicates the objectives, and departments across campus share responsibility.

## ORGANIZATIONAL STRUCTURE

Marble State is a publicly supported institution and part of the Alabama Community College System. It is directed and controlled by the ACCS Board of Trustees and led by the President and the President’s Cabinet. The Cabinet is comprised of leaders in the areas of faculty, support services, fiscal affairs, program development, and accreditation. In addition, the college receives advisement from its Advisory Board consisting of members representing the needs of the community, area industries, and the college’s students.<sup>12</sup>



## CURRENT STUDENT ACHIEVEMENT DATA<sup>13</sup>



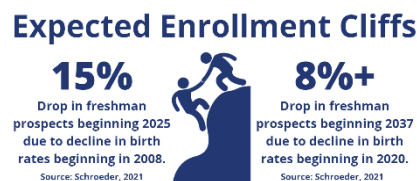
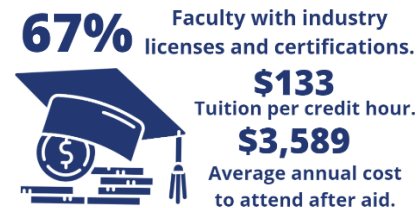
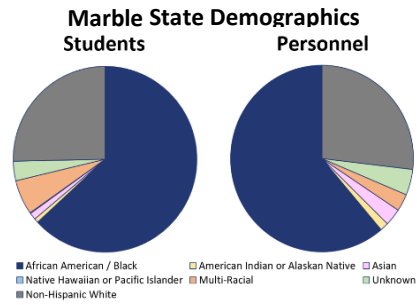
## SWOT ANALYSIS

**Strengths.** Marble State has a low student-to-faculty ratio. The institution’s personnel demographics mirror those of its diverse student body.<sup>14</sup> Representation on campus aids in connecting cultures, setting high expectations, and reducing implicit bias (Rodriguez, 2021). The majority of full-time faculty have specialized licenses, certifications, and experience.<sup>15</sup> Industry credentials and experience give Marble faculty the ability to teach specific skills needed for students to enter and succeed in the workforce or continue their education at four-year institutions. Tuition is less than half that at Alabama’s four-year schools (ACCS, 2021). The average annual cost of attending full-time is \$3,589 after aid (NCES, n.d.-b).<sup>viii</sup>

**Weaknesses.** Marble State has poor retention and completion rates. An internal analysis of weaknesses highlighted a lack of communication, overextended faculty and staff, and limited funds.<sup>16</sup> There is a lack of community awareness about the institution and its offerings beyond technical training. Marble State also has some dated facilities.

**Opportunities.** In April 2021, the Alabama State Board of Education put a rule in place requiring every graduating senior to complete a Free Application for Federal Student Aid to improve access to college and add 500,000 highly-skilled workers to the state’s workforce by 2025 (Crain, 2021). Marble State is currently undergoing a rebranding effort that can help address gaps in the community perception. The new skills and resources acquired in response to COVID can facilitate the expansion of online offerings.

**Threats.** The impact COVID has had on high school graduation and dropout rates is a threat to future enrollment as are the future enrollment cliffs due to low birth rates. Faculty and staff indicate that Marble State students are often unprepared for college, impacting their ability to succeed.<sup>17</sup> The growing student debt burden is a threat to the ability of students to continue their education. Low unemployment and higher education funding instabilities also pose threats.



### Impact of FAFSA Applications

**50.1%**

Percentage of 2021-22 high school seniors completing FAFSA.

Source: NCAN, n.d.

**56.9%**

Percentage of 2021-22 high school graduates completing FAFSA.

Source: NCAN, n.d.

**92%**

Percentage of students who completed FAFSA and enrolled in college the following fall.

Source: Crain, 2021

**\$60M**

Grants not realized by Alabama graduates because they did not complete FAFSA.

Source: Crain, 2021

<sup>viii</sup> The U.S. Department of Education (IPEDS) estimates the average annual cost before aid to be \$15,530 (\$4,830 for tuition and \$10,700 for other costs, including books and off-campus room and board). Aid includes grants and scholarships from the institution, state, and federal government.

## CHES ANALYSIS

The CHES capital analysis refers to evaluating five types of capital: cultural, human, economic, social, and spiritual. The following provides an analytical overview of those types of capital at Marble State.

**Strongest** **Social Capital.** Marble State provides open access to students and significant ties to its community. It has strong networks and partnerships that provide the training needed by industry and skills required for students to find gainful employment. The institution also has learning agreements with four-year colleges and universities in the state and an advisory board comprised of notable community members. There are numerous technical programs designed to meet the needs of employers in the community.

**Human Capital.** There is a heavy investment in human capital acquired through hiring, resulting in highly-skilled personnel that is demographically representative of the student body. The institution spends 27% of its operating expenses on academic instruction alone.<sup>18</sup>

**Cultural Capital.** There is a high level of cultural capital. Policies and procedures are well-defined and reflected in the behavior and actions of its employees. There is a low risk of misconduct due, in part, to the bureaucratic nature of the institution and level of oversight.

**Spiritual Capital.** As a not-for-profit institution, Marble State seeks to improve society through the education of its citizens. The institution's spiritual capital is embodied in its students, faculty, staff, and administration and codified in its mission, vision, and values. It is unclear to what extent this capital is reflected in daily operations.

**Economic Capital.** The extent of economic capital is primarily out of the institution's control. It can influence enrollment to a limited extent through recruiting efforts. Tuition and fee rates are set by the ACCS Board of Trustees. Marble relies heavily on government funding through state legislative actions, federal financial aid, and government grants and contracts.

**Weakest**

## COMPETITIVE ADVANTAGE

Marble State has a number of advantages over its competitors, including industry and university partnerships (recent partnerships highlighted below), technical programs, affordability, and a diverse student body, faculty, staff, and administration. Marble State's robust academic programs include traditional associate degrees, professional and technical certificates, technology programs, trade programs, and research and science programs. They offer students traditional paths to degree completion and the ability to create their own career opportunities with certificate programs that can be completed in a few months.

### Industry Partnerships



### Academic Programs

- Adult Education
- Advanced Manufacturing Programs
- Automotive Service Technology
- Business Administration Programs
- Certificate Programs
- Computer Information Systems Technology
- Culinary Arts/Hospitality Management
- Frontiers Research Program
- Gainful Employment
- General and Developmental Education
- Health Sciences Programs
- Heating & Air Conditioning Technology
- Salon and Spa Management Programs

### University Partnerships



# DIAGNOSING THE PROBLEM

Retention is a priority for community colleges because it is often tied to government funding. Retention also impacts the attractiveness of schools and their ability to achieve their goals. Community colleges benefit society to the extent that they are effective in helping students reach their goals.

Marble State's ability to retain students directly impacts two institutional priorities: serve more students and promote student success. Researching a solution to the institution's retention problem would support these priorities. It would also improve the institution's competitive advantage by helping address the needs of the underrepresented communities they serve. Better retention would increase revenue and allow Marble State to invest the money into resources and programs that provide students with more options, greater quality, and cutting-edge technologies.

More importantly to the institution, retention matters because it is directly related to the success of its students by way of completion, job placement, and attainment of certifications and licenses. Marble State acknowledges a continued problem with retention and is seeking information regarding students' motivation and abilities, structural barriers students face, methods to measure institutional effectiveness in retention and completion, and effective strategies for improving retention and completion.

Analyses of the environment, industry, and organization indicate that Marble State's retention rates lag behind other public institutions within the state and the United States. In addition, enrollment at community colleges, including Marble State, has been on a steady decline for the last decade. As enrollment declines, it is increasingly important to retain students to completion to address individual, workforce, and societal needs such as:

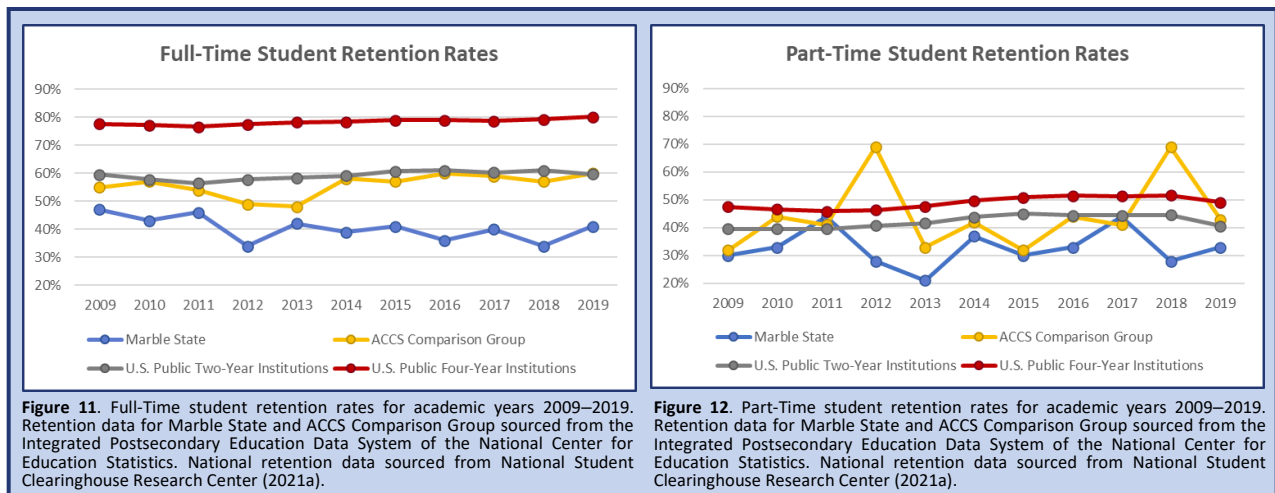
- improving the income gap and poverty rates,
- providing qualified individuals to fill industry positions,
- developing a workforce that protects and cares for citizens (health care workers and first responders),
- providing economic support through higher incomes and taxes, and
- delivering societal savings through more educated communities.

The following sections identify the known facts, assumptions, knowledge gaps, and ideation of solutions associated with the problem. These assist with defining the problem statement and in the development of accurate, pointed questions. The questions serve as a means to develop a better understanding of the problem and guide the exploration of potential solutions for the problem.

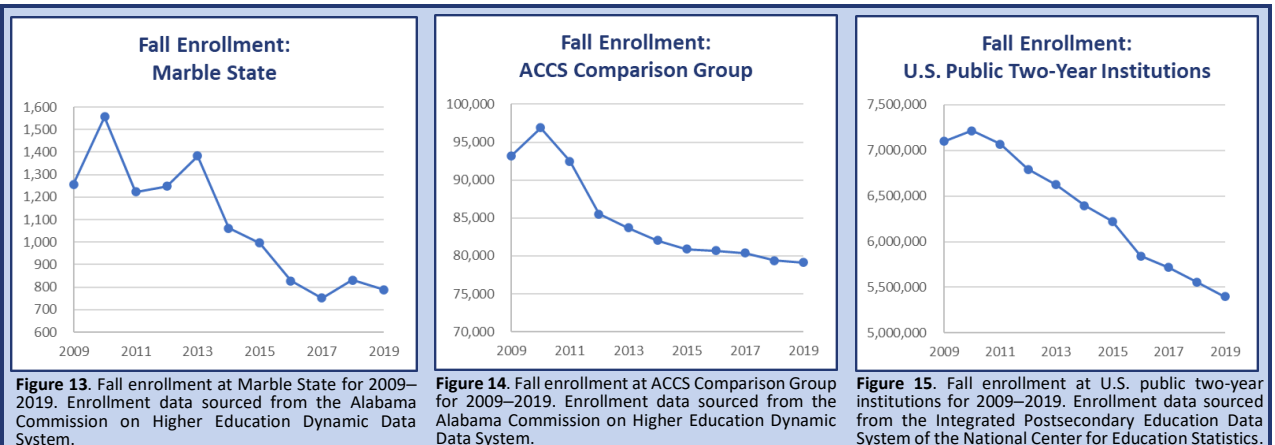
## FACTS, ASSUMPTIONS, KNOWLEDGE GAPS

**Known Facts.** Figure 11 shows the full-time student retention rates of Marble State, the ACCS Comparison Group, all U.S. public two-year institutions, and all U.S. public four-year institutions for 2009 through 2019. Community college retention rates are significantly lower than those at four-year institutions, and retention at Marble State is even more dismal. Lagging behind the U.S. average for all public community colleges, Marble State also lags behind the average for other Alabama public community colleges. All institutions have lower retention rates with part-time students when compared to full-time students, as demonstrated in Figure 12.





Retention at Marble State is a significant, persistent issue and is intensified by the steady decline in community college enrollment. Figures 13, 14, and 15 show the fall enrollment trends for Marble State, the ACCS comparison group, and U.S. public two-year institutions for 2009 through 2019. These trends put increasing pressure on institutions to retain the students that do enroll.



Retention is one metric used to measure Marble State’s effectiveness and is part of the institution’s strategic plan and institutional priorities. It is also one of the metrics adopted by the ACCS to help measure how well two-year institutions fulfill their missions and can impact funding received by the institutions.

Retention is also essential for making improvements within the state. The Alabama Commission on Higher Education (ACHE)<sup>ix</sup> developed a comprehensive human capital plan, citing as rationale a strong correlation between state wealth and individual educational attainment and that “economists have concluded that

<sup>ix</sup> The Alabama Commission on Higher Education, a statewide 12-member lay board appointed by the Governor, Lieutenant Governor, and Speaker of the House and confirmed by the Senate, is the state agency responsible for the overall statewide planning and coordination of higher education in State, the administration of various student aid programs, and the performance of designated regulatory functions. The Commission seeks to provide reasonable access to quality collegiate and university education for the citizens of State. In meeting this commitment, the Commission facilitates informed decision making and policy formulation regarding wise stewardship of resources in response to the needs of students and the goals of institutions. The agency also provides a state-level framework for institutions to respond cooperatively and individually to the needs of the citizens of the State. (ACHE, 2021, para. 1).



nearly all economic growth and prosperity for individuals, families, cities, states and countries are now driven by college-educated workers” (ACHE, 2017, p. 2). Alabama currently ranks 46<sup>th</sup> in national per capita income and 44<sup>th</sup> in share of adults with a bachelor’s degree or higher (World Population Review, 2021a, 2021b). To support an increase in educational attainment and economic prosperity in Alabama, ACHE included improving retention as a strategy in its human capital plan and developed performance measures to monitor institutions’ success in achieving retention goals (ACHE, 2017).<sup>x</sup>

**Assumptions.** There are three significant assumptions associated with the problem. One is that students enter Marble State with the intent and purpose of completing a program, either by attaining a certificate, degree, or other credential or transferring to a four-year institution. The second is that Marble’s retention rates can be improved and that doing so is at least partially within the control of the institution and its employees. The third assumption is that the faculty, staff, and administration will acknowledge they have a role in retention, recognize a problem with retention rates, and are committed to improving retention.

**Knowledge Gaps.** Information needs to be gathered to determine the type and amount of data that Marble State tracks to measure and understand retention at the institution. A review of the literature is necessary to identify successful retention strategies and best practices. This will also help identify what data Marble should track and determine any deficiencies in current data collection measures. Understanding best practices that facilitate various stakeholders’ participation in successful retention efforts will be crucial in evaluating the status and effectiveness of the school’s current retention efforts.

The structure, oversight, and resources available for retention practices at Marble State need to be examined, as do best practices in those areas. It should be determined whether Marble has tracked and identified the effectiveness of the institution’s retention strategies to date. In addition, to develop an effective change management plan, it is necessary to obtain an understanding of the institution’s quantifiable goals and how the institution defines success as it relates to retention.

**Ideation of Solutions.** It is hypothesized that there is no comprehensive framework for informing and monitoring retention roles, responsibilities, and efforts and that Marble State would benefit from an in-depth analysis of its activities and processes. It is further hypothesized that some individuals who could be instrumental in improving retention are unaware of the role they could play in retention or of effective methods of carrying out that role. A comprehensive review of best practices and current practices at Marble State would result in more effective retention efforts and improved retention rates.

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<sup>x</sup> ACHE notes that success in its human capital plan will rely on specific priorities and strategy. Priority 2 of the plan is “enhancing student success.” A strategy devised to address that priority is to “improve retention and persistence.” The performance measures for this strategy are: a) at-risk students will be retained and will graduate at a higher rate, i.e., Pell Grant recipients, developmental education students, and minorities; b) more institutions will develop early warning systems that identify at-risk students; c) grades in courses with a disproportionate level of Ws and Fs will improve after course revisions; and d) reduction in the average time to graduate from the institutions (ACHE, 2017, p. 24).

## PROBLEM STATEMENT

Community colleges rely primarily on government funding, which is often tied to critical success factors such as enrollment, retention, and completion rates (NCES, n.d.-b). Community college enrollment has steadily declined since 2010 (NCES, n.d.-b), placing even greater importance on retaining students who enroll. The general problem is that retention is a long-standing issue at community colleges, resulting in threats to the well-being of students (Watson & Chen, 2019), the institutions (Jenkins & Belfield, 2014), and society (Blagg & Blom, 2018; Monaghan & Sommers, 2021). Community colleges educate 39% of undergraduates (AACC, 2022), providing the majority of skilled health care workers and first responders in the United States (JFF's Policy Leadership Trust, 2020; Juskiewicz, 2020). Community college graduates can break cycles of poverty, give back to their communities, and provide substantial economic support and societal savings (Blagg & Blom, 2018; EAB, 2018). Although community colleges provide valuable services and have the lowest tuition rates in the country, policymakers continue to cut funding, citing low completion rates as evidence of poor use of taxpayer funds (Jenkins & Belfield, 2014).

The specific problem is that declining enrollment and policymakers' use of completion rates as success indicators result in a greater imperative that Marble State improves its persistently poor retention rates. Poor retention rates can exacerbate enrollment declines at Marble State by negatively impacting its image and reputation and impairing its ability to serve its students. Students who are not retained through to completion likely leave the institution with debt but no degree or credential, putting them in a more perilous financial condition than when they first enrolled (Nadworny & Lombardo, 2019). Poor retention also limits the institution's ability to provide the societal benefits and taxpayer return on investment community colleges historically deliver (Blagg & Blom, 2018; Jenkins & Belfield, 2014). Addressing the retention problem can help community colleges serve more students and continue to support society through betterments for individuals, the workforce, local and national economies, and society as a whole while improving the metrics that make it possible for Marble State to fulfill its mission.

## OVERARCHING QUESTION

This study seeks to identify the current state of retention practices at Marble State and compare it to research findings with the aim of proposing changes to bridge the gap between the two. By bridging the gap between the current and desired states, an effective change management plan will uniquely apply the findings in a way that is most appropriate to Marble State. The following research question will guide the study:

Based on a gap analysis, what innovative and student-centered solutions will secure and sustain higher retention year over year at Marble State Community College, enabling the institution to fulfill its mission?



**MARBLE STATE**  
COMMUNITY COLLEGE

## GUIDING QUESTIONS FOR EXPLORING POTENTIAL SOLUTIONS

This study proposes to conduct a gap analysis to identify innovative and student-centered methods to improve retention at Marble State. The following questions will develop a better understanding of the current and desired states of retention at the institution and guide the exploration of potential solutions for the retention problem at Marble State.

1. What are Marble State's current practices aimed at supporting student retention and intervention?
2. What data is currently collected and tracked at Marble State to monitor student retention and intervention?
3. How do current enrollment, retention, and graduation rates differ across programs at Marble State?
4. What theoretical and conceptual frameworks are informative for retention practices?
5. What innovative and student-centered solutions help to secure and sustain high retention year over year in post-secondary institutions?
6. What key performance measures are used, collected, and tracked to determine the effectiveness of higher education student retention strategies?
7. What student characteristics serve as predictors of community college student retention and identify students at risk?
8. What intervention practices are in use to address students at risk and improve community college student retention?
9. What benchmarks are useful for setting goals and measuring success in student retention efforts?
10. How might a gap analysis be used as an ideal research method for assessing the present state of student retention and intervention at Marble State in comparison to the desired state?

## SCOPE

This study seeks to provide a change management plan that could effectively facilitate retention improvement at Marble State. To that end, the scope of the study must be examined, including assumptions, externally-imposed limitations, and internally-imposed delimitations to bound the study to a feasible size and address the specific problem statement related to Marble State.

**Assumptions.** Assumptions are reasonable statements accepted as true even in the absence of empirical evidence and are a necessary element of research (Simon & Goes, 2012). One assumption in this study is that employees at Marble State will provide honest, accurate, unbiased information about the institution's current state of retention efforts. Another is that the institution has and would be willing to commit the resources necessary to implement a change management plan. The researcher based these assumptions on communication with Marble State and the signed partner agreement.

**Limitations.** "Limitations represent weaknesses within the study that may influence outcomes and conclusions of the research" (Ross & Bibler Zaidi, 2019, p. 261). There are limitations associated with this study that must be considered when making inferences about the results. One such limitation is the generalizability of the findings. This study will be conducted at a single institution using a relatively small sample size to address a problem at that specific institution. While the results may not be immediately generalizable to the greater higher education population, the findings may inform future studies and retention efforts at other institutions.

An additional limitation of the study is that Marble State is embarking on a rebranding process that will include an updated logo, website, and messaging.<sup>19</sup> Brand reputation, perceptions, and quality can positively impact student satisfaction which increases retention (Swani et al., 2021). Institution employees are aware of and contributing to the rebranding efforts, which may affect their perceptions. Any branding changes and the resulting impact on retention are speculative as the institution will deploy the rebranding after the conclusion of this study.

The study's conclusions will be based partly on self-reported information. This study requires gathering information about the institution from employees, including those responsible for retention efforts. There is a risk of individuals not recollecting and reporting all relevant information. In addition, changes to the institution or its environment could impact the applicability of the findings and solutions, limiting the conclusions of this study to a limited time.

**Delimitations.** Delimitations represent deliberate limitations imposed by the researcher for the purpose of bounding the study (Ross & Bibler Zaidi, 2019, p. 261). The researcher placed delimitations on this study to keep it at a manageable scale and focus on the research problem specific to Marble State. The scope of the study is delimited to a single public HBCU community college in Marble City, Alabama. For that reason, the results of this study may not be generalizable to a larger population, including non-HBCU institutions, private institutions, four-year colleges or universities, or other geographic locations.

## SUMMARY

The preceding section included environmental, industry, and organizational analyses at a glance, which provided current conditions and trends relevant to the problem. Facts, assumptions, and knowledge gaps related to the problem were identified and used to ideate possible solutions. The section demonstrates a current and persistent issue with poor retention at Marble State and declining enrollment with community colleges. These analyses and knowledge examination informed the development of the detailed problem statement, overarching question, and guiding questions for exploring potential solutions to the problem.

Finally, the scope of the study was defined, including assumptions, limitations, and delimitations. The guiding questions developed in this section will aid in the exploration of potential solutions for the problem of retention at Marble State. The following section will include a literature review to develop and expand knowledge of the problem and identify those potential solutions.



## SECTION 3: EXPLORING THE SOLUTIONS

The previous section developed the problem statement, overarching question, and guiding questions needed to explore potential solutions to the retention problem at Marble State. This section includes a comprehensive review of those questions to develop a deeper understanding of the problem and insight into potential solutions. The review uses websites, industry and governmental resources, and scholarly research to ensure that a variety of relevant, timely, and informative sources are examined and utilized.

The review begins with the theoretical and conceptual retention frameworks that facilitate a deeper understanding of the problem and the development of more effective solutions. Using those frameworks as a foundation, innovative and student-centered retention solutions are identified and examined, and key performance measures that aid in determining the effectiveness of those solutions are summarized. In addition, this section identifies student characteristics that serve as predictors of at-risk students and intervention practices that are useful and effective in supporting those students. Benchmarks that can assist in setting goals and measuring the success of retention efforts are also identified. This section concludes with a review of how gap analysis can be used to assess Marble State's current state of retention and intervention compared to the desired state.

### PERSPECTIVES ON THE PROBLEM

As a community college, Marble State's surrounding communities depend on the institution to help develop an educated society, provide skilled health care workers and first responders, and support the needs of the local workforce. The institution understands this responsibility and the need to retain students through to transfer or completion. Coupling this imperative with its below-average retention rates, Marble State has made improving student retention an integral part of its institutional priorities. In addition, funding is becoming increasingly connected to completion rates, reinforcing the need to prioritize retention. Decreased funding could limit the institution's ability to serve its students and provide the resources and support upon which its surrounding communities rely.



# COMPREHENSIVE REVIEW

The following is a comprehensive review of guiding questions provided in Section 2. The review examines the theoretical and conceptual frameworks that are informative for retention practices, retention best practices, and key retention performance measures. It explores the student characteristics that serve as predictors of at-risk students, intervention best practices, and benchmarks useful in setting goals and measuring success in student retention efforts. Finally, the review identifies how a gap analysis can be used as an ideal research method for identifying and assessing solutions to Marble State’s student retention problem.

## THEORETICAL AND CONCEPTUAL RETENTION FRAMEWORKS

The following is a review of the seminal theoretical and conceptual frameworks that are informative for retention practices. These theories and models include the undergraduate dropout process, institutional departure, student attrition, nontraditional student attrition, integrated model of student attrition, student-faculty informal contact, self-determination theory, and student involvement and comprise the fundamental concepts underlying this study and resulting recommendations. They further support best practices and why certain areas will benefit from evaluation and change.

**Undergraduate Dropout Process Model (Spady).** Spady (1970, 1971) developed the undergraduate dropout process model depicted in Figure 16. This theoretical model is widely acknowledged as the first of its kind in student retention literature (Aljohani, 2016; Burke, 2019; Habley et al., 2012; Tinto, 1975; Webb et al., 2017). Spady’s work prompted the inclusion of how the relationships between students and higher education institutions impact student retention and shifted the retention responsibility from students to the institutions. In addition, his work has served as the foundation for other retention models.

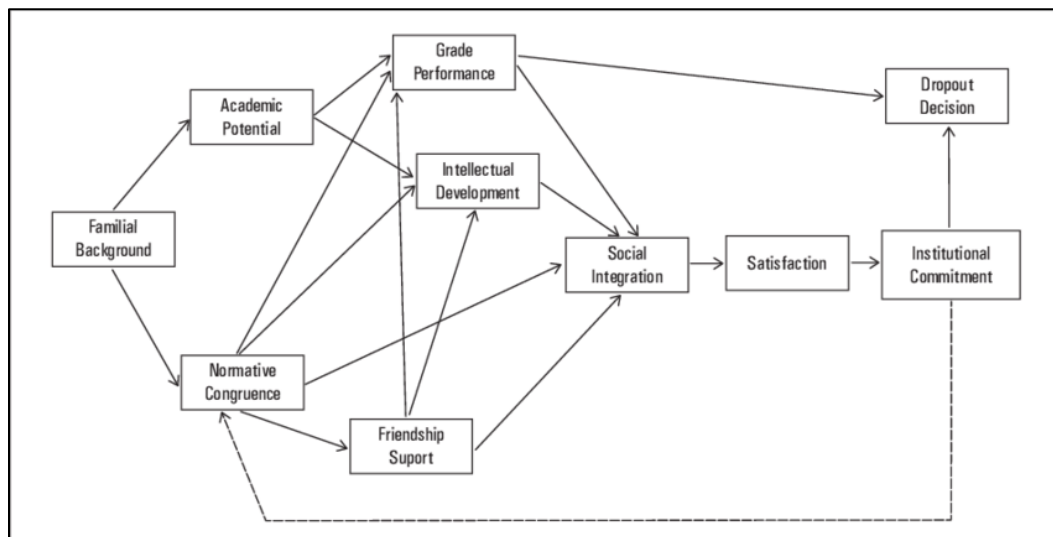


Figure 16. Undergraduate Dropout Process Model. From “Dropouts from higher education: Toward an empirical model,” by W. G. Spady, 1971, *Interchange*, 1(1), p. 52. Copyright 1971 by Springer Nature.

The undergraduate dropout process model was influenced by Durkheim’s suicide theory in the field of sociology (Spady, 1970). As Durkheim argued that suicide (a departure from society) results from a lack of societal integration, Spady (1970) contends that dropout (a departure from an institution) results from a lack of higher education environmental integration. He also asserts that family background impacts a



student's integration into the institution as it is a significant source of student influences, demands, and expectations (Spady, 1970, 1971).

Spady's (1970, 1971) model demonstrates how the outcome of the interaction between students' characteristics and institutions impacts the level to which a student feels integrated into and committed to an institution. The level of integration and commitment significantly influences a student's decision to stay enrolled or leave the institution. According to Spady (1971), this interaction occurs in two systems, academic and social, and two factors within each system influence a student. Those factors are grade performance and intellectual development within the academic system and normative congruence and friendship support within the social system.

**Institutional Departure Model (Tinto).** A leading expert in student retention, Tinto (1975) developed the most famous and most cited model of student retention, the institutional departure model (Aljohani, 2016). Tinto's (as cited in WGU Labs, 2021) work relies heavily on Spady's (1970, 1971) work with student integration at its heart but includes considerable extension and modification of the theory. He expanded the theory to build a model that emphasizes communities' importance, character, and impact on students' willingness to remain in school. Tinto's (as cited in Burke, 2019) expansion evolved with the incorporation of the social anthropology writings of Arnold van Genep regarding tribal societies' rites of passage.

Tinto's (1975, 1987, 1996)<sup>xi</sup> institutional department model is one of the most well-known, tested, and influential student retention models (Aljohani, 2016; Burke, 2019; Kerby, 2015; Mayanga et al., 2017). It places slightly more retention responsibility on the student than does Spady's (1971) model. As seen in Figure 17, Tinto (1996) asserts that students enter an institution with attributes defined by their family background, skills and abilities, and prior schooling, leading to their intentions, goals, and institutional commitments.

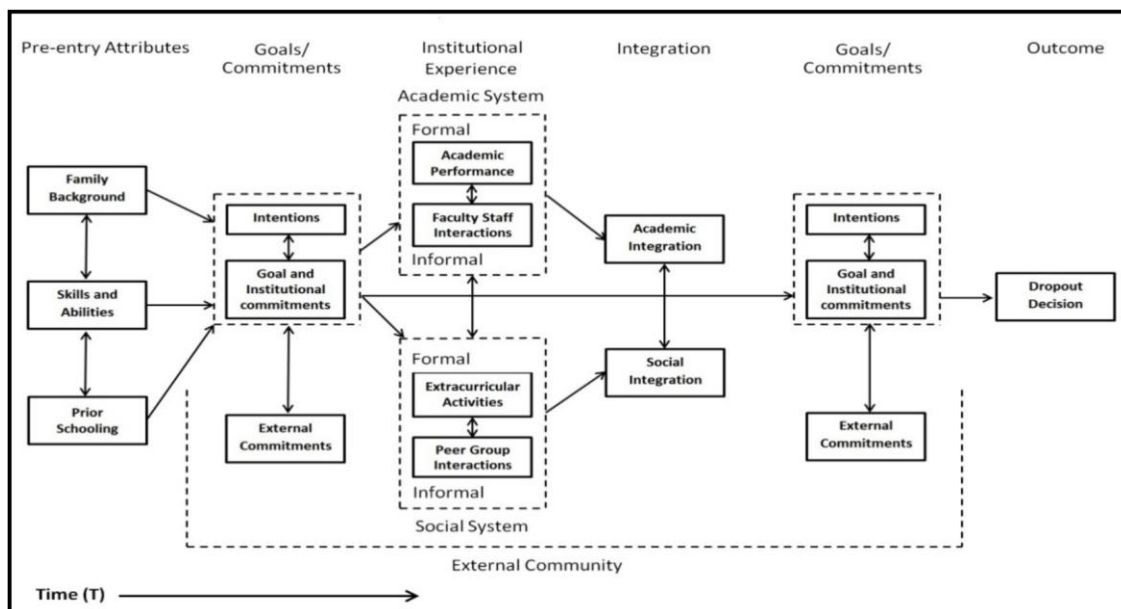


Figure 17. Institutional Departure Model. From *Leaving College* (2nd ed., p. 114), by V. Tinto, 1996, University of Chicago Press. Copyright 1996 by University of Chicago Press.

<sup>xi</sup> Tinto originally developed the institutional departure model in 1975. This model went through several revisions throughout the years, the two most notable revisions occurring in 1987 and 1996 (2nd ed.) with the publication of Tinto's book, *Leaving College: Rethinking the Causes and Cures of Student Attrition*.

Like Spady (1970, 1971), Tinto (1975, 1987, 1996) recognizes that student interactions occur in two systems, academic and social, and he also expands the concept to recognize that they occur in formal and informal fashions. These interactions impact the levels to which students integrate academically and socially at an institution which, in turn, modify the students' goals and commitments to their education and the institution. In short, higher levels of interaction lead to higher levels of integration, leading to greater commitment, retention, and graduation rates.

**Student Attrition Model (Bean).** The works of Spady (1970, 1971) and Tinto (1975, 1987, 1996) have Durkheim’s theory of suicide as their foundation. While Bean (1980, 1982) built off of their work, he contends that there is insufficient evidence to support a link between student attrition and suicide and that the definitions of the variables in Spady’s and Tinto’s models render them untestable. Using quantitative data and statistical analysis, Bean (1980, 1982) developed the student attrition model, as seen in Figure 21. Bean’s (1980) model is differentiated in that it is grounded in human resource theory, arguing that causes for student attrition are similar to causes of employee turnover in organizations.

Pay is a significant factor in employee turnover that is absent in the higher education student attrition setting. Bean (1980) replaced pay with the four education variables of GPA, development, practical value, and institutional quality to account for this difference. He argued that the intention to leave an institution is the primary indicator of attrition and that it is impacted by four primary categories of variables: background (e.g., parent’s grades, high school performance), interaction with the organization (e.g., GPA, courses, membership in student organizations, informal contact with faculty), environment (e.g., development, opportunity to transfer, ease of financing education), and outcomes and attitudes (e.g., loyalty, practical value, satisfaction; Bean, 1982).

The model in Figure 18 could be used across different types of institutions and contexts by adjusting the variables in each category. The heavy lines indicate that interaction with the organization and environmental factors are presumed the most important causal linkages to outcomes and attitudes. The outcomes and attitudes, in turn, significantly impact a student’s intent to leave an institution.

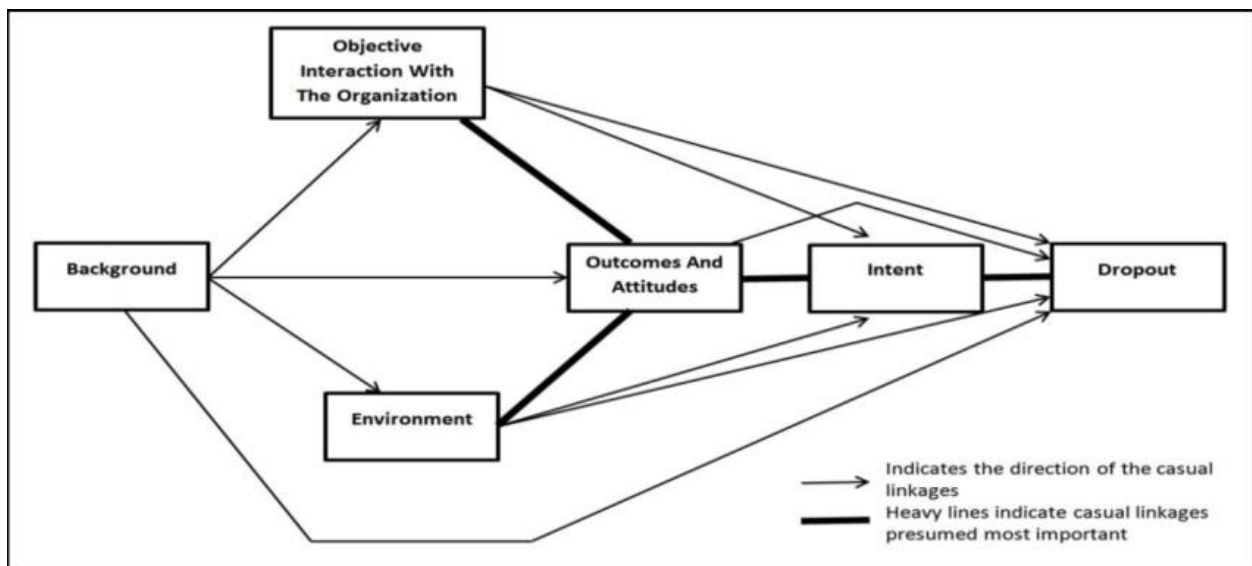


Figure 18. Student Attrition Model. From “Conceptual models of student attrition: How theory can help the institutional researcher,” by J. P. Bean, 1982, *New Directions for Institutional Research*, 1982(36), p. 23. Copyright 1982 by Sage Publications Inc. Journals.

In 1985, Bean teamed up with Metzner to revisit student attrition and develop a model for nontraditional (specifically “commuter”) students. While social integration still directly affected a student’s decision to leave an institution, the authors found it was less critical for nontraditional students (Bean & Metzner, 1985). As seen in Figure 19, the four categories of variables for the nontraditional student attrition model are background, academic, environment, and intent.

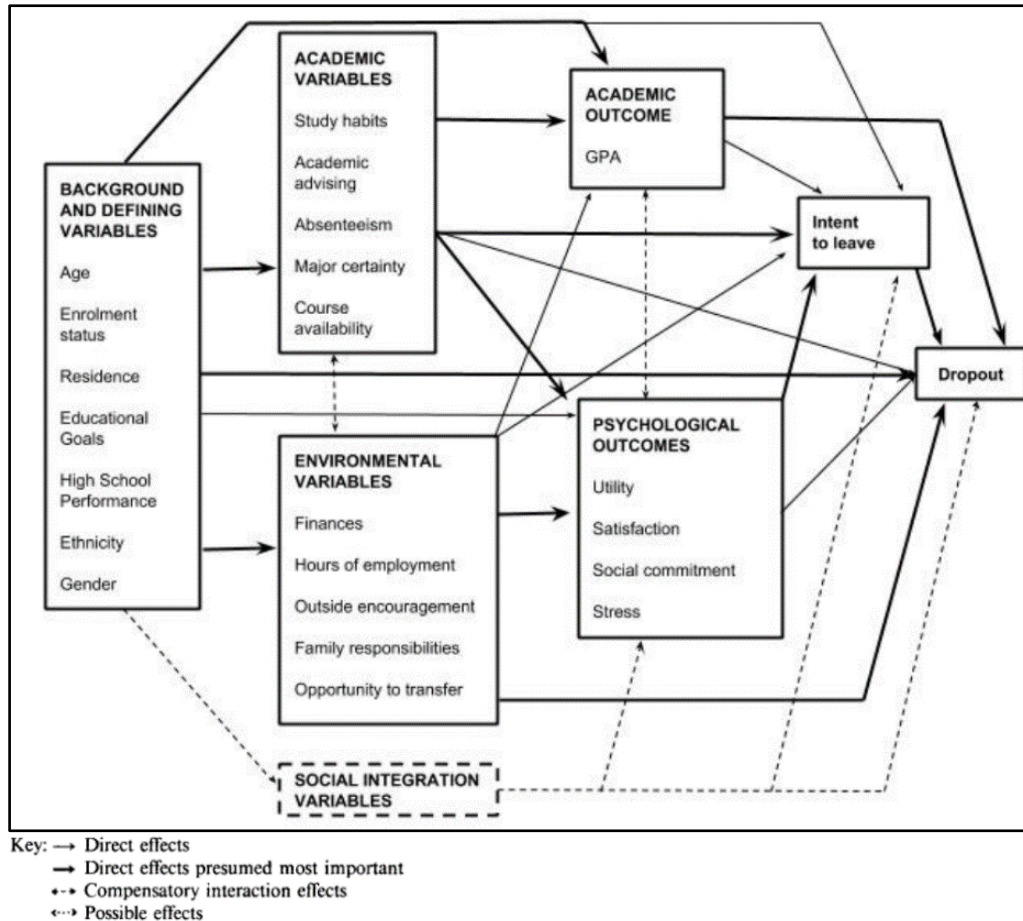


Figure 19. *Nontraditional Student Attrition Model*. From “A conceptual model of nontraditional undergraduate student attrition,” by J. P. Bean and B.S. Metzner, 1985, *Review of Educational Research*, 55(4), p. 491. Copyright 1985 by Sage Publications Inc. Journals.

**Integrated Model of Student Retention (Cabrera, Nora, & Castaneda).** Cabrera et al. (1992) examined the student integration theory of Tinto (1975, 1987) and the student departure theory of Bean (1985) to determine the extent to which the theories could be merged to provide a better understanding of student persistence. The study found strong support for both Bean’s and Tinto’s assertions regarding the variables and interactions that impact a student’s decision to persist. It further found that the two theories are complementary. The authors contend that the study provides a basis for developing a framework that integrates the theories while providing a greater examination of the variables unique to each theory (Cabrera et al., 1992).

The following year, Cabrera et al. (1993) used those findings to develop and test a proposed integrated model. The integrated model of student retention, displayed in Figure 20, includes the variables from Tinto’s (1987) and Bean’s (1985) theories that were statistically confirmed by Cabrera et al. (1992). The authors’ findings support further theoretical research as the merging of theories yields a better

understanding of the complementary nature of the theories and the interconnectivity of the variables within those theories. The findings also provide an integrative framework that is useful for practitioners.

By incorporating only the statistically-confirmed variables, Cabrera et al. (1993) provide colleges with information that will allow them to focus on highly predictive variables that can be manipulated and implement effective intervention strategies. The authors demonstrate a need for “a concerted effort on the part of the institution in bringing together the different student support services to address student attrition” (Cabrera et al., 1993, p. 136). In addition, the findings point to the need for constant monitoring of the intervention's effectiveness.

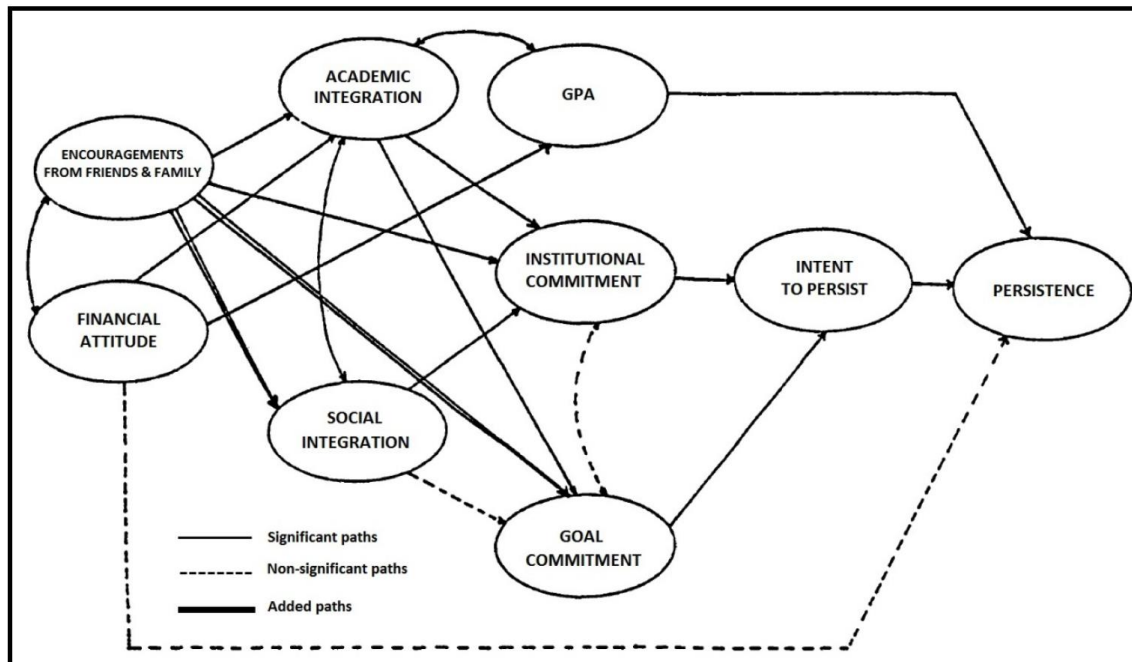


Figure 20. *Integrated Model of Student Retention*. From “College persistence: Structural equations modeling test of an integrated model of student retention,” by A. F. Cabrera, A. Nora, and M. B. Castaneda, 1993, *The Journal of Higher Education*, 64(2), p. 134. Copyright 1993 by Taylor & Francis.

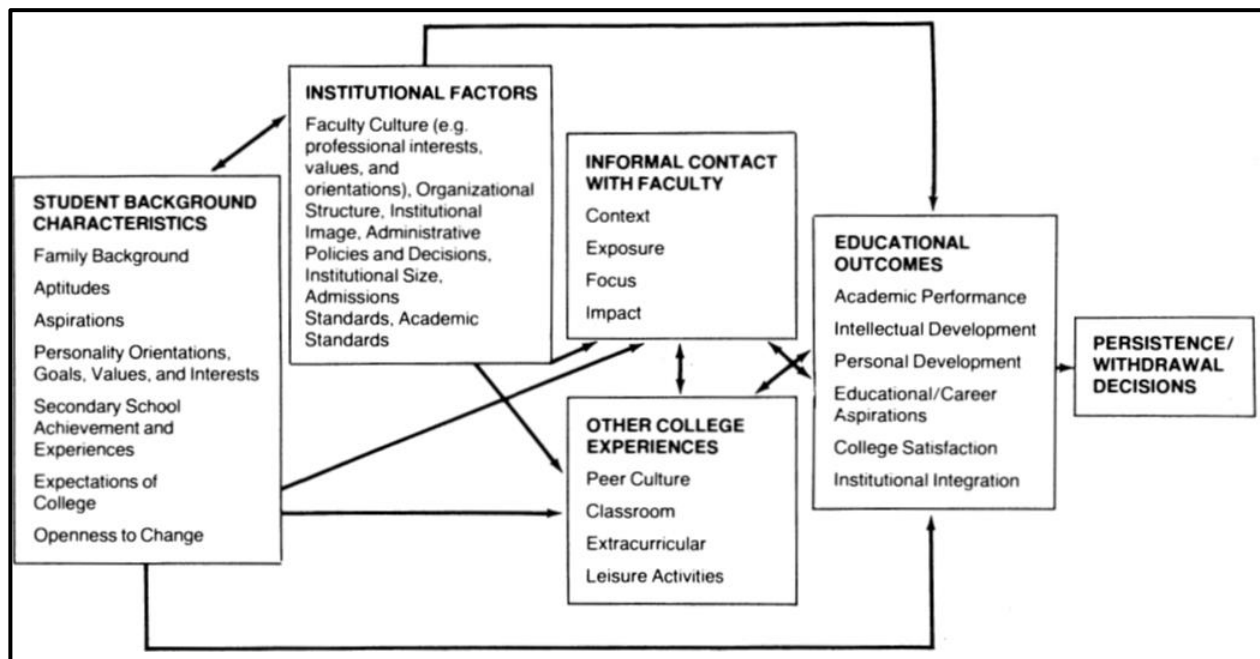
**Student Involvement Theory (Astin).** Astin (1984) defined student involvement as “the amount of physical and psychological energy that the student devotes to the academic experience” (p. 307). Not unlike the theories and models mentioned previously, Astin’s theory includes the primary elements of student inputs (background, experiences, demographics, etc.), environment (includes academic and social experiences students have during school), and outcomes (student’s knowledge, beliefs, values, etc. that were changed and developed through student involvement). Astin contended that the more involved a student is with a higher education institution, the more likely they will be retained at the institution.

Astin (1984) proclaimed that his theory provides higher education institutions with a unifying construct for directing the efforts of all institutional personnel toward the common goal of student involvement. He outlined how institutional practitioners could apply the theory to improve student involvement which, in turn, will improve retention. Faculty and administrators are encouraged to focus less on their techniques and processes and more on what students are doing and the level to which students are involved in their education. Student personnel workers (e.g., counselors, advisors, etc.) will play a prominent role in institutional operations when the institution commits to maximizing student involvement (Astin, 1984).

**Student-Faculty Informal Contact Model (Pascarella).** Spady (1970) and Tinto (1975) identified informal faculty interaction as an important factor in students' academic and social integration and dropout decisions. Astin (1977) declared that this type of interaction has a greater impact on student satisfaction than any other variable or student or institutional characteristic. Through an analysis of existing research, Pascarella (1980) provided evidence that a positive correlation exists between the amount of informal faculty interaction with students and student persistence and that the correlation remains statistically significant across a range of student characteristics. He further found that not all informal student-faculty interaction has the same effect, and those interactions "focusing on intellectual/literary or artistic interests, value issues, or future career concerns have the greatest impact" (Pascarella, 1980, p. 565).

Pascarella (1980) found several problems with the method and concepts in the studies he examined. These include a lack of consideration for the quality of formal classroom interactions, the direction of causal linkages, reasons students choose more or less informal interaction with faculty, and the operational definition of informal contact. A final problem noted was that studies were limited to a single institution.

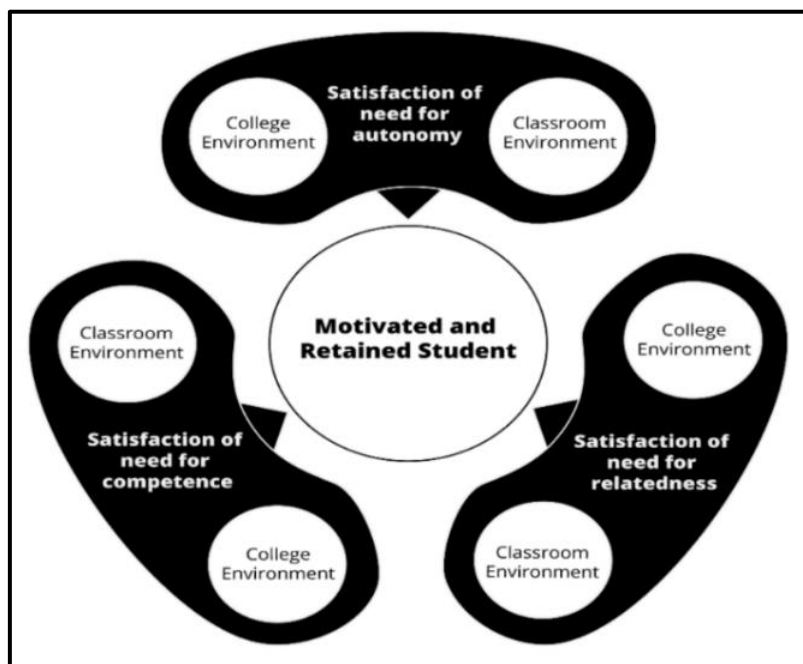
To address those shortcomings and provide guidance for further investigation, Pascarella (1980) developed the conceptual model for research on student-faculty informal contact in Figure 21. As in the work of Astin (1975), Spady (1970), and Tinto (1975), Pascarella (1980) incorporated the role of students' background characteristics. The double arrow lines between areas of the model suggest the existence of reciprocal causal linkages. The model demonstrates that the student background and characteristics, institutional factors, and other college experiences influence the quality of the informal contact with faculty (Pascarella, 1980). The student-faculty informal contact directly impacts educational outcomes and, thereby, attrition.



**Figure 21.** Student-Faculty Informal Contact Model. From "Student-Faculty informal contact and college outcomes," by E. T. Pascarella, 1980, *Review of Educational Research*, 50(4), p. 569. Copyright 1980 by SAGE Publications, Inc.



**Self-Determination Theory.** Self-determination theory (SDT) deals with human motivations and personalities with a foundation built on the idea that individuals have three basic psychological needs that motivate behavior: autonomy, competence, and relatedness (Deci & Ryan, 1985). Those basic psychological needs play a role in education, and Zak-Moskal and Garrison (2020) contend the theory can be applied to improve retention. To do so, all three needs must be met both in the classroom and at the institution as a whole (Zak-Moskal & Garrison, 2020). To demonstrate this need for comprehensive support of the three basic needs, Zak-Moskal and Garrison developed the graphical representation provided in Figure 22.



**Figure 22.** *Self-Determination Theory Needs in Classrooms and Colleges.* From "Can self-determination theory be used to increase college student retention?" by A. Zak-Moskal and M. J. Garrison, 2020, *The New York Journal of Student Affairs*, 20(1), p. 51. Academic Commons, Stony Brook University.

Zak-Moskal and Garrison (2020) completed a review of retention research, in part, to determine which of the basic psychological needs were addressed in each of the studies. The studies included learning communities, student suspensions, summer bridge learning community, academic probation, freshman seminar, student advisor, courses, majors, faculty perception of student outcomes, part-time faculty instruction, and student-faculty interaction.

Of the 12 studies examined, only two addressed all three basic needs, and autonomy was by far the least addressed need (Zak-Moskal & Garrison, 2020). The authors noted that the need for autonomy is likely the least common feature in college retention programs because it is the least understood. From a practitioner standpoint, they also encourage college personnel to examine how SDT can be used to improve student success and retention (Zak-Moskal & Garrison, 2020).

Chen and Jang (2010) developed a hypothesized SDT model, seen in Figure 23, to examine motivation in online learning. They found that supporting autonomy and competency positively impacted online students' perception of and satisfaction with their basic need fulfillment. These results indicate that for student support strategies to be effective, they must address all three basic needs. The authors also noted the importance of not simply placing students in the motivated or unmotivated category but understanding that students may have very different reasons for their level of motivation (Chen & Jang, 2010).



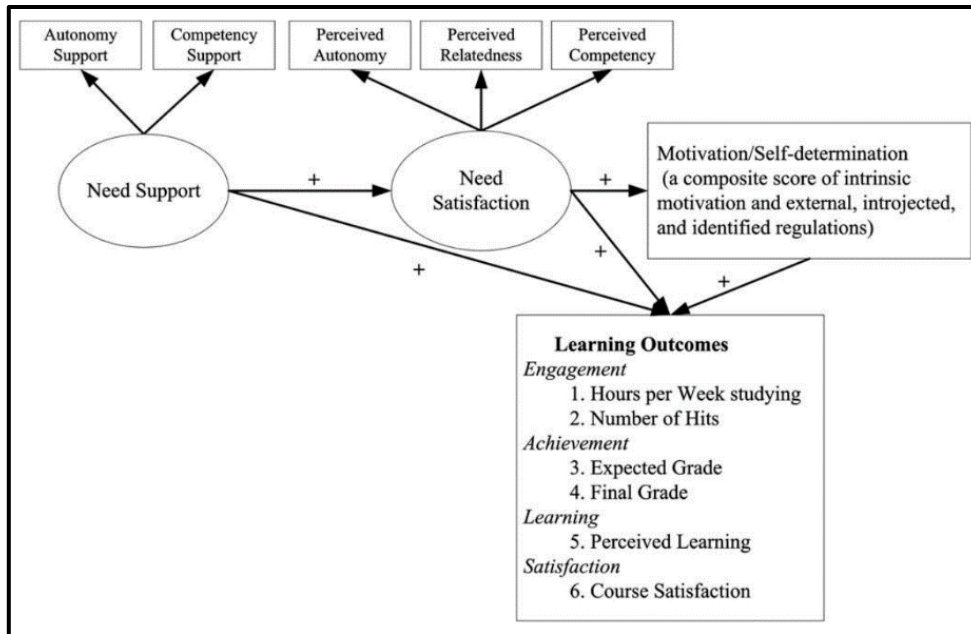


Figure 23. Hypothesized SDT Model for Online Learner Motivation. From “Motivation in online learning: Testing a model of self-determination theory,” by K.-C. Chen and S.-J. Jang, 2010, *Computers in Human Behavior*, 26(4), p. 743. Copyright 2010 by Elsevier Ltd.

## INNOVATIVE AND STUDENT-CENTERED RETENTION SOLUTIONS

The following summarizes innovative and student-centered solutions that help secure and sustain improved retention year over year in post-secondary institutions. The solutions include data analytics, summer bridge and orientation initiatives, student advising and support, peer-to-peer support systems, instructional quality and improvement, and adjunct training and support.

**Data Analytics.** Higher education institutions are increasingly using data analytics to measure, monitor, and improve student retention. This increased usage is driven by the continuing growth of the types and volumes of data available and advancements in data analytics technologies (Foster & Francis, 2020). In a review of published research focused on analytics and student outcomes, Foster and Francis (2020) found evidence that analytics is effective in improving student outcomes.

Predictive analytics are particularly effective because they can be used to predict risk, behaviors, and relationships and can be used to provide targeted student services. The University of South of Florida (USF) used predictive analytics to help develop and implement a case management strategy that led to record retention and graduation rates and national recognition for the institution (Civitas Learning, 2019). USF’s vice president for student success noted that predictive analytics allow them to “deliver the right support to the right student at the right time” (Civitas Learning, 2019, para. 3). Predictive analytics has enabled Georgia State University (GSU) to identify at-risk students and implement interventions in a timely manner leading to improved retention and graduation rates and elimination of achievement gaps (Georgia State University, n.d.-b).<sup>xii</sup>

<sup>xii</sup> Predictive analytics allowed GSU to eliminate achievement gaps. “For the last four years, we have been the only national university at which black, Hispanic, first-generation and low-income students graduated at rates at or above the rate of the student body overall” (Georgia State University, n.d.-b, para. 11).

Predictive analytics can provide new insights and help institutions identify risk indicators that may be overlooked otherwise. Using analytics, Monroe College identified a student receiving a “C” in psychology as a surprising risk factor. The University of Central Florida found that logins and engagement were not predictors of success in online courses as they expected but that how students performed on certain graded activities was (Fishman et al., 2021).

Analytics can also be used to provide personalized learning to students. The theoretical frameworks of Astin (1984), Bean (1982), Spady (1970), and Tinto (1996) each begin with the acknowledgment that students enter higher education with diverse backgrounds, knowledge, skills, abilities, and experiences. Through analytics, adaptive learning technology can recognize and capitalize on that diversity to customize student learning experiences while improving student performance (Fishman et al., 2021). Analytics can also efficiently identify students needing support so that the institution can deliver tailored interventions to those students. Herodotou et al. (2020) found that students identified using predictive learning analytics who received motivational interventions had better retention outcomes than those who did not receive the interventions.

**Summer Bridge and Orientation Initiatives.** Summer bridge and orientation programs are designed to support the transition to higher education and promote student success. Summer bridge programs are conducted during the summer months after high school graduation but before the fall freshman college term begins. Typically lasting two to four weeks, these programs help students develop academic skills, provide them with social resources, and develop connections to their new school (What Works Clearinghouse, 2016). Summer bridge programs are typically aimed at underprepared and at-risk students, including students that are first-generation, low-income, and have excessive family and work-related obligations.

Studies have found that summer bridge programs are effective at improving student experiences and retention (Dorman et al., 2020; Howard & Sharpe, 2019). Georgia State University (n.d.-c) identifies incoming first-year students at risk and requires they complete a summer bridge program before the start of the fall term. Last year, the institution enrolled 400 students in the program with retention rates of 87%, a 37-point increase over retention rates of similar students prior to the bridge program (Georgia State University, n.d.-c).

Prasad et al. (2017) found that first-year students who developed a sense of connectedness during orientation were more likely to stay enrolled. Research has also confirmed that retention rates are higher for students who complete an orientation in their first year of college (Derby & Smith, 2010; Kai et al., 2017; Koehnke, 2013; Mayo, 2013).

**Student Advising and Support.** Academic advising has consistently been recognized as an effective retention strategy and essential to student success (Joslin, 2018; Sanders & Killion, 2017; Swecker et al., 2013; Wiseman & Messit, 2010). As noted previously, students’ diverse backgrounds, knowledge, skills, abilities, and experiences are the foundation of the seminal retention theories and frameworks (Astin, 1984; Bean, 1982; Spady, 1970; Tinto, 1993). By valuing and focusing on this diversity, academic advising can “address inequalities and barriers in higher education for a range of underrepresented and marginalized student groups” (McGill et al., 2020, p. 8).

A holistic advising approach allows academic advisors to adapt to an increasingly diverse student body and provides support to help students address personal issues that can significantly impact their academic success (Kardash, 2020). Achieving the Dream (n.d.-b), a nonprofit focused on institutional improvement

and advancement of community colleges, developed the student support model in Figure 24 to illustrate the importance and value of holistic student support. It shows that the typical support provided to students is disjointed and requires that students seek disparate services throughout the organization, often on a self-selecting basis. The holistic approach is “the intentional planning and integration of mission-critical student academic and personal supports” (Achieving the Dream, n.d.-b., para. 2).



### TYPICAL STUDENT SUPPORT



### HOLISTIC STUDENT SUPPORT

**Figure 24.** *Typical Student Support Versus Holistic Student Support.* From “Holistic Student Supports,” by Achieving the Dream, n.d.-b., para. 2. (<https://www.achievingthedream.org/resources/initiatives/holistic-student-supports>). Copyright 2022 by Achieving the Dream.

Achieving the Dream (n.d.-b) asserts that through its work with over 100 higher education institutions, it determined that the holistic student supports approach is the most effective way to support students. This approach provides a “seamless, timely, and personal experience for every student” (Achieving the Dream, n.d.-b., para. 2).

The holistic approach supports guided pathways and a case management model of advising. Guided pathways is a community college reform movement designed to streamline decision-making for community college students and promote timely completion by removing typical confusion and roadblocks that often derail students (Jenkins et al., 2021). Guided pathways promotes a holistic, case-management model of advising. As mentioned previously, USF saw record retention rates after implementing its case management strategy (Civitas Learning, 2019).

An analysis of the traditional, self-selective student advising services across Georgia State University<sup>xiii</sup> (n.d.-a) found that almost all advising resources were being used for students whose outcome was not being materially impacted by those resources. To address the ineffective advising, GSU used historical data (10 years of data, 2.5 million grades, and 144,000 student records) to identify risk factors that correlated to students dropping out of the institution. This analysis resulted in over 800 analytics-based alerts that enable individualized advising and intervention. Since overhauling its advising services, GSU has experienced a five-point increase in retention (Georgia State University, n.d.-a).<sup>xiv</sup>

**Peer-to-Peer Support Systems.** Peer-to-peer support systems have been proven to promote student success through improved retention and matriculation, a sense of belonging, and improved course performance (EAB, n.d.; Grabsch et al., 2020). A common limitation of student services is a lack of available resources, particularly at community colleges. One way to expand the reach of student services is to “activate the latent social capital in peer networks” (Waite, 2021, p. 3). Waite (2021) notes that peer-to-peer support models include student peers serving as:

- social support to foster belonging, identity formation, and social and emotional skills,
- academic support to drive learning outcomes and keep each other on track,
- guidance support to expand options and ease transitions, and
- and mental health support to promote wellbeing and reduce loneliness. (p. 3)

Social support through peer affinity groups can foster inclusivity, decrease feelings of isolation, build friendships, and provide nurturing spaces that help develop social-emotional skills and identity formation (Beals et al., 2021; EAB, 2019a; Waite, 2021).

Academic support is provided through peer tutoring, which is low cost, high impact, and very effective. Peer tutors are often viewed as more approachable, empathetic, and motivational (Markowitz, 2020). Peer tutoring can destigmatize asking for help, improve student self-efficacy and engagement, and decrease test anxiety (EAB, 2019a; Kovel, 2021; Markowitz, 2020; Waite, 2021).

Peer mentors can provide guidance and support by sharing experience and insight into how to navigate the intricacies of higher education. This resource is particularly effective for first-generation students who struggle to understand and acclimate to cultural expectations (Waite, 2021). Peer mentors can also bolster student confidence and provide encouragement and motivation.

Peer counselors can provide mental health support that promotes students’ well-being (Waite, 2021). An increasing number of students seek mental health support as the stigma around mental health has declined and the number of students with mental health issues increases (Binkley & Fenn, 2019). While not designed to replace professional counselors, peer counselors can assist with the growing demand, serve as advocates, provide support, and help alleviate feelings of isolation and loneliness (Binkley & Fenn, 2019; Carapezza, 2022; Waite, 2021).

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<sup>xiii</sup> Georgia State University is an internationally-recognized leader in “introducing advanced technology, programs and initiatives that foster student success” (University System of Georgia, n.d., para. 1).

<sup>xiv</sup> Since overhauling its advising services, GSU is graduating 1,700 more students per year and faster than before. The time to degree was reduced by over one-half a semester per student, saving students time and money and reducing their debt load (Georgia State University, n.d.-a).

**Instructional Quality and Improvement.** Faculty play a significant role in student success and retention. Quality teaching and high-impact practices (HIPS)<sup>xv</sup> have a direct, positive impact on student outcomes and retention (White, 2018). Typically, faculty are hired for their subject-matter expertise rather than their expertise in pedagogy, course design, and student learning. While being an expert in their field is critical, “a growing body of research says that indicates an “instructor’s aptitude in evidence-based teaching methods is more indicative of students’ academic success and colleges’ retention rates” (Bushra, 2022, para. 2). It is, then, incumbent on the institutions to ensure that faculty have access to education and training in effective instruction.

The Association of College and University Educators (ACUE) offers training and credentials to provide effective instruction skills to equip faculty to measurably improve student achievement (ACUE, n.d.). ACUE has produced one of the “largest bodies of research and evidence to date that fully connects the impact of faculty development on changes in teaching practices and the consequent changes in student outcomes” (ACUE, 2019a, p. 6). The ACUE impact studies found that courses taught by ACUE-credentialed faculty had improvements in students’ grades, passing, and DFW<sup>xvi</sup> rates (Hecht, 2019; Lawner et al., 2019; Lawner & Snow, 2018, 2019a, 2019b; Pippins et al., 2021; Pippins et al., 2021a, 2021b, 2021c). They also found improvements in retention (Pippins et al., 2021), course evaluations and students’ self-reported growth mindset (Lawner & Snow, 2018, 2019a; Lawner et al., 2019), and in equity gaps for underrepresented groups (Lawner et al., 2019; Lawner & Snow, 2020). In addition to improved student outcomes, faculty recognize gains from initiatives aimed at improving instructional quality. Faculty find the ACUE content highly relevant to their teaching (ACUE, 2018) and improved confidence in their teaching abilities (ACUE 2019c).

While improving instructional quality is critical to student outcomes and success, it comes at a financial cost, which can pose challenges to higher education institutions, particularly public community colleges. Budget constraints and pressure to cut costs can discourage the investment in improving instructional quality due to the widely-held belief that those improvements require increased expenditures and result in decreased revenue. Brown and Kurzweil (2018) demonstrate this view in Figure 25. They contend that this conventional view is incomplete and ignores improved instruction's impact beyond improved student outcomes. Figure 26 illustrates how funds spent on improving instructional quality can improve retention, leading to increased tuition revenue and decreased recruitment costs for an overall increase in net revenue (Brown & Kurzweil, 2018). There is evidence to support this assertion.

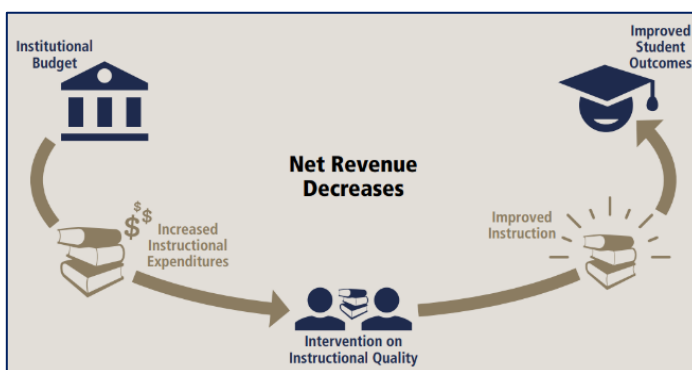


Figure 25. Conventional view of relationship between net revenue and student outcomes. From “Instructional Quality, Student Outcomes, and Institutional Finances,” by J. Brown and M. Kurzweil, 2018, p. 4. (<https://www.acenet.edu/Documents/Instructional-Quality-Student-Outcomes-and-Institutional-Finances.pdf>). Copyright 2018 by ACE.

Delta State University invested in improved instruction and experienced positive financial returns. Using a return on investment (ROI) measurement tool developed by the American Council on Education, Delta State was able to estimate the ROI for its investment in instructional improvements. Its estimated ROI was

<sup>xv</sup> “HIPS are teaching and learning tools which have demonstrated to increase student engagement and persistence” (White, 2018, p. 118).

<sup>xvi</sup> DFW rates are the percentages of students who receive a grade of D or F or who withdraw.



5.74 times over one year, 19.22 times over three years, and 32.7 times over five years (ACUE, 2019b). The University of Southern Mississippi invested in instructional improvements through ACUE. Dr. Amy Chasteen, Executive Vice Provost for Academic Affairs at the University of Southern Mississippi, said that investment has had a positive impact on retention and that “there’s an actual ROI of about a million dollars we’re seeing from keeping these students enrolled” (Anderson et al., 2022, 2:33).

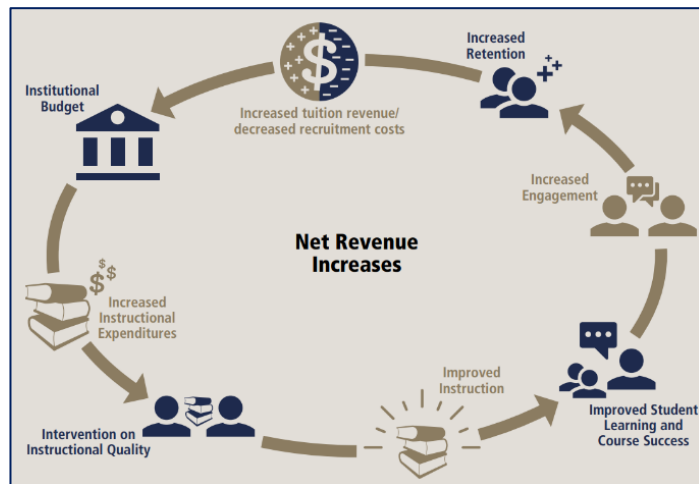


Figure 26. Proposed feedback loop between net revenue and student outcomes, retention example. From “Instructional Quality, Student Outcomes, and Institutional Finances,” by J. Brown and M. Kurzweil, 2018, p. 6. (<https://www.acenet.edu/Documents/Instructional-Quality-Student-Outcomes-and-Institutional-Finances.pdf>). Copyright 2018 by ACE.

**Adjunct Training and Support.** Adjunct (part-time) faculty are increasingly utilized at community colleges to help balance a reduction in resources with the need for instructors. Employing adjunct faculty gives higher education institutions the flexibility to quickly adjust staffing in response to changes in enrollment. Research indicates that a larger proportion of adjunct faculty can result in lower graduation and transfer rates (Bowman et al., 2017; Jeager & Eagan, 2011). Studies show that students perform better in courses taught by adjunct faculty compared to full-time faculty, but they are less likely to enroll in and pass subsequent courses (Ran & Sanders, 2020; Xu, 2018).

In many cases, adjunct faculty are not provided the appropriate resources to be as effective as full-time faculty. Most notably lacking are training and support in instructional design, pedagogy, and diversity and inclusion (Anthony et al., 2020; Ascione, 2022). Adjunct faculty often lack office space, commensurate compensation, benefits, access to tenure, and other resources. In addition, adjunct responsibilities can vary significantly, including within the same organization. These faculty may teach on campus or online, fully design and build a course or teach a pre-built course, advise students, hold office hours, and other duties (Gibson & O’Keefe, 2019).

There are several best practices that institutions can employ to support and adequately prepare adjunct faculty and develop a sense of inclusion and respect. Many experts recommend addressing the pay inequity that adjuncts face and offering longer-term employment commitments through extended contracts (Anthony et al., 2020; Gibson & O’Keefe, 2019; Kezar, 2019; Soika, 2021). Providing adjuncts with faculty liaisons and mentoring communities improves networking opportunities and develops a sense of belonging for the adjuncts (Herdklotz & Canale, 2017; Soika, 2021).

Institutions are increasingly realizing the benefits of providing adjunct faculty with professional development training and activities. Front Range Community College compensates adjuncts who participate in a two-year professional development program (Ashford, 2017). Jackson College pays adjuncts to attend a week-long, required orientation program that focuses on building networks; conducts professional development through adjunct learning days; and invites adjuncts to attend student panels (Ashford, 2017). Other institutions use “master” (pre-built) courses to reduce the amount of time and responsibility placed on adjuncts and limit the number of courses taught by adjuncts (Magda et al., 2015).



## KEY PERFORMANCE MEASURES

The following include key performance measures used by higher education institutions. The measures are collected and tracked to determine the effectiveness of higher education student retention strategies.

**Retention Rates.** The NCES (2021b) notes that retention rates “measure the percentage of first-time undergraduate students who return to the same institution the following fall” (para. 1). This rate includes “first-time degree/certificate-seeking students from the previous fall who either re-enrolled or successfully completed their program by the current fall” (NCES, 2021b, para. 1). Marble State also defines retention in this manner.

**Persistence Rates.** Persistence rates measure the percentage of students enrolled in one term that persists to the following term or completes a program (degree or certificate). Marble State measures persistence as the percentage of students enrolled in the fall term that are enrolled in the spring term.

**Transfer Rates.** The transfer rate is the proportion of students that transfer from a two-year institution to a four-year institution. Three types of transfer rates are particularly useful: total transfer rate (with or without completing a degree or credential at the two-year institution), transfer rate of graduates, and transfer rate of students who did not receive a degree or credential.

**Graduation Rates.** “Graduation rates measure the percentage of first-time, full-time undergraduate students who complete their program at the same institution within a specified period of time” (NCES, 2021b, para. 1). The rate is adjusted for allowable exclusions (e.g., death, disability, military service, foreign aid service, church mission service). As depicted in Figure 27, IPEDS has three primary graduation rates based on time to completion: 100% of normal time, 150% of normal time, and 200% of normal time.

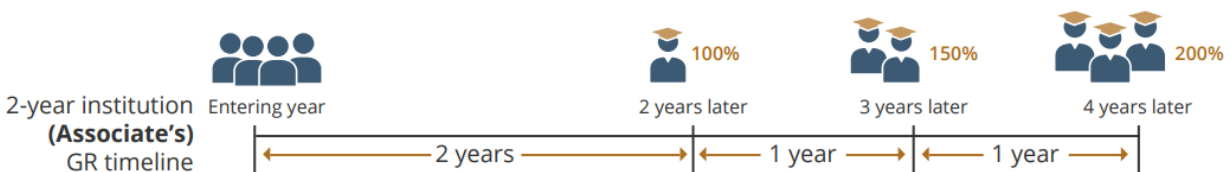


Figure 27. 2-Year Institution Graduation Rate Timeline. From “Graduation Rates,” by NCES, 2016, p. 2. (<https://nces.ed.gov/pubs2017/2017046.pdf>).

**Course Success Rates.** Course success rates refer to the percentage of students enrolled in a course who successfully receive credit for it. This is the opposite of the DFW rate, which is the percentage of students who receive a D or F grade or withdraw from the course. This key performance measure can be evaluated by instructor, course, delivery method, and other criteria that provide insight into student success.

**Student Engagement.** Student engagement is defined as “the degree of attention, curiosity, interest, optimism, and passion that students show when they are learning or being taught, which extends to the level of motivation they have to learn and progress in their education” (The Glossary of Education Reform, n.d., para. 1).

Formative feedback can be gathered through informal measures of engagement at the course level during the learning process. These measures include instructor observations (e.g., peer collaboration, faculty interaction, learning community participation, and time devoted to academic tasks), students’ self-reports (e.g., through questionnaires, focus groups, or student activity journals), and administrative reports (e.g., attendance, assignment completion, and adherence to guidelines and rubrics; Mandernach, 2015). Summative feedback can be gathered through formal measures of engagement at course and institution

levels. This feedback is generally gathered after the learning experience is concluded. Formal measures of engagement typically include surveys (Mandernach, 2015).

The Center for Community College Student Engagement (CCCSE) is a service and research initiative based at The University of Texas at Austin that provides formal measures of engagement for gathering summative feedback. It aims to assist community and technical colleges that want to improve student learning, retention, and completion through student engagement and success (CCCSE, n.d.-a). The organization administers the Community College Survey of Student Engagement (CCSSE) to community college students to “assess institutional practices and student behaviors that are correlated highly with student learning and student retention” (CCCSE, n.d.-b, para. 4). The survey, available to member institutions, serves as a benchmarking instrument, diagnostic tool, and monitoring device. Through the survey, the CCSSE provides benchmark scores for five key performance measures related to student engagement: “active and collaborative learning, student effort, academic challenge, student-faculty interaction, and support for learners” (CCCSE, n.d.-d, para. 6).

The CCCSE also administers the Community College Faculty Survey of Student Engagement (CCFSSE) to accompany the CCSSE. The CCFSSE allows institutions to gather information about faculty perceptions, practices, and experiences to provide their unique perspectives on student engagement which can then be compared with student data (CCCSE, n.d.-c).

**Part-Time vs. Full-Time Faculty.** To determine the effectiveness of part-time versus full-time faculty and identify areas for further investigation and improvement, institutions can compare key performance measures between part-time and full-time faculty. This can provide insight to narrow the focus of investigations, particularly in measures such as course success rates and grade distribution.

**Student-to-Faculty Ratio.** The student-to-faculty ratio measures the proportion of full-time-equivalent (FTE) students to FTE faculty (NCES, n.d.-b). This number is often measured and benchmarked at the institution level but can be measured by department or other criteria.

**Developmental Course Completion by Grade.** Developmental (or gateway) course completion is a “critical leading indicator of students’ likelihood for credential completion” (National Student Clearinghouse, n.d., para. 3). Evaluating completion by grade among different variables (instructor, delivery format, etc.) and student demographics can provide insight into identifying at-risk students and opportunities for course improvements.

**Credit Completion Ratio.** The credit completion ratio is the proportion of credit hours completed to credit hours attempted. This metric can be measured at the student, program, and institution levels and by student demographics. It “can help identify student populations needing early intervention” (National Student Clearinghouse, n.d., para. 2).

**Credit Accumulation Rate by Year.** The credit accumulation by year measures “the extent to which students are progressing toward on-time completion” (National Student Clearinghouse, n.d., para. 1). Using this rate, the institution can identify students lacking academic momentum and implement interventions to assist.

**First-Term GPA.** A student’s grade point average (GPA) is an important factor as it is generally tied to institutional and financial aid policies. Research shows that “students whose first-semester GPA is 2.33 or below should be targeted as particularly vulnerable to attrition” (Gershenfeld et al., 2016, p. 483).

**Average Cumulative GPA.** By monitoring cumulative student GPAs, students can be identified for intervention, particularly for those whose GPA puts them at risk of academic probation and loss of financial aid.

## STUDENT CHARACTERISTICS AS PREDICTORS

Student characteristics can serve as predictors of student retention and identify at-risk students. These characteristics most often relate to underrepresented students and include students who are parents, first-generation, low income, and otherwise underrepresented.

**Student Parents.** Student-parents, college students with children, have only recently been recognized as a “distinct student group with a unique set of support needs” (DeMario, 2021, para. 1). Twenty-two percent, or 3.8 million, of all undergraduate students are parents. Of those, 2.7 million are mothers, and 62 percent are single mothers. Fathers account for 1.1 million student parents, and the majority, 61 percent, are married. In addition, 42 percent of all student parents attend community colleges (Institute for Women’s Policy Research, 2018).

The likelihood that a first-time student-parent will leave college before graduating is almost double that of students without children. Factors contributing to the attrition include a lack of time, work (employment), child care, financial challenges, and family and life circumstances outside the student’s control (Contreras-Mendez & Reichlin Cruse, 2021).

**First Generation.** First-generation students are students of which neither parent graduated from college and account for one-third of all college undergraduates (Cataldi et al., 2018). Fifty percent of first-generation students attend community college, making them twice as likely to attend community college as their counterparts (EAB, 2018).

First-generation students face challenges that put them at greater risk for attrition. They lack knowledge about college, including how it works and how to navigate the system. In addition, they have less social and cultural capital that can facilitate success in higher education. First-generation students have doubts about the worth of college and suffer from lower self-confidence and self-efficacy. They lack encouragement and support from their families as they face conflicting cultures at home and in college (Cuseo, 2018).

**Low Income.** The U.S. Department of Education defines a low-income student as an “individual whose family’s taxable income for the preceding year did not exceed 150 percent of the poverty level amount” (U.S. Department of Education, 2022, para. 2). These students account for approximately 20 percent of undergraduate students (Smith, 2019). Table 1 provides information about low-income levels in the United States.

Low-income students are more likely to be undermatched (i.e., not matched with the competitive colleges for which they are qualified), resulting in a lower likelihood of college success,

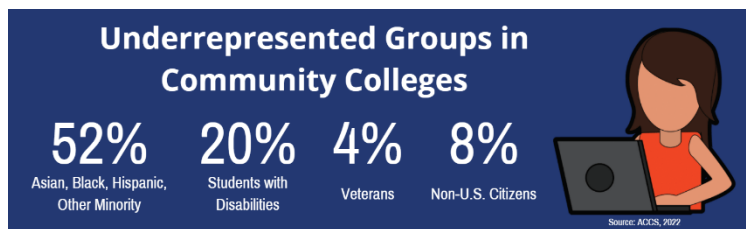
Low-Income Levels			
Size of Family Unit	48 Contiguous States, D.C., and Outlying Jurisdictions	Alaska	Hawaii
1	\$20,385	\$25,485	\$23,445
2	\$27,465	\$34,335	\$31,590
3	\$34,545	\$43,185	\$39,735
4	\$41,625	\$52,035	\$47,880
5	\$48,705	\$60,885	\$56,025
6	\$55,785	\$69,735	\$64,170
7	\$62,865	\$78,585	\$72,315
8	\$69,945	\$87,435	\$80,460

**Table 1. Low-Income Levels in the United States.** Income level data sourced from the United States Department of Education Office of Postsecondary Education. Amounts effective January 2022. Note. For family units with more than eight members, add the following amount for each additional family member: \$7,080 for the 48 contiguous states, the District of Columbia and outlying jurisdictions; \$8,850 for Alaska; and \$8,145 for Hawaii.

greater income inequality, and stunted social mobility. They are less likely to be aware of postsecondary options, including academic and financial opportunities (Executive Office of the President, 2014). Low-income students face food insecurity, homelessness, transportation concerns, and an inability to cope with sudden, small expenses (Weese, 2022).

**Underrepresented.** Other underrepresented groups include students of color, LGBTQ+, international, veterans, and students with disabilities. These students face unique challenges that can put them at risk for attrition. Those challenges include discrimination, a feeling of invisibility, a lack of role models or mentors, culture shock, a lack of belonging, and mental challenges such as depression, stress, anxiety, and feelings of isolation (Johnson, 2020).

Community colleges enroll a diverse student body. Approximately 52 percent of all community college enrollment identify as Asian, Black, Hispanic, or another minority group. Twenty percent of community college students have disabilities, four percent are veterans, and eight percent are non-U.S. citizens (AACC, 2022).



While well-represented in enrollment, these students are “underrepresented among completers of community colleges” (Chen, 2022, para. 3).



## INTERVENTION PRACTICES

Many of the retention best practices discussed previously are also interventions. Both are useful and effective in attempting institutionwide improvements and changing the behavior and trajectory of at-risk students. The primary difference is how and when the retention practice or intervention is deployed. While not repeated in this section, summer bridge and orientation initiatives, advising, and peer-to-peer support are significant interventions used to address students at risk and improve community college student retention, as are motivational and faculty interventions.

**Motivational Interventions.** Motivational interventions effectively facilitate course completion, improve learning outcomes, and improve student retention (Herodotou et al., 2020; O’Hara & Sparrow, 2019; Wilson & Pugatch, 2017). One motivational intervention is based on nudge theory, a concept brought to prominence by the work of Nobel Prize Laureate and preeminent expert in behavioral economics Richard Thaler and legal scholar Cass Sunstein. A nudge is an intervention aimed at influencing someone’s behavior without using mandates, forbidding options, or changing economic incentives (Damgaard & Nielsen, 2018). An example of a nudge aimed at promoting healthier eating would be to place healthier options in a place of more prominence than less healthy options. In this example, the food placement is aimed at influencing someone’s behavior without removing the individual’s ability to choose.

Nudging in an academic setting primarily consists of messaging in various forms (i.e., texts, emails, alerts). Damgaard and Nielsen (2018) note that nudging has positive effects and that the most significant improvements resulted from nudges that helped alleviate barriers. Making peer tutoring available is a retention best practice where nudging can be an effective intervention aimed at increasing the use of that tutoring (Wilson & Pugatch, 2017). Nudging, particularly as a means of targeting community college student psychosocial barriers, can improve financial aid submission rates, reenrollment, and retention (EAB, 2019b; O’Hara & Sparrow, 2019).

**Faculty Interventions.** Faculty interaction is one of the top factors contributing to positive student outcomes and persistence. By building caring, supportive partnerships with students, they can provide “effective and seamless interventions for academically at-risk students” (Winfield, 2018, para. 3). Faculty intervention best practices include identifying at-risk students early, informing the student they are at-risk, and connecting them to the appropriate resources (Winfield, 2018). Those resources will likely include some of the retention best practices mentioned previously, such as advising and peer-to-peer tutoring and mentoring support.



## BENCHMARKS

Many benchmarks help set goals and measure success in student retention efforts. Benchmarking assists community colleges with setting goals, measuring performance, and prioritizing resources. It also facilitates continuous improvement and a focus on student success (CCCSE, 2010).

The two primary types of benchmarks utilized in this study are external and internal benchmarks.<sup>xvii</sup> External benchmarking involves comparing an organization’s performance to that of other organizations. This study will use industry averages as the primary external benchmarks because Marble State currently falls below the industry averages, particularly for retention. Using industry averages, provided in Tables 2–10, will allow for the development of realistic, incremental goals.

Internal benchmarking involves comparing metrics and practices across institutional units or to past performance within the organization. This method allows organizations to identify strengths and weaknesses and learn from themselves. It facilitates the exchange of ideas and resources and can assist in developing baseline performance expectations. Internal benchmarks can help identify which programs or units have the highest or most effective performance and determine whether those successes can be duplicated in other programs or units to improve performance across the institution (CCCSE, 2010).

Once the institution makes incremental improvements based on internal evaluation and industry comparisons, external benchmarks of high-performing institutions can be used to develop aspirational goals to support continuous improvement.

### Retention Rates

Type of Institution	Full-time			Part-time		
	Adjusted cohort, fall 2019	Still enrolled fall 2020	Retention rate <sup>xviii</sup> (%)	Adjusted cohort, fall 2019	Still enrolled fall 2020	Retention rate (%)
<b>4-year</b>	1,566,766	1,278,045	81.6	57,288	28,504	49.8
Public	1,059,085	872,736	82.4	35,615	19,208	53.9
Private nonprofit	488,071	392,915	80.5	12,508	5,574	44.6
Private for-profit	19,610	12,394	63.2	9,165	3,722	40.6
<b>2-year</b>	626,269	384,275	61.4	320,114	130,742	40.8
Public	571,765	347,013	60.7	316,984	128,919	40.7
Alabama public	13,708	7,855	57.3	4,104	1,581	38.5
Private nonprofit	12,048	8,294	68.8	460	182	39.6
Private for-profit	42,456	28,968	68.2	2,670	1,641	61.5
<b>HBCU</b>	48,572	32,596	67.1	2,755	843	30.6

**Table 2.** Retention Rates for U.S. 4-Year and 2-Year Title IV Institutions. Retention data was sourced from the Integrated Postsecondary Education Data System of the National Center for Education Statistics.

<sup>xvii</sup> Internal benchmarks will be discussed in greater detail in Section 4 as part of institutional data collection.

<sup>xviii</sup> The U.S. Department of Education defines retention rate as:

A measure of the rate at which students persist in their educational program at an institution, expressed as a percentage. For four-year institutions, this is the percentage of first-time bachelors (or equivalent) degree-seeking undergraduates from the previous fall who are again enrolled in the current fall. For all other institutions this is the percentage of first-time degree/certificate-seeking students from the previous fall who either re-enrolled or successfully completed their program by the current fall. (NCES, n.d.-a, para. 1)



## Persistence Rates

Persistence Ratios <sup>xix</sup>		Four-Year Private	Four-Year Public	Two-Year Public
Persistence from term one to term two, 2015-16 academic year <sup>xx</sup>	25th Percentile	86.0%	83.5%	79.0%
	<b>Median</b>	90.0%	88.5%	82.0%
	75th Percentile	93.0%	93.3%	86.0%
Persistence from term two of the 2015-16 academic year to term three (the beginning of the 2016-17 academic year, i.e., the students' second year)	25th Percentile	78.0%	77.8%	70.0%
	<b>Median</b>	84.0%	82.0%	74.0%
	75th Percentile	88.0%	88.3%	76.0%

**Table 3.** First-Time-in-College (FTIC) Persistence Rate Benchmarks (based on 2015-16 FTIC cohort). Source Ruffalo Noel Levitz (2017).<sup>xxi</sup>

Persistence Ratios		Four-Year Private	Four-Year Public	Two-Year Public
Persistence from term one to term two, 2015-16 academic year	25th Percentile	86.0%	83.5%	79.0%
	<b>Median</b>	90.0%	88.5%	82.0%
	75th Percentile	93.0%	93.3%	86.0%
Persistence from term two of the 2015-16 academic year to term three (the beginning of the 2016-17 academic year, i.e., the students' third year)	25th Percentile	78.0%	77.8%	70.0%
	<b>Median</b>	84.0%	82.0%	74.0%
	75th Percentile	88.0%	88.3%	76.0%

**Table 4.** Second-Year Undergraduate Term-to-Term Persistence Rate Benchmarks (based on 2015-16 second-year cohort). Source Ruffalo Noel Levitz (2017).

## Transfer Rates

Student Level Demographics	Two-Year Institutions		
	% of Students	Transfer-Out Rate <sup>xxii</sup>	Transfer-With-Award Rate <sup>xxiii</sup>
<b>U.S. Community College Average</b>	100.0%	30.8%	41.9%
<b>Gender</b>			
Female	49.1%	33.1%	44.3%
Male	46.4%	29.9%	38.9%
<b>Enrollment Intensity</b>			
Exclusively Full-Time	20.8%	33.8%	52.3%
Exclusively Part-Time	12.6%	5.1%	51.0%
Mixed Enrollment	66.6%	34.8%	38.5%

**Table 5.** Transfer Rates for U.S. Community Colleges. Source National Student Clearinghouse Research Center (2021b).

<sup>xix</sup> “Persistence is defined as term-to-term return. For the tables in this section, each percentage is calculated based on the enrollment of the previous term” (Ruffalo Noel Levitz, 2017, p. 3).

<sup>xx</sup> Term one refers to the fall term, and term two refers to what is called either the winter or spring term.

<sup>xxi</sup> The Ruffalo Noel Levitz report was selected because it defines persistence consistent with Marble State’s definition. An updated 2020 report is available from Ruffalo Noel Levitz, however; the company did not collect enough data from two-year institutions to report benchmarks for those institutions.

<sup>xxii</sup> Calculated as “the number of transfer students who started at the community college divided by the number of students in the community college’s fall 2014 cohort” (National Student Clearinghouse Research Center, 2021b, p. 5).

<sup>xxiii</sup> Calculated as:

the number of transfer students who started at the community college and earned a certificate or associate degree from that college prior to their earliest enrollment at a four-year institution, divided by the number of transfer students in the community college’s fall 2014 cohort. (National Student Clearinghouse Research Center, 2021b, p. 5)

## Graduation Rates

Level of institution and type of aid received	All institutions			Public		
	Adjusted cohort	Completers	Graduation rate <sup>xxiv</sup> (%)	Adjusted cohort	Completers	Graduation rate (%)
<b>All institutions<sup>xxv</sup></b>						
All students	2,565,501	1,386,556	54.0	1,752,714	866,868	49.5
Received Pell Grant	1,128,754	505,759	44.8	750,323	295,599	39.4
Received DSL <sup>xxvi</sup> but not Pell Grant	358,464	225,742	63.0	206,032	119,977	58.2
Received neither Pell Grant nor DSL	1,078,283	655,055	60.7	796,359	451,292	56.7
<b>4-year institutions (cohort year 2014)</b>						
All students	1,733,948	1,041,497	60.1	1,156,482	676,789	58.5
Received Pell Grant	648,407	308,832	47.6	435,789	205,021	47.0
Received DSL but not Pell Grant	307,055	199,132	64.9	177,869	110,713	62.2
Received neither Pell Grant nor DSL	778,486	533,533	68.5	542,824	361,055	66.5
<b>2-year institutions (cohort year 2017)</b>						
All students	693,745	249,566	36.0	579,639	178,323	30.8
Received Pell Grant	387,082	133,030	34.4	305,905	84,195	27.5
Received DSL but not Pell Grant	38,534	16,772	43.5	27,111	8,426	31.1
Received neither Pell Grant nor DSL	268,129	99,764	37.2	246,623	85,702	34.8

**Table 6.** Graduation Rates for U.S. 4-Year and 2-Year Title IV Institutions. Graduation data was sourced from the Integrated Postsecondary Education Data System of the National Center for Education Statistics.

Level of institution and type of aid received	Private					
	Nonprofit			For-profit		
	Adjusted cohort	Completers	Graduation rate (%)	Adjusted cohort	Completers	Graduation rate (%)
<b>All institutions</b>						
All students	526,139	350,635	66.6	286,648	169,053	59.0
Received Pell Grant	178,952	95,587	53.4	199,479	114,573	57.4
Received DSL but not Pell Grant	122,833	85,325	69.5	29,599	20,440	69.1
Received neither Pell Grant nor DSL	224,354	169,723	75.6	57,570	34,040	59.1
<b>4-year institutions (cohort year 2014)</b>						
All students	506,298	338,732	66.9	71,168	25,976	36.5
Received Pell Grant	164,730	87,524	53.1	47,888	16,287	34.0
Received DSL but not Pell Grant	121,559	84,397	69.4	7,627	4,022	52.7
Received neither Pell Grant nor DSL	220,009	166,811	75.8	15,653	5,667	36.2
<b>2-year institutions (cohort year 2017)</b>						
All students	14,342	7,819	54.5	99,764	63,424	63.6
Received Pell Grant	10,632	5,330	50.1	70,545	43,505	61.7
Received DSL but not Pell Grant	1,004	700	69.7	10,419	7,646	73.4
Received neither Pell Grant nor DSL	2,706	1,789	66.1	18,800	12,273	65.3

**Table 7.** Graduation Rates for U.S. 4-Year and 2-Year Title IV Institutions. Graduation data was sourced from the Integrated Postsecondary Education Data System of the National Center for Education Statistics.

<sup>xxiv</sup> The U.S. Department of Education defines graduation rate as:

Data are collected on the number of students entering the institution as full-time, first-time, degree/certificate-seeking undergraduate students in a particular year (cohort), by race/ethnicity and gender; the number completing their program within 150 percent of normal time to completion; the number that transfer to other institutions if transfer is part of the institution's mission. (NCES, n.d.-a, para. 1)

<sup>xxv</sup> The "all institutions" data includes "less-than-2-year institutions" not listed in the table. For this reason, total for all institutions will not equal the sum of the 4-year and 2-year institution data.

<sup>xxvi</sup> DSL is Direct Subsidized Loan.

## Student-to-Faculty Ratio

Student-to-Faculty Ratio <sup>xxvii</sup>	Fall 2020	Fall 2019	Fall 2018	Fall 2017
<b>4-Year Institutions</b>				
Public	17.1	17.0	17.0	17.2
Private Not-For-Profit	11.7	11.8	11.9	12.0
Private For-Profit	16.2	17.2	15.3	15.1
<b>2-Year institutions</b>				
Public	17.1	18.0	17.9	18.1
Alabama Public Institutions	14.8	16.5	17.1	17.5
Private Not-For-Profit	12.1	12.0	11.4	11.4
Private For-Profit	18.7	16.9	17.0	16.9
<b>HBCU Institutions</b>				
All HBCU Institutions	14.6	15.2	15.5	15.6

**Table 8.** Student-to-Faculty Ratios for U.S. 4-Year and 2-Year Title IV Institutions. Student-to-faculty data was sourced from the Integrated Postsecondary Education Data System of the National Center for Education Statistics.

## Credit Completion Ratio

Credit Completion Ratio		Four-Year Private	Four-Year Public	Two-Year Public
Credit hours attempted	25th Percentile	14.5	14.0	13.1
	<b>Median</b>	15.0	14.9	13.8
	75th Percentile	15.6	15.1	14.2
Credit hours completed	25th Percentile	13.0	12.6	10.2
	<b>Median</b>	14.0	13.0	10.9
	75th Percentile	14.7	13.8	11.7
Ratio of credit hours completed to credit hours attempted	25th Percentile	0.90	0.86	0.75
	<b>Median</b>	0.92	0.89	0.81
	75th Percentile	0.94	0.93	0.84

**Table 9.** FTIC Credit Hours Attempted vs. Credit Hours Completed in Term One, 2015-16 Academic Year. Source Ruffalo Noel Levitz (2017).

Credit Completion Ratio		Four-Year Private	Four-Year Public	Two-Year Public
Credit hours attempted	25th Percentile	14.7	14.4	12.0
	<b>Median</b>	15.1	14.7	13.1
	75th Percentile	15.7	15.0	13.7
Credit hours completed	25th Percentile	13.2	12.5	9.0
	<b>Median</b>	14.4	13.3	10.1
	75th Percentile	14.9	14.1	10.9
Ratio of credit hours completed to credit hours attempted	25th Percentile	0.90	0.86	0.73
	<b>Median</b>	0.93	0.91	0.78
	75th Percentile	0.96	0.94	0.83

**Table 10.** FTIC Credit Hours Attempted vs. Credit Hours Completed in Term Two, 2015-16 Academic Year. Source Ruffalo Noel Levitz (2017).

<sup>xxvii</sup> The U.S. Department of Education defines student-to-faculty ratio as “total FTE students not in graduate or professional programs divided by total FTE instructional staff not teaching in graduate or professional programs” (NCES, n.d.-a, para. 1).

## NEED FOR FURTHER INVESTIGATION

Through a comprehensive review of the literature, this section supports the driving research question by presenting a detailed examination of theoretical and conceptual student retention frameworks, innovative and student-centered retention solutions, key performance measures, predictive student characteristics, intervention practices, and benchmarks helpful in setting goals and measuring the success of retention efforts. This review provides an understanding of industry data and practices.

The review also supports the need for further investigation and data collection. Further investigation will focus on the guiding questions aimed at understanding the current practices at Marble State. The continued investigation will include identifying the institutions current practices aimed at supporting student retention and intervention, retention and intervention data currently collected and tracked at the institution, and how current enrollment, retention, and graduation rates differ across its programs.

Further investigation will facilitate the assessment and ranking of the potential solutions identified and the identification of the optimal solution to be recommended. It can be divided into three categories: desired performance, actual performance, and cause analysis.

## METHODOLOGY

The comprehensive review provides benchmarks and best practices for retention efforts. The continued investigation will examine the benchmarks and best practices in relation to the institution's mission, vision, values, goals, strategies, and critical issues to determine the desired state of Marble State's retention efforts. Continued investigation will also identify current practices and metrics of the institution. As the goal of the study is to identify solutions to improve retention efforts, the ideal methodology would identify the areas in which the institution falls short of the desired state. Identifying those shortcomings would best be accomplished by a gap analysis.

## SUMMARY

The preceding section provided perspectives on the presenting problem and a comprehensive review of guiding questions presented in Section 2. The comprehensive review examined the seminal theoretical and conceptual frameworks that are informative for retention practices. It also summarized best practices in retention and interventions, key performance measures, student characteristic predictors, and benchmarks, each of which is critical to addressing the presenting problem. Further investigation is necessary to determine the current state of retention and intervention practices at Marble State in order to determine gaps in its practices and performance. As such, a gap analysis is the ideal research method for addressing the current state of retention and intervention at Marble State compared to the desired state.

The following section will include a multiple perspective inquiry approach to conducting research, data collection, analysis, and identification of retention and intervention strategies. The aim is to approach the research holistically to garner information about potential solutions and select one or more optimal test solutions.

## SECTION 4: MULTIPLE PERSPECTIVES & TEST SOLUTION

The previous section included a comprehensive review of guiding questions. It summarized best practices in retention and interventions, key performance measures, student characteristic predictors, and benchmarks, each of which will provide insight into the desired state at Marble State. Further investigation is necessary to fully inform the desired state and determine the current state of retention and intervention practices at Marble State.

The current section introduces the multiple perspectives framework and identifies the planned inquiry design and method and data collection and analytics. The planned inquiry includes a customized performance improvement model with a multiple perspective framework that includes a gap analysis based on the secondary research from Section 3 and the primary research and inquiry from Section 4. It also incorporates a TOWS (threats, opportunities, weaknesses, strengths) matrix to help form the gap analysis components needed to arrive at a refined list of potential solutions. The section identifies the limitations and generalizability of the study.

A multiple solutions framework is used to examine the solutions using the McKinsey 7-S framework, a social capital lens, and a risk assessment matrix. The framework facilitated the identification of the ideal test solution to answer the research question and be presented to Marble State.



# MULTIPLE PERSPECTIVES FRAMEWORK

Multiframe thinking is the process of examining issues from more than a single perspective. It includes challenging assumptions and changing perspectives. This process will help ensure that the correct question is being examined and correctly understood, and that the solution options are not too narrowly-focused (Cantero-Gomez, 2019).

To incorporate multiframe thinking throughout this section, a customized performance improvement model is utilized. The data collection and analysis use the TOWS matrix, and a gap analysis identifies potential solutions. The solutions are examined through the use of the McKinsey 7-S framework, social capital lens, and risk assessment matrix to identify the optimal test solution.

## PLANNED INQUIRY

The previous section provided a comprehensive review of the literature and identified gap analysis as the ideal research methodology. Further investigation is required to facilitate a gap analysis and answer the remaining guiding questions. The continued investigation will examine Marble State's current retention and intervention practices, current data collection, and how enrollment, retention, and graduation rates vary among the programs. This section will use a multiple perspectives framework for conducting the continued investigation and evaluating the potential solutions.

## INQUIRY DESIGN

The comprehensive review uncovered the methodology most appropriate for executing the further investigation is a gap analysis. To ensure a holistic analysis and examination of multiple perspectives, the gap analysis is carried out through a customized methodology framework that incorporates the human performance technology (HPT) model, TOWS matrix, and McKinsey 7-S framework.

**Gap Analysis.** Gap analysis is “an analytical tool designed to measure the difference between an organization's actual state or performance at a given moment in time and its desired or potential state or performance in the future” (Mercadal, 2020, para. 1). This analysis method has effectively examined questions and problems in many higher education settings (Bloemer et al., 2017; Febriani et al., 2021; Kreider & Almalag, 2019; LaBay & Comm, 2003; Sharvari & Kulkarni, 2019). It is an ideal research method for assessing the present state of student retention and intervention at Marble State compared to the desired state for several reasons.

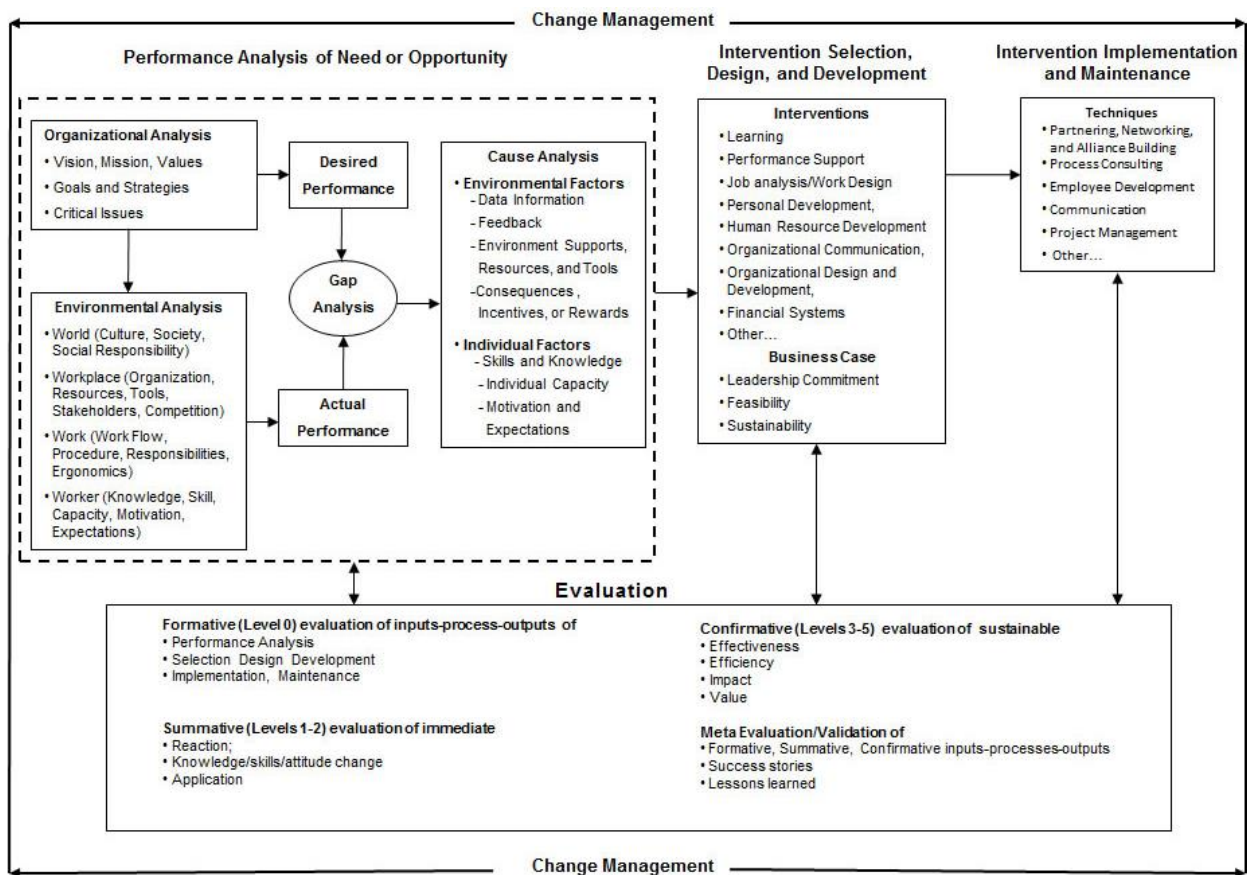
A gap analysis is a cost-effective method of identifying opportunities for improvement and developing an effective action plan to capitalize on those opportunities. This type of analysis is useful at the organizational level to identify actionable steps needed to achieve strategic goals (Mind Tools, n.d.). One of Marble State's strategic goals is to improve retention rates at the institution.<sup>20</sup>

A gap analysis can help improve retention rates and bridge that gap by improving resource usage and execution (Cuofano, 2021). It can help identify focus areas and be used to develop action plans that are broken down into small, measurable, and executable steps. Gap analysis can also help identify institutional inefficiencies leading to process improvements (Cuofano, 2021). These gap analysis functions combine to create the ideal research method for addressing retention and intervention at Marble State.



**HPT Model.** HPT is “the study and ethical practice of improving productivity in organizations by designing and developing effective interventions that are results-oriented, comprehensive, and systematic” (Pershing, 2006, p. 6). The performance improvement/HPT model (“HPT model”) depicted in Figure 28 offers a structured approach to change management utilizing the HPT framework.

A useful tool in academic settings, the HPT model consists of four stages: performance analysis, intervention selection, intervention implementation, and evaluation (Essmiller et al., 2020; Wells et al., 2014). The model is an iterative change management process of continuous improvement and provides a visual guide to the flow of the processes through each stage of change management. The comprehensive nature of the model, coupled with the documented need for a gap analysis, makes the HPT model an ideal tool for this study and will facilitate a holistic approach to the methodology.



**Figure 28.** Performance Improvement/HPT Model. From “Fundamentals of Performance Improvement: Optimizing Results Through People, Processes, and Organizations, 3rd Edition,” by D. M. Van Tiem, J. L. Moseley, and J. C. Dessinger, 2012, p. 43. Copyright 2012 by John Wiley and Sons.

**TOWS Matrix.** The TOWS matrix is an extension of a strengths, weaknesses, opportunities, and threats (SWOT) analysis. A SWOT analysis is a framework for evaluating the *internal* (strengths and weaknesses) and *external* (opportunities and threats) factors of an organization (Dess et al., 2021). While a SWOT identifies the factors, TOWS takes those factors and examines the relationships between the external and internal factors.

Figure 29 demonstrates the TOWS matrix as it will be applied in this study. This type of analysis involves examining how the factors impact and influence one another, enabling the user to mitigate threats, capitalize on opportunities, exploit strengths, and eliminate weaknesses (Lucidity, n.d.). The TOWS matrix supports decision-making and strategic planning by providing a basis to evaluate, rank, and prioritize strategies (Pirius, 2014).

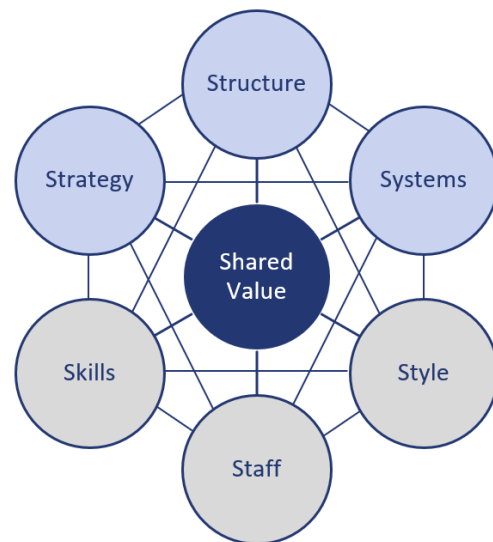
TOWS Matrix		EXTERNAL FACTORS	
		Opportunities	Threats
INTERNAL	Strengths	Strengths / Opportunities	Strengths / Threats
	Weaknesses	Weaknesses / Opportunities	Weaknesses / Threats

**Figure 29.** TOWS Matrix. Adapted from “The TOWS matrix—A tool for situational analysis,” by H. Wehrich, 1982, *Long Range Planning*, 15(2), p. 60. Copyright 1982 by Elsevier.

**McKinsey 7-S Framework.** The McKinsey 7-S framework is built on the premise that for organizational change to be effective, the relationship between multiple elements must be examined (Waterman et al., 1980). Figure 30 depicts the 7-S framework and the seven elements: shared values, structure, strategy, systems, style, staff, and skills. Waterman et al. (1980) explain that the design of the diagram is significant. It demonstrates that the factors are interconnected and equally important and that there is no beginning or end.

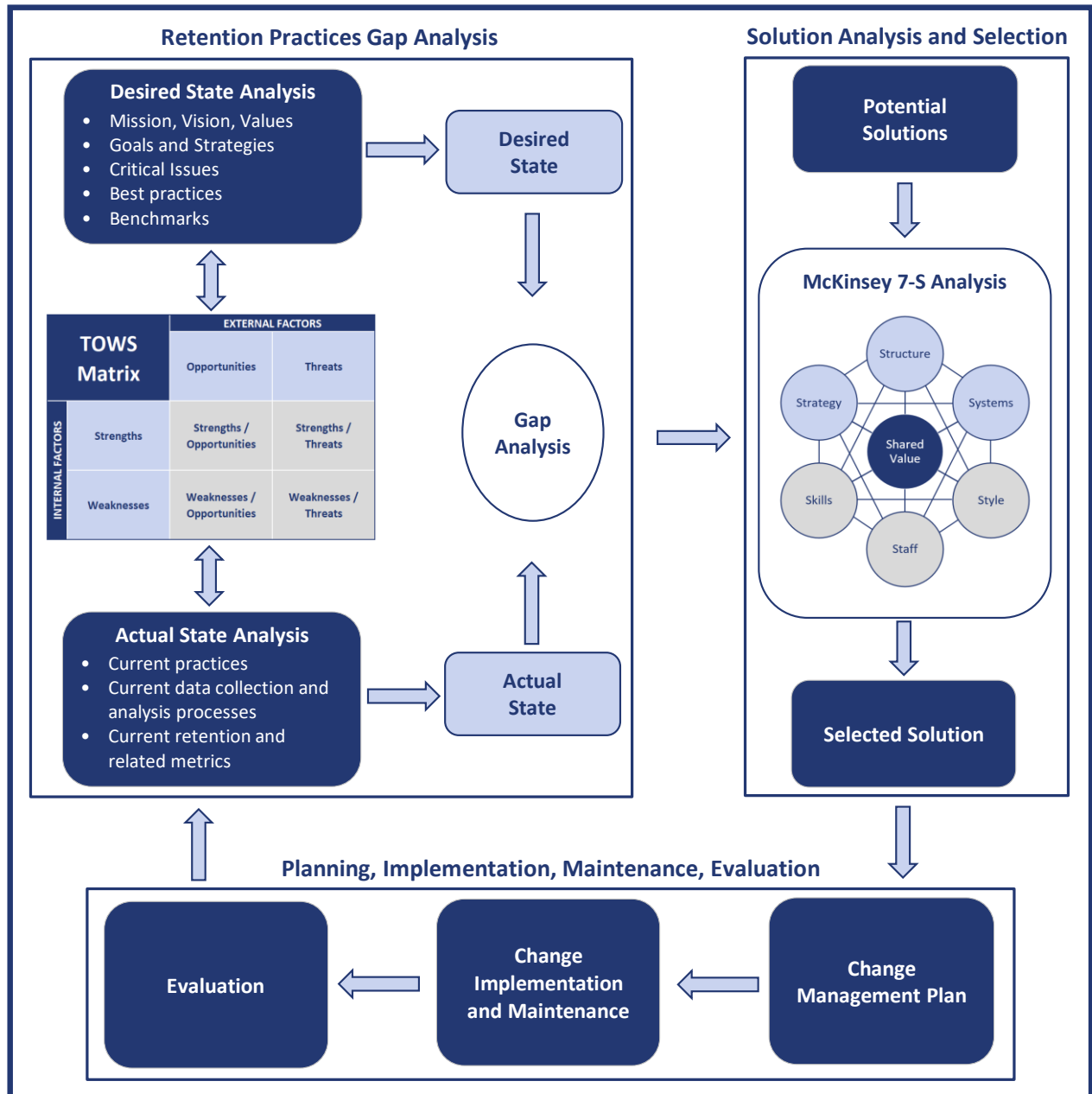
The shared values in the 7-S framework represent the values and principles that serve as the organization’s foundation (Waterman et al., 1980). Structure, strategy, and systems represent the “hard” elements in the framework. Hard elements are those that are tangible and measurable and which the organization can directly influence. Shared values, skills, style, and staff represent the “soft” elements. Soft elements are more abstract and, therefore, more difficult to measure (Savkin, 2013). The 7-S framework is ideal for exploring change solutions as it fosters a comprehensive examination of seven critical elements and seeks out misalignments, vulnerabilities, and inconsistencies that may undermine solutions (Cox et al., 2019; Pressler, 2014).

### McKinsey 7-S Framework



**Figure 30.** McKinsey 7-S Framework. Adapted from “Structure is not organization,” by R. H. Waterman, Jr., T. J. Peters, & J. R. Phillips, 1980, *Business Horizons*, 23(3), p. 18. Copyright 1980 by Elsevier.

**Methodology, Data Collection, and Analysis.** Figure 31 presents the performance improvement model adapted for this study. The model ensures a holistic analysis by incorporating the HPT model, TOWS (threats, opportunities, weaknesses, strengths) matrix, and McKinsey 7-S framework.



**Figure 31.** Customized Performance Improvement Model. Adapted from “Fundamentals of Performance Improvement: Optimizing Results Through People, Processes, and Organizations, 3rd Edition,” by D. M. Van Tiem, J. L. Moseley, and J. C. Dessinger, 2012, p. 43. Copyright 2012 by John Wiley and Sons.

Data collection will inform the desired and actual state of Marble State and include examination of institutional documents (internal and external) and information-gathering interviews with institutional personnel. Tables 11 and 12 provide details about the data to be collected.

<b>Data:</b>	Institutional Documents and Reports
<b>Format:</b>	Electronic
<b>Storage:</b>	Many documents and reports are available publicly or through an online network at Marble State and will be accessed online. Documents and reports provided directly to the researcher will be securely stored on the researcher’s computer with daily backups to a secured external drive.
<b>Internal:</b>	Marble State Catalog and Handbooks, Marble State Strategic Implementation Plans and Reports, Institutional Effectiveness Reports, Other Internal Documents and Reports
<b>External:</b>	Department of Examiners Annual Audit Reports, Integrated Postsecondary Education Data System, Alabama Community College System, Alabama Commission on Higher Education, Other External Sources as Available
<b>Data Sharing:</b>	Internal reports that are not made publicly available by Marble State will not be shared or otherwise made public by the researcher. The data will be maintained with the researcher for a period of five years, after which it will be destroyed.

**Table 11.** *Institutional Documents and Reports from Internal and External Sources.*

<b>Data:</b>	Information-Gathering Interviews
<b>Format:</b>	Virtual Interviews
<b>Storage:</b>	The researcher will create interview notes and transcripts. These documents will be securely stored on the researcher’s computer with daily backups to a secured external drive.
<b>Individuals to Interview:</b>	Nicole Bell, Dean of Students Tiffany Green, Student Success Specialist Carolyn Henderson, Dean of Instruction Lesley Shotts, Director of Institutional Effectiveness Others as appropriate and available.
<b>Data Sharing:</b>	Interview notes and transcripts will not be shared or otherwise made public by the researcher. The data will be maintained with the researcher for a period of five years, after which it will be destroyed.

**Table 12.** *Information-Gathering Interviews with Marble State Personnel.*

As indicated in Figure 31, analysis of the data collected will include the use of the TOWS matrix, gap analysis, and McKinsey 7-S analysis. The TOWS matrix will help uncover unknown information about the actual state of Marble State by examining relationships between internal and external factors. This information will likely also be useful in the gap and 7-S analyses.

The comprehensive review identified innovative and student-centered solutions that can secure and sustain higher retention at colleges and universities, summarized as potential solutions for Marble State in Table 13. The gap analysis will help identify which of those solutions are currently employed at the institution and to what extent. This analysis will help refine the list of potential solutions identified in the comprehensive review. Where gaps are identified, the 7-S analysis will aid in determining to what extent Marble State is capable of implementing or improving the solutions. In addition, the 7-S will facilitate prioritizing the potential solutions.

Potential Solutions	
Expand/Improve Data Collection and Analytics	Institute Instructional Quality Standards
Implement Summer Bridge or Orientation Programs	Develop Adjunct Support Framework
Develop a Holistic Advising Approach	Implement Motivational Interventions
Facilitate Instructional Quality Improvement Processes	Provide Faculty Interventions
Implement Intrusive Advising via Identified Risk Factors	Develop Peer-to-Peer Support Systems

Table 13. Potential Solutions to Secure and Sustain Higher Retention at Marble State.

The TOWS, gap, and 7-S analyses will result in a refined list of innovative and student-centered solutions to secure and sustain higher retention year over year at Marble State. The researcher will develop a set of criteria for ranking these potential solutions using a multi-solution framework to identify the ideal solution. Finally, a business case will be developed to justify and support the ideal solution.

## INQUIRY EXECUTED

The method of inquiry was carried out as planned using a multiple perspective inquiry and solution framework. Primary research and inquiry was conducted to answer the three guiding questions focused on the operations and data of Marble State. The research and inquiry included examining documents and conducting information-gathering interviews. The results were combined with the SWOT analysis previously performed to develop a TOWS matrix. The TOWS matrix informed the actual and desired states, facilitating a gap analysis. The gap analysis resulted in a refined list of solutions that were analyzed through the McKinsey 7-S framework, social capital lens, and risk assessment matrix. This final analysis resulted in identification of the ideal test solution.

The project did not involve the study of living humans. The researcher examined institutional documents and reports and conducted information-gathering interviews with Marble State personnel. As a public institution, much information was publicly available through the Alabama Community College System, Alabama Commission on Higher Education, Alabama Department of Examiners, and the Integrated Postsecondary Education Data System. In addition to external sources, Marble State publishes a significant amount of information on its website, including institutional catalogs, handbooks, and other resources. This project's point of contact (POC) within the institution provided internal reports not publicly available. The internal reports examined included strategic implementation plans and reports, institutional effectiveness reports, and other internal documents and reports.

The researcher conducted information-gathering interviews to uncover retention and intervention practices and metrics not identified in the available documentation. For instance, most institutional reports lag by at least one academic year. The interviews helped uncover relevant information during that lag time, including practices put in place or discontinued during that time. They also identified additional sources of information and provided clarity to items found in internal documents. The interviews were not used to collect information about individual characteristics, experiences, thoughts, or opinions.

The institutional POC assisted with identifying the individuals to be interviewed for information-gathering purposes. The individuals were selected based on their roles within the institution and their ability to provide insight into retention and intervention practices and data. The individuals interviewed were:

- Dr. Catherine Baker, Dean of Students
- Bethany Grant, Student Success Specialist
- Dr. Diana Hawthorne, Dean of Instruction
- Alyssa Smith, Director of Institutional Effectiveness

Initial interviews were conducted with the individuals virtually via Zoom. Follow-up discussions were held to provide clarity and updates after the initial interview. These discussions were primarily held over the phone or through email.

The researcher collected the following Marble State retention and intervention practices, data, and metrics from institutional documents and reports and information-gathering interviews. The information represents the actual state of retention efforts at Marble State and facilitates a gap analysis.

## MARBLE STATE CURRENT RETENTION AND INTERVENTION PRACTICES

The following summarizes Marble State's current retention and intervention practices. To facilitate a gap analysis, the institution's practices were examined in relation to the major categories of best practices identified in Section 3.

**Start Strong.** Marble State requires that all students attend and complete an Start Strong New Student Orientation (NSO). The NSO supports new students' successful transition into the college and equips students with knowledge and resources that serve as a solid foundation for social and academic student success. It provides information and services from all relevant offices in one place. Students receive advising and assistance with course registration during the NSO.

As part of the NSO, Marble State delivers a comprehensive guide that includes information regarding:

- a detailed map of the campus and its services
- welcome message
- registration steps
- Banner quick Reference guide
- student advisor locations
- student services
- Quality Enhancement Plan
- important notifications
- financial aid
- Marble Online Services
- campus safety
- important contacts
- academic calendar



Before the NSO meeting, Marble State prepares students by assisting them with applying for admission, completing an exam that assesses their math, English, and reading abilities, and applying for federal financial aid. The NSO lasts 2.5 hours, and there is no cost to students to attend.<sup>21</sup>

**Orientation 101.** With minimal exceptions, Marble State requires all students to complete a new student orientation course, Orientation 101: Orientation to College. This course is taught by academic completion specialists who also serve as the students' advisors for their first term. The orientation course serves three primary purposes: "to present the student with information about the College, ease the registration process, and orient the student (over the first semester) to personnel, policies and procedures which can help him/her progress through the curriculum and associated activities."<sup>22</sup>



In Orientation 101, students complete a WorkKeys assessment that identifies a career readiness score for each student.<sup>23</sup> In addition, they complete a VARK questionnaire that identifies the student's learning style and delivers strategies that will complement that style. Students complete a discussion assignment in which they share their learning style and strategies that have worked for them with their classmates to encourage student engagement and form connections. The VARK questionnaire results are provided to the student success specialist for use in any future interventions deemed necessary. The Orientation 101 course promotes engagement by requiring students to participate in three campus activities throughout the term, two Cup Full sessions and one focused on career and other topics.<sup>24</sup>

**STEM Summer Bridge.** Through a grant provided by the National Science Foundation, Marble State holds an annual STEM (science, technology, engineering, and mathematics) Summer Bridge program. The program is four weeks long and available at no cost to high school students in the Madison County area. Students benefit from participation through improved academic and social adjustment to college life, enhanced student social support, friendships, improved academic performance, and increased enthusiasm and confidence. The summer bridge exposes participants to various academic and technical programs through interactive, hands-on, engaging activities. The program also serves as a recruitment and retention tool to encourage and support students interested in STEM careers.<sup>25</sup>

**Cup Full Sessions.** Marble State implemented Cup Full sessions to support students' well-being and promote student engagement, a sense of community, and student success. The sessions are conducted by the student success specialist one to two times per month. One session is held at the beginning of each semester for all new students to welcome them to the institution and help them start strong. An encouragement session is held at the end of the term to help students finish strong. Throughout the semester, the sessions cover topics such as mental health, emotional health, time management, study skills, stress relief, dealing with anxiety, notetaking, and suicide, among others.<sup>26</sup>

**Dropout Detective and Instructor Insight.** Marble State currently uses Dropout Detective, a software solution that integrates into Canvas, the school's learning management system, and identifies students at risk of failing or dropout out of courses. Aimed at improving retention and graduation rates, Dropout Detective analyzes student behavior and patterns to calculate a risk factor for each student daily (AspireEDU, n.d.). This software gives Marble State the ability to proactively intervene to help students who are at risk get back on track before it is too late.

Marble State uses Instructor Insight, which also integrates into Canvas. It provides analytics on the course engagement and performance of the school's instructors. Through a dashboard, the institution can view the key performance indicators of its instructors and use them to trigger alerts based on behavior such as the percentage of at-risk students in their courses, timeliness of grading, grade distribution, and course participation. The program then ties the instructors' behaviors to the risk level of students in their classes (AspirEDU, n.d.).

AspirEDU administers both Dropout Detective and Instructor Insight. Marble State entered an agreement with the company in 2021. After training, Marble State piloted the software in the nursing program during the fall of 2021 and implemented it campuswide in the spring of 2022. The faculty can apply tags and alerts that they can forward to the student success specialist for personalized intervention.<sup>27</sup>

**PBCC-HBCC Project.** Marble State is participating in a two-year initiative led by Complete College America (CCA, 2022) and aimed at sharing "research and best practices to strengthen the career and economic outcomes of community college students of color" (para. 1). CCA is a nonprofit organization that

advocates for increased college completion rates and improved student success. The initiative launched in August 2021 has \$1 million in funding, includes 22 Historically Black Community Colleges (HBCCs) and Predominantly Black Community Colleges (PBCCs), and spans eight states. The PBCC-HBCC Network will help institutions eliminate educational outcome gaps based on race and age. It will also help assess current academic programs and their alignment with the workforce, strengthen institutional data capacity, and identify best practices that provide career, academic advising, and wraparound support<sup>xxviii</sup> to students (Complete College America, 2022).

**Caring Campus.** Marble State brought Caring Campus, an Institute for Evidence-Based Change (IEBC) initiative, to the college to support student success and retention. The IEBC provided research-based training to enhance and advance student success initiatives by altering the Marble State staff behavior. Caring Campus provides staff with the tools needed to develop stronger connections between students and the college and assist students in overcoming non-academic barriers. The training also teaches staff how to be more proactive and engaging with students.<sup>28</sup>

**Degree Completion Pathways and Degree Audits.** Marble State created “Degree Completion Pathways” for its programs, an idea modeled on the guided pathways movement aimed at helping students efficiently and effectively complete their college goals. The Degree Completion Pathways offers students detailed information about their chosen program and a clear path from their first semester to completion of the program. This is designed to help students stay on track and avoid unnecessary courses or delays due to incomplete information or scheduling conflicts.<sup>29</sup>

The Degree Completion Pathways includes a map to completion for each program. The maps include short-term and long-term goals, including short certificates, certificates, and degrees. Using these maps, academic completion specialists work with the students in their first term to develop individual plans.

Faculty conduct degree audits each term, and students are auto-graduated for any programs the students have completed. Auto-graduation provides students with manageable goals and structure, celebrates their accomplishments, encourages them to continue, and gives them credentials that make them immediately more marketable in the workforce. Since implementing the auto-graduation process, the number of completions increased by 92.75% in 2021 (from 138 in 2020 to 266 in 2021).<sup>30</sup>

**Midterm Success Checks.** The student success specialist conducts midterm success checks with every student failing at midterm. Students often get discouraged and give up on the course when they do poorly on midterm exams. This intervention allows the student success specialist to work with the student to identify why they did poorly and help develop a path to complete the course successfully.<sup>31</sup>

**Text Campaign via Trellis.** Marble State received a federal grant to support a text campaign throughout the campus. The campaign utilizes the services of Trellis Company, a nonprofit focused on initiatives that leverage higher education to make individual and community improvements (Trellis Company, n.d.). The student success specialist routinely sends texts to communicate efficiently and effectively with students through their typically-preferred platform. The texts provide students with information about services and activities available through the institution and the opportunity to receive additional information immediately on their phones by answering a simple “yes or no” question. In addition, the student success

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<sup>xxviii</sup> Wraparound support refers to holistic services that “wrap around” a student and address a comprehensive range of needs. These services can include financial support, academic tutoring, tax preparation, child care, counseling services, transportation, and the like (NCEE, 2020).

specialist sends supportive texts, including the recent campaign called “dear self,” which includes a motivational text every Monday to encourage and support students.<sup>32</sup>

**Tutoring Services.** Marble State offers professional tutoring services on campus for all general education courses and career technical education programs. Funded through Title III grants, the tutoring services are free of charge to all students throughout the academic year.<sup>33</sup> Each faculty member sets aside a specified number of hours each week to provide tutoring to students.<sup>34</sup> Marble State also makes available an extensive list of online support services on its website, including math and writing resources.<sup>35</sup>

**Library Services.** Marble State offers comprehensive library services to all students. Those services include reference assistance, library instruction, referrals to other libraries, internet access, databases, and photocopying and fax services. The library has rooms equipped with resources such as computers, presentation technology and equipment, and multimedia devices available for student use. There are also two computer labs within the library and available for student use.<sup>36</sup>

**Student Clubs & Organizations.** Marble State provides students with opportunities for engagement through various student activities. In addition to supporting its academic programs and developing soft skills, this type of engagement promotes student retention. Marble State currently provides the following clubs and organizations:

- Cyber Security Club
- Entrepreneurship Club
- International Association of Administrative Professionals
- Medical Assisting Technology Club
- National Technical Honor Society
- Phi Beta Lambda
- Phi Theta Kappa
- S.C. O’Neal, Sr. Library and Technology Center Book Club
- SkillsUSA
- Student Ambassador’s Program<sup>37</sup>

**Career Services.** Located inside the library, Marble State’s Career Services office offers career coaching, placement assistance, and resume support. Career coaching services include assistance with college and career planning, goal setting, study skills, time management skills, and education and industry trend information. Career services provides assistance with college applications, resume and interview preparation, job search, and skills, interest, and confidence analysis assessments and training. These services are available to all students and alumni.<sup>38</sup>

**Counseling Services.** Marble State offers counseling services to assist students with various needs, including crisis intervention, personal and academic issues, and stress and anxiety. A comprehensive counseling services guide for helping students in need is provided on the school’s website.<sup>39</sup> Counseling services also provides referrals to external sources as needed. Marble State provided access to counseling services at the Solid Ground Counseling Center for all students, staff, and faculty. As the contract with that center expired recently, the institution is reviewing broader options that may be more accessible to students, including a service that delivers virtual, text, and peer counseling.

**Instructional Quality and Improvement.** Marble State provides training and development opportunities to its faculty, including through designated professional development days annually at the institution. In addition, full-time personnel have access to paid leave for professional and vocational pursuits, allowing them to select development opportunities that meet their specific needs. One recent instructional quality and improvement initiative at Marble State is its e-certification initiative for online classes. The institution developed a customized online course delivery training program modeled after Quality Matters standards. All faculty, adjunct and full-time, completed the online e-certification program, giving them the skills and

tools they need to develop and deliver high quality online courses.<sup>40</sup> The institution’s long-term goal is for faculty to use those new skills to have all courses Quality Matters-certified.<sup>41</sup>

**Adjunct Training and Support.** Adjunct meetings are held each term to provide adjuncts with textbooks, syllabi, and other resources needed to teach courses. Master course shells are not mandated to be used by adjuncts. They are given the academic freedom to design and teach the courses as they see fit. Faculty, staff, and administration are available to address any needs or issues raised by the adjuncts.

## MARBLE STATE RETENTION AND INTERVENTION DATA

**Office of Institutional Effectiveness.** Marble State’s Office of Institutional Effectiveness supports and strengthens planning and assessment, budgeting, institutional effectiveness, institutional research, and decision-making through the collection, analysis, and distribution of data across the institution. In addition to routinely analyzed and reported data, individuals may request institutional data and analysis from the office’s director.<sup>42</sup>

Table 14 provides information about Marble State’s current utilization of the key performance measures discussed in Section 3.

Key Performance Measure	Data Tracked	Routinely Analyzed
Retention Rates	Yes	Yes
Persistence Rates	Yes	Yes
Transfer Rates	Yes	No
Graduation (Completion) Rates	Yes	Yes
Course Success Rates	Yes	Yes
Student Engagement	Limited	Yes
Part-Time vs. Full-Time Faculty	Yes	No
Student-to-Faculty Ratio	Yes	Yes
Development Course Completion by Grade	Yes	Yes
Credit Completion Ratio	Yes	Limited
Credit Accumulation Rate by Year	Yes	Limited
First-Term GPA	No	No
Average Cumulative GPA	No	No

Table 14. Key Performance Measures at Marble State.<sup>43</sup>

The recent implementation of Dropout Detective and Instructor Insight gives Marble State the ability to collect and track a significant amount of behavioral data for both students and instructors by integrating with the school’s learning management system. Dropout Detective gathers information on student grades, missed assignments, last date of attendance, and other activities to daily assess each student’s risk level. Instructor Insight collects information about instructor activity, including grade distribution, course log-in frequency, number of high-risk students, and timeliness of grading.<sup>44</sup>

## MARBLE STATE ENROLLMENT, RETENTION, AND GRADUATION RATES

The following figures and tables demonstrate how Marble State’s current enrollment, retention, and graduation rates differ across programs.

Figure 32 shows Marble State’s unduplicated headcount by program for the three most recent academic years. The programs with the largest enrollment across these years are salon and spa, general studies, and welding.

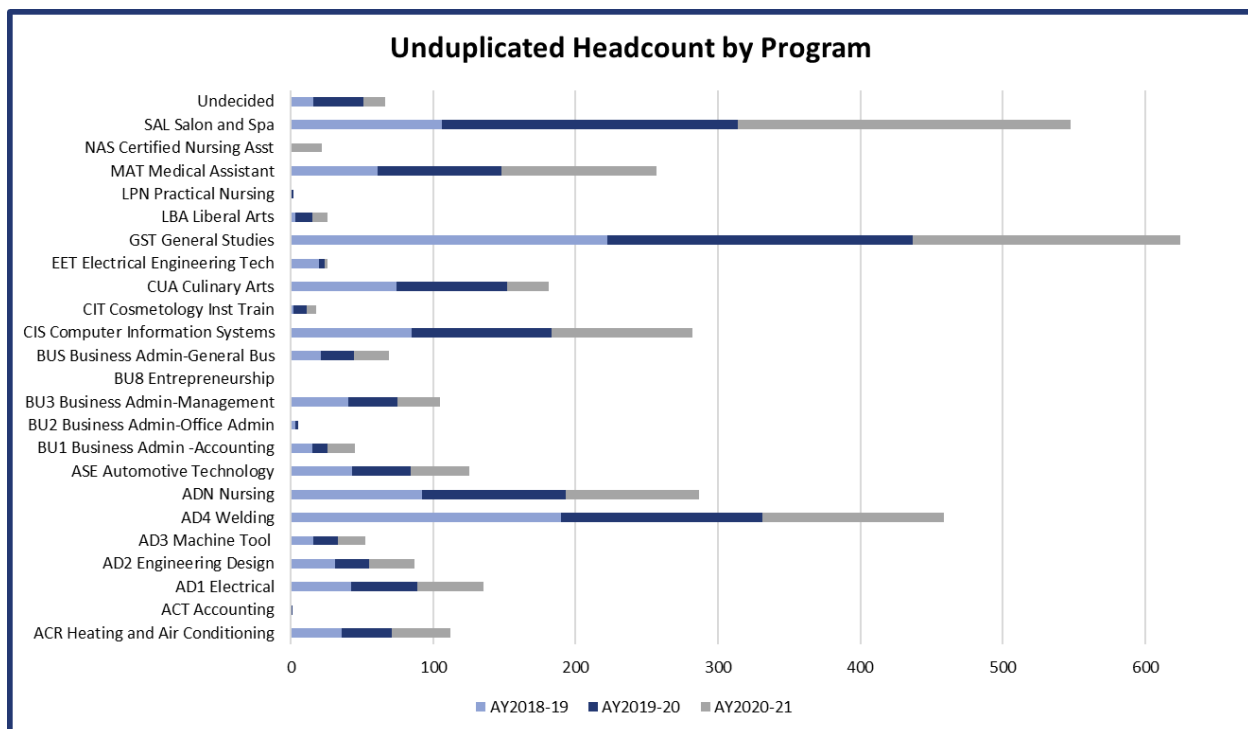
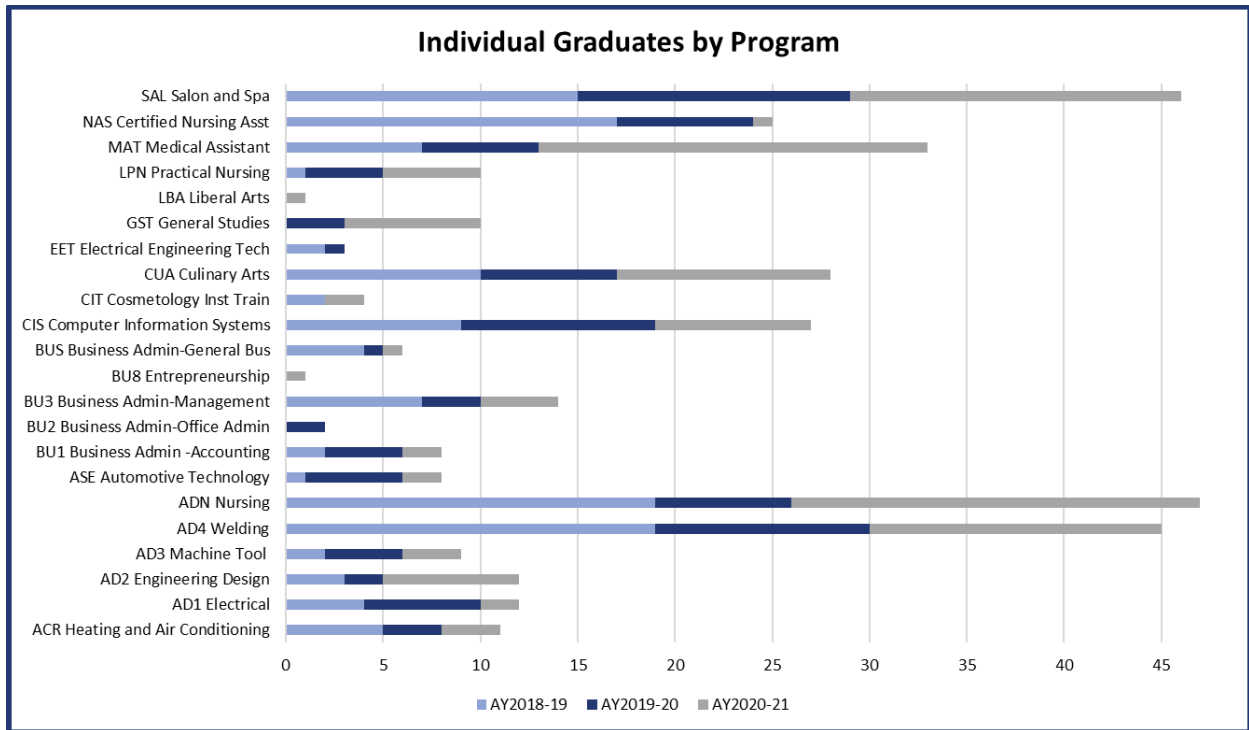


Figure 32. Unduplicated Headcount by Program for Academic Years 2018–2020. Data provided by Marble State.<sup>45</sup>

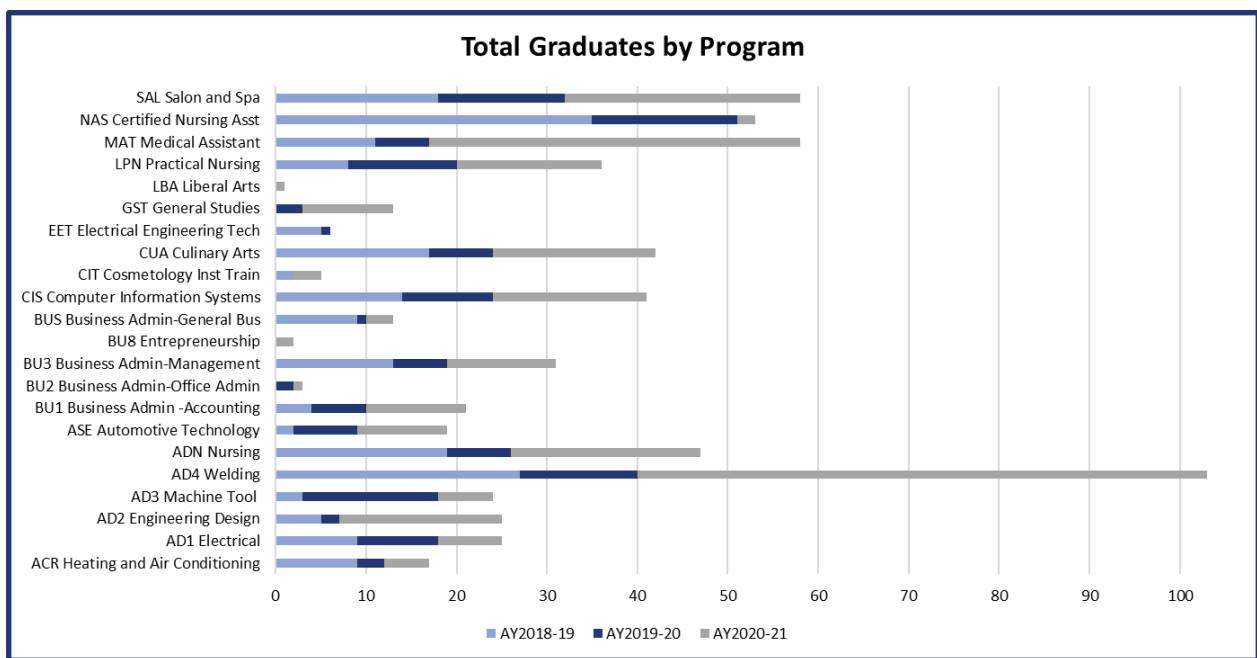
Figure 33 demonstrates the number of individual graduates by program, without regard to the number of awards a graduate received. The programs with the largest number of individual graduates include salon and spa, nursing, and welding.





**Figure 33.** Individual Graduates by Program for Academic Years 2018–2020. This figure includes a count of individual students without regard to the number of awards they received. Data provided by Marble State.<sup>46</sup>

Marble State offers programs with multiple awards, including short certificates, certificates, and associate degrees. Figure 34 shows all awards received by students. The largest number of awards over the last three academic years were in salon and spa, medical assistant, and welding. There has been significant growth in the number of awards in certain areas, due primarily to the implementation of auto-graduation of completed programs.



**Figure 34.** Total Graduates by Program for Academic Years 2018–2020. This figure includes a count of all awards received by students. Data provided by Marble State.<sup>47</sup>



Program	Persistence	Retention
	Fall 2020 to Spring 2021	Fall 2020 to Fall 2021
ACR Heating & Air Cond	60%	42%
AC1 Heating and Air Conditioning	100%	0%
AC2 Heating and Air Conditioning	100%	100%
AD1 Adv Manufacturing-Elec Tech	73%	58%
AD1C Adv Manf-Elec Tech Wiring	0%	0%
AD2 Adv Manufacturing-Eng Design	57%	38%
AD21 Adv Manf Engr Design Adv Cert	100%	0%
AD22 Adv Manf Engr Design Mech Dsgn	0%	0%
AD3 Adv Manufac-Machine Tool Tech	71%	25%
AD32 Adv Manufac- MTT Prec Mach Fun	0%	0%
AD4 Advance Manufacturing-Welding	67%	40%
AD41 ADM-SMAW	75%	25%
AD42 Advance Manufact-Welding SMA	0%	0%
AD43 ADM-GMAW	100%	100%
AD44 Advance Manufact-WDT GTAW Cert	0%	0%
AD4C Advance Manufact-Welding SMA	100%	100%
AD6 Advance Manufacturing-Mechatro	100%	33%
ADM Advanced Manufacturing	100%	100%
ADN Registered Nursing	63%	62%
ADN1 Nursing Mobility	0%	
ASE Automotive Technology	43%	27%
BU1 Business Admin-Accounting	78%	57%
BU2 Business Admin-Office Admin	100%	0%
BU3 Business Admin-Management	69%	45%
BU5 Accounting	0%	0%

Program	Persistence	Retention
	Fall 2020 to Spring 2021	Fall 2020 to Fall 2021
BUS Business Admin-General Bus	56%	38%
CI1 CIS-Cyber Security	29%	20%
CI2 CIS-Network Administrator	50%	50%
CI4 CIS-Systems Administrator	100%	100%
CIS Computer Information Systems	61%	39%
CIT - Cosmetology Instructor	67%	
CUA - Culinary Arts	86%	67%
EET Electrical Engineering Tech	0%	0%
GST General Studies	51%	42%
GST1 General Studies	100%	100%
LBA Liberal Arts	43%	0%
MAT Medical Assistant	55%	21%
MAT1 Medical Assisting	100%	0%
MAT2 Medical Assisting	33%	33%
MAT3 Medical Assisting	29%	14%
MTT Machine Tool Tech	100%	100%
NAS Certified Nursing Asst	32%	5%
BAR - Barbering Technology	100%	100%
SA2 Salon Management-Esthetics	100%	0%
SA3 Salon Management-Barbering	70%	24%
SA4 Salon Management-Nail Care	50%	20%
SA5 Salon Management-Natural Hair	50%	33%
SA6 Barbering	75%	25%
SAL Salon Management-Cosmetology	63%	33%
UND - Undecided	20%	0%
<b>Total for the Institution</b>	<b>58%</b>	<b>36%</b>

**Table 15.** Persistence and Retention Rates by Program for Academic Year 2020. Note: If the cell is blank, there was not enough data to calculate a rate. Graduates were removed from the persistence calculation. Data provided by Marble State.<sup>48</sup>



## DATA ANALYSIS

The following outlines the data analysis process applicable to identifying viable solutions. It includes an explanation of how the different analysis methods flowed from one another to result in a refined list of solutions.

SWOT analyses were prepared by the researcher and by Marble State based on the institution’s mission, vision, values, goals, strategies, and critical issues. Using these analyses, the researcher prepared a TOWS matrix. The TOWS matrix facilitated an examination of the interaction of Marble State’s strengths, weaknesses, opportunities, and threats.

By developing the TOWS matrix, an analysis of the relationships of internal and external factors and how they impact one another produced four types of strategies. The S-O strategies aim to use internal strengths to capitalize on external opportunities. Internal strengths are also used to mitigate external threats through the S-T strategies. The W-O strategies use external opportunities to improve internal weaknesses. The final strategies, W-T, attempt to minimize internal weaknesses to avoid external threats.

A detailed TOWS matrix is provided in Appendix A. Table 16 includes a summary of the strategies produced by that matrix.

Type	Strategy
S-O	<ul style="list-style-type: none"> <li>• Develop a comprehensive adjunct support framework.</li> <li>• Expand infrastructure by upgrading student computer labs, updating hardware in administrative areas, creating a virtual learning environment for student success, and growing a collaborative online environment for faculty.</li> <li>• Actively participate in the PBCC-HBCC Project led by Complete College America to identify and respond to the needs of the college’s adult students of color.</li> </ul>
S-T	<ul style="list-style-type: none"> <li>• Expand resources by increasing the amount of funds derived from grants and fundraising/ donations.</li> <li>• Increase awareness of industry-focused programs, the highly-skilled faculty who teach them, and the low cost of completing them to demonstrate competitive advantage of attending Marble State.</li> <li>• Provide comprehensive orientation opportunities to prepare new students for college.</li> <li>• Implement a holistic student support approach by creating a comprehensive center for student support.</li> </ul>
W-O	<ul style="list-style-type: none"> <li>• Strengthen curriculum by increasing standardized online course offerings, increasing institutional accreditations and program certifications, and providing targeted faculty professional development.</li> <li>• Increase funds derived from grants, fundraising, and donations by developing grant processes (review, monitor, analyze) and a fundraising strategy (evaluate opportunities and prioritize needs).</li> <li>• Utilize Dropout Detective and Instructor Insight to identify, prioritize, and support at-risk students.</li> <li>• Engage the Center for Community College Student Engagement to gather, analyze, and benchmark student engagement data.</li> </ul>
W-T	<ul style="list-style-type: none"> <li>• Develop and implement a peer mentoring program with experienced students.</li> <li>• Develop and implement a peer tutoring program utilizing Federal Work Study funding.</li> <li>• Develop and implement a recruitment plan to achieve incremental enrollment goals.</li> <li>• Enhance academic teaching and learning environment by upgrading and renovating academic facilities.</li> <li>• Increase student success resources by adding staff to support current and expand future retention and intervention efforts and mitigate risk to operations.</li> <li>• Utilize motivational interventions to support student success and improve retention.</li> </ul>

Table 16. Summary of TOWS Matrix Strategies Prepared for Marble State.

The TOWS matrix strategies inform and represent the desired state of Marble State’s retention efforts. The researcher performed a gap analysis based on the uncovered actual state and the strategized desired state. The detailed gap analysis is included in Appendix B, and a summary of the gaps identified through that analysis are provided in Table 17.

Potential Solution	Actual State	Desired State	Gap Identified	TOWS Strategy
Develop Adjunct Support Framework	Adjunct meetings each term. Otherwise, sporadic and non-standardized guidance and training.	Comprehensive adjunct support framework.	Yes	Develop a comprehensive adjunct support framework.
Expand/Improve Data Collection and Analytics	Conducts limited internal surveys of some student engagement activities. No comprehensive student engagement data collection or analysis.	Summative feedback and analysis of student engagement.	Yes	Engage the Center for Community College Student Engagement to gather, analyze, and benchmark student engagement data.
Develop Peer-to-Peer Support Systems	Currently evaluating external virtual counseling services that include peer counseling. No peer tutoring or mentoring on campus.	Peer support services.	Yes	Develop and implement a peer mentoring program with experienced students.
				Develop and implement a peer tutoring program utilizing Federal Work Study funding.
None	One student success specialist	Sufficient staffing of student success specialist office.	Yes	Increase student success resources by adding staff to support current and expand future retention and intervention efforts and mitigate risk to operations.

Table 17. Summary of Gaps Identified in Gap Analysis.

The researcher mapped the associated potential solution and TOWS strategy for each area examined in the gap analysis. The TOWS strategies, summarized in Table 16, were developed as part of the primary research and inquiry. The potential solutions identified in Table 13 are based on the secondary research, including the comprehensive review and analysis in prior sections. The gap analysis facilitated the refined list of innovative and student-centered solutions that will help secure and sustain higher retention at Marble State.

One item of particular note in Table 17 is that three of the gaps identified were directly related to potential solutions identified in the secondary research. The final item in the table is a solution not originally identified but that arose from new insight gleaned through analysis, including through the mapping of best practices to the actual practices at Marble State.

## LIMITATIONS AND GENERALIZABILITY

As noted in Section 2, limitations are weaknesses of a study that may impact the research findings. Potential limitations associated with this study must be considered when making inferences about the results. One such limitation is the generalizability of the findings. This project involves the study of a small, HBCU community college in Marble City, Alabama. While the results may not be immediately generalizable to the greater higher education population, the findings can be used to inform retention efforts, particularly at community and technical colleges. In addition, the study may be used to guide practitioners and scholars in retention research methods and future studies.

One limitation of the study is that Marble State is in the midst of a branding campaign to improve and promote awareness and preference for Marble State as an educational institution.<sup>49</sup> Brand reputation, perceptions, and quality can positively impact student satisfaction and increase retention (Swani et al., 2021). Institution employees are aware of and contributing to the rebranding efforts, which may affect their perceptions. Any branding changes and the resulting impact on retention are speculative as the rebranding will be deployed after the conclusion of this study.

An additional limitation of the study is that the findings and proposed solution(s) are applicable for a limited time. Changes at the institution and in its environment could impact the viability of the resulting change management plan. The COVID-19 pandemic is an example of a change in the institution's environment that significantly affected operations and plans. The expiration of grants and other resources available to the institution could also impact operations and plans.

## MULTIPLE SOLUTIONS FRAMEWORK

The refined list of potential solutions must be evaluated to determine which is most likely to succeed and result in positive change for the organization. To that end, the McKinsey 7-S framework is used to evaluate how well each solution aligns with the institution. Because of the importance of social capital to a public higher education institution, each solution is also examined to determine its impact on the institution's social capital.

### POTENTIAL SOLUTIONS

Prior to data analysis, ten potential solutions aimed at answering the overarching research question from Section 2 were identified and summarized in Table 13. The potential solutions were based on the secondary research, which identified retention best practices by addressing the guiding research questions, also in Section 2. A TOWS matrix and gap analysis refined the list of potential solutions by identifying gaps between the current state of retention practices at Marble State and its desired state based on best practices. These analyses produced a refined list of three types of potential solutions that support answering the overarching research question. Those solutions include:

- Develop Adjunct Support Framework
- Expand/Improve Data Collection and Analytics
- Develop Peer-to-Peer Support Systems

The solutions were further refined through the TOWS strategy development. The final solutions included in the following evaluation are:

- Develop a comprehensive adjunct support framework.
- Engage the Center for Community College Student Engagement to gather, analyze, and benchmark student engagement data.
- Develop and implement a peer mentoring program with experienced students.
- Develop and implement a peer tutoring program utilizing Federal Work Study funding.
- Increase student success resources by adding staff to support current and expand future retention and intervention efforts and mitigate risk to operations.

## FRAMEWORK TO EVALUATE SOLUTIONS

The researcher selected the McKinsey 7-S framework to facilitate a holistic analysis of the potential solutions. As noted earlier in this section, the framework examines seven organizational elements that can provide insight into proposed solutions. These interconnected elements “influence an organization’s ability to change” (Bryan, 2008, para. 2).

Each potential solution is examined using the seven elements of the McKinsey 7-S framework. The analysis identifies the extent to which the seven elements of the framework are aligned for each potential solution. Those elements are:

- **Shared values** are at the center of the framework and represent the institution's foundation. They include the mission, vision, norms, and core values. The evaluation of potential solutions includes determining how each solution aligns with the shared values of Marble State.
- **Strategy** refers to the institution’s plan to compete and build and maintain a competitive advantage. The solution evaluation includes how well each solution aligns with Marble State’s strategic plan.
- **Structure** represents how the institution is organized, including who makes decisions and how they are made. Evaluation of the solutions includes the extent to which the institution has a structure capable of successfully implementing the solutions while avoiding chaos, confusion, and unnecessary disruptions.
- **Systems** are the processes, procedures, and activities routinely carried out in the execution of daily functions. Solutions are evaluated to determine how well they fit in the institution’s current systems.
- **Style** refers to the institution's management, leadership, and teamwork styles. Solutions are evaluated to the extent that the institution’s style will facilitate each solution.
- **Staff** includes the employees of the institution and their abilities. Staffing needs and requirements for each solution are examined.
- **Skills** refer to the competencies of the institution’s employees. Solutions are examined to determine any skills gaps that may prevent the successful implementation of each solution.

Because shared values are critical to all other elements in the framework, any solution not aligned with the institution’s shared values will be deemed nonviable. The remaining six elements will be evaluated on the scale in Figure 35.

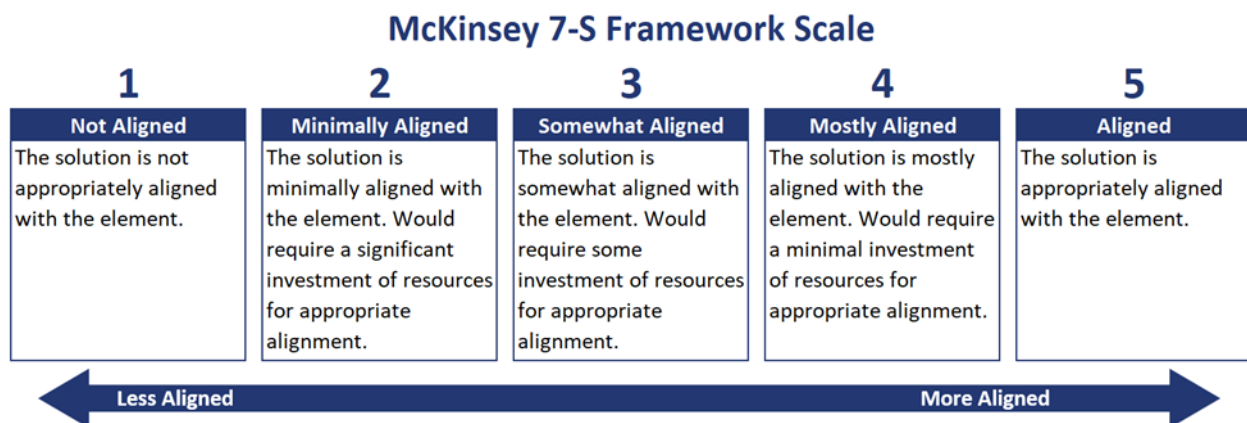


Figure 35. Scale Utilized to Evaluate McKinsey 7-S Framework Analysis of Solutions.

Each solution was evaluated regarding the extent it builds or contributes to the institution’s social capital. As a public, not-for-profit higher education institution, Marble State is primarily funded by taxpayer dollars from the state and federal governments. As such, it has a broader stakeholder base and heightened responsibility to develop social capital.

Social capital is developed by prioritizing stakeholder relationships through sincerity, service, and support, as demonstrated in the virtuous business model© (Brooker & Boyce, 2017; Hein & Wilkinson, 2015). Marble State currently has strong relationships and capital with its internal (i.e., students, staff, faculty) and external (i.e., employers, government, community) stakeholders. Each solution was evaluated to the extent that it impacts the institution’s social capital. Figure 36 represents the scale used in that evaluation.

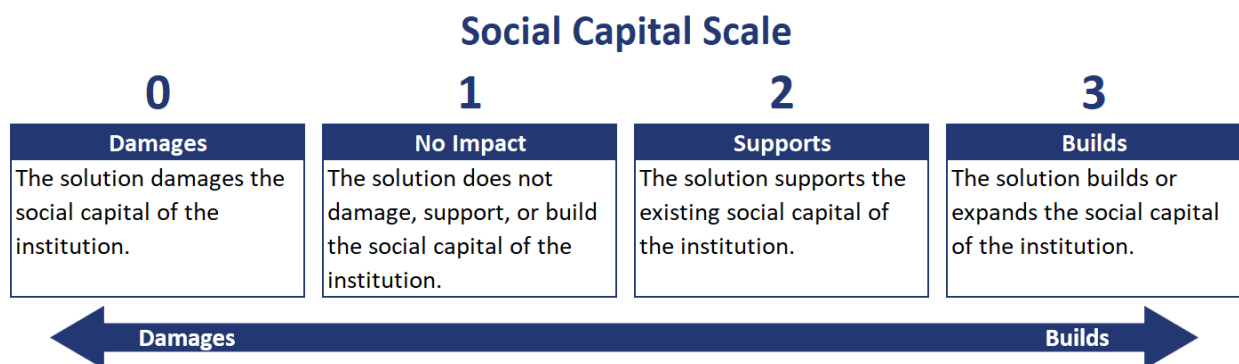


Figure 36. Scale Utilized to Evaluate Social Capital of Solutions.

## EVALUATION OF SOLUTIONS

Each solution was evaluated based on the McKinsey 7-S framework and social capital elements. Appendix C includes a detailed matrix of this evaluation. A summary of the assessment is provided in Table 18.

If a solution did not align with Marble State’s shared values, it would be deemed a nonviable solution. All solutions were found to align with the institution’s shared values. Each solution was then scored on its alignment with the remaining six McKinsey elements and the institution’s social capital. The scores were combined to calculate a total score for each solution. The solutions were ranked based on their total scores, from highest to lowest.

The resulting ranked solutions are as follows:

1. Increase student success resources by adding staff to support current and expand future retention and intervention efforts and mitigate risk to operations.
2. Engage the Center for Community College Student Engagement to gather, analyze, and benchmark student engagement data.
3. Develop a comprehensive adjunct support framework.
4. Develop and implement a peer mentoring program with experienced students.
4. Develop and implement a peer tutoring program utilizing Federal Work Study funding.



Solution	McKinsey 7-S							Social Capital	Total Score	Rank
	Shared Values	Staff	Skills	Style	Systems	Structure	Strategy			
Increase student success resources by adding staff to support current and expand future retention and intervention efforts and mitigate risk to operations.	✓	Aligned. Would help reduce current strain. 5	Aligned. 5	Aligned 5	Aligned. 5	Aligned. 5	Serve more students, promote student success. 5	Builds by prioritizing employee and student stakeholder relationships. 3	33	1
Engage the Center for Community College Student Engagement to gather, analyze, and benchmark student engagement data.	✓	Slightly time-intensive solution, putting additional strain on faculty and staff. 4	No skills gaps. 5	Aligned 5	Office of Institutional Effectiveness, Dean of Students 5	Aligned 5	Promote student success. 5	Builds by prioritizing student stakeholder relationship. 3	32	2
Develop a comprehensive adjunct support framework.	✓	Time-intensive solution, putting additional strain on faculty and staff. 3	No skills gaps. 5	Aligned 5	Lacking consistent, formalized system for adjunct support. 4	Aligned 5	Promote student success, strengthen the curriculum. 5	Builds by prioritizing adjunct stakeholder relationship. 3	30	3
Develop and implement a peer mentoring program with experienced students.	✓	Time-intensive solution, putting additional strain on faculty and staff. 3	Skills to deploy peer-to-peer mentoring needed. 4	Aligned 5	Adaptation or new systems specific to peer mentoring. 4	Aligned 5	Serve more students, promote student success. 5	Builds by prioritizing student stakeholder relationship and exploiting dormant peer network social capital. 3	29	4
Develop and implement a peer tutoring program utilizing Federal Work Study funding.	✓	Time-intensive solution, putting additional strain on faculty and staff. 3	Skills to deploy peer-to-peer tutoring needed. 4	Aligned 5	Adaptation or new systems specific to peer tutoring. 4	Aligned 5	Serve more students, promote student success. 5	Builds by prioritizing student stakeholder relationship and exploiting dormant peer network social capital. 3	29	4

Table 18. Summary of McKinsey 7-S and Social Capital Analysis of Solutions.

As with any change, there are risks associated with the identified and ranked solutions. Those risks are summarized in Table 19. As noted in the TOWS matrix, one of Marble State’s identified weaknesses is that its lack of communication leads to silos and resistance to change. A lack of communication is possible and could have a serious impact on the success of the change management implementation. To mitigate that risk, it is essential that a change management plan, based on comprehensive research and analysis, be communicated to all affected parties. With honest and transparent communication about the need for the change, its implementation, and its anticipated impact, leadership can help ensure that the change management plan is adopted ethically and with integrity.

A lack of communication can result in a resistance to change and a lack of support for the selected solution. Both are possible and could have a serious impact on the solution's success. A demonstrated commitment from leadership and proactive communication and collaboration with affected parties will be instrumental in reducing those risks. This provides another opportunity to engrain ethics into the change management process. By providing faculty and staff the opportunity to review and comment on the proposed change and treating them as an integral part of the process, the institution is more likely to get buy-in and ethical compliance.

With any change management plan, there is a budgeting risk. The risk to the budget is unlikely due to the availability of federal funds and the potential for increased revenues from the implemented solution. In addition, the TOWS matrix identified the institution’s strong financial position through the effective and efficient use of funds as one of Marble State’s strengths. In addition, the gap analysis identified that Marble State is currently pursuing increased resources through grants and donations. Frequent reporting and oversight could assist in mitigating budget risks of the change management plan.

At least two of the solutions include hiring individuals, which comes with the risk of making a poor hiring decision. That risk at Marble State is unlikely due to the comprehensive selection and hiring practices established by the institution and the ACCS. To the extent that those practices are followed, the hiring risk can be reduced.

Risk	Likelihood	Severity	Priority	Strategies to Reduce Risk	Key
Lack of communication	3	4	12	Comprehensive change management plan communicated to affected parties.	<b>Likelihood</b>
					1 Remote
Resistance to change	3	4	12	Commitment from leadership and proactive communication and collaboration with affected parties.	2 Unlikely
					3 Possible
					4 Likely
Lack of support	3	4	12	Commitment from management and proactive communication and collaboration with affected parties.	5 Certain
					<b>Severity</b>
Budgeting risk	2	3	6	Federal funds, improved retention can lead to increased revenues, reporting and oversight.	1 Immaterial
					2 Annoying
Poor staffing choices	2	3	6	Comprehensive selection and hiring practices followed.	3 Disruptive
					4 Serious
					5 Critical

Table 19. Risk Assessment Matrix for Identified Solutions.

Each potential solution was evaluated based on the McKinsey 7-S framework and social capital elements. The researcher also assessed and ranked the risks associated with the solutions. The researcher assigned a likelihood and severity score to each risk using the key in Table 19. The two scores for each risk were multiplied together to arrive at a numerical priority. The higher the priority score, the more critical the risk. The highest priority risks (i.e., the three with scores of 12) are associated with all solutions and include lack of communication, resistance to change, and lack of support. Each of those risks can be mitigated by leadership's proactive, intentional, and ethical communication and collaboration with individuals impacted by implementing the selected solution.

## IDENTIFICATION OF TEST SOLUTION

After comprehensively evaluating each solution through multiple perspectives, the researcher selected the following optimal test solution for Marble State:

Increase student success resources by adding staff to support current and expand future retention and intervention efforts and mitigate risk to operations.

In its simplest form, justification for selecting this solution lies in the fact that it was the highest-ranked solution resulting from the preceding analysis. Recalling how the study developed the potential solutions and the complexities of the analysis will be important to understanding the value of the selected solution.

Section 2 set out to diagnose the problem that this study would examine. That section uncovered that retention is critical to Marble State and that poor retention rates significantly impact the school's ability to address two institutional priorities: serve more students and promote student success. The problem statement in this study identified both a general and specific problem. As stated in Section 2, the general problem is that the long-standing community college retention problems threaten the well-being of students, institutions, and society. The problem specific to Marble State is that declining enrollment and policymakers' use of completion rates as success indicators make improving its retention rates increasingly critical.

Acknowledging a problem and citing a continuing concern with retention, Marble State partnered with the researcher to answer the following overarching question:

Based on a gap analysis, what innovative and student-centered solutions will secure and sustain higher retention year over year at Marble State Community College, enabling the institution to fulfill its mission?

Ten guiding questions were identified to assist with answering the overarching question. The questions helped develop a better understanding of the current and desired states of retention at Marble State and guided the exploration of potential solutions for the stated problem.

Section 3 provided a comprehensive review to address seven of the ten guiding questions identified in Section 2. The review examined the informative theoretical and conceptual frameworks for retention practices, retention best practices, and key retention performance measures. It explored the student characteristics that serve as predictors of at-risk students, intervention best practices, and benchmarks useful in setting goals and measuring success in student retention efforts. Finally, the review identified

how a gap analysis could be an ideal research method for identifying and assessing solutions to Marble State's student retention problem.

This section addressed the remaining three guiding questions by identifying Marble State's current practices aimed at supporting student retention and intervention, data currently collected and tracked to monitor student retention and intervention, and how current enrollment, retention, and graduation rates differ across its programs.

The answers to the guiding questions were combined to conduct a gap analysis. A TOWS matrix, the McKinsey 7-S framework, and an analysis of social capital, ethics, and risk assessment supported the analysis to ensure a holistic approach.

In conducting the gap analysis, the researcher found that many retention and intervention best practices are currently in use or in the process of being deployed at Marble State. Appendix D presents a mapping of Marble State's current practices to the best practices identified in Section 3. Through the Section 4 inquiry, the researcher discovered that Marble State experiences significant change regarding its retention and intervention practices due partly to the award or expiration of grants that fund the initiatives. In addition, the researcher determined that many of Marble State's retention and intervention practices fall under the purview of a single student success specialist, as noted in Appendix D.

The student success specialist position is a critical and student-centered role, particularly regarding retention and intervention. The skills for that role are specialized and not easily backfilled by other employees when the success specialist is out of the office. Examples of the technical qualifications for the role include a graduate degree in counseling, student development, or a related field and full-time counseling experience.<sup>50</sup> In addition, that position performs duties related to summer bridge and orientation programs, counseling services, disability services, motivational interventions, and academic interventions.

Each of those roles results in developing significant relationships with Marble State students. In the fall of 2021, there were 872 students enrolled at Marble State (ACHE, n.d.-b). A disruption in the services provided to those students could be detrimental to the students and the institution's retention efforts. Overreliance on a single individual is a threat to the institution's operations and students' success.

The selected solution would allow the institution to develop a backup and succession plan for the position, including developing standards and documentation around its retention and intervention practices. Additional staff in this area would also allow the institution to expand existing practices and implement new practices.

Another reason this solution is optimal is that the current faculty and staff are overextended and at risk for burnout. Attempting to implement new retention and intervention practices (i.e., CCCSE student engagement data project, adjunct support framework, and peer-to-peer programs) can potentially worsen the overburdened condition of faculty and staff, putting existing practices at greater risk. Increasing student success staff will support current retention and intervention efforts, facilitate the addition of new efforts, mitigate the risk to student success operations, and support overextended faculty and staff.

# SUMMARY

The preceding section identified the planned research and analysis to determine the ideal test solution to the overarching research question to present to Marble State. The research and analysis used a customized performance improvement model. The model is an iterative, multiple perspective framework that includes a gap analysis based on the secondary research from Section 3 and the primary research and inquiry from Section 4. It also incorporates a TOWS matrix that helped inform the gap analysis components to arrive at a refined list of potential solutions. The section identified the limitations of the study.

A multiple solutions framework was used to examine each solution using the McKinsey 7-S framework, a social capital lens, and a risk assessment matrix. The framework facilitated the identification of the ideal test solution that will answer the research question and be presented to Marble State. The identified solution is to increase the student success resources by adding staff to support current and expand future retention and intervention efforts and mitigate risk to operations. The solution is optimal because it will protect and support current retention and intervention efforts by facilitating a backup and succession plan for the student success specialist position. In addition, it will allow the institution to expand existing retention and intervention practices and implement new ones. Finally, the solution will help alleviate some of the overextended faculty and staff burden.

The final section of this report will include a change management plan to assist Marble State with successfully implementing the solution. The plan will include an explanation of why the change should occur and a proposed path to implement the change.





# SECTION 5: CHANGE MANAGEMENT PLAN

The previous section included the identification of the optimal test solution. That solution is to increase the student success resources by adding staff to support current and expand future retention and intervention efforts and mitigate risk to operations. This section includes a change management plan designed to implement the solution successfully.

The section begins with making the case for change and reframing the organization to understand the change and how it will fit within the institution. A force field analysis provides a better understanding of the primary forces for and against adopting the authorized solution. Kotter's 8-step process for leading change is used to manage the change and develop a change management plan. The section concludes with a detailed plan for change management, including implementation of intervention strategies, communication plan, evaluation, reinforcement strategies, scenario planning, and an action plan.





# MAKING THE CASE FOR CHANGE

## BUSINESS CASE FOR CHANGE

The researcher presented a business case for change to Marble State on June 2, 2022. Marble State representatives participating in the meeting included:

- Dr. Catherine Baker, Dean of Students
- Bethany Grant, Student Success Specialist
- Alyssa Smith, Director of Institutional Effectiveness

The presentation and discussion included the following topics:

- Research question
- Theoretical and conceptual retention frameworks
- Innovative and student-centered retention solutions
- Customized methodology framework
- Identified gaps
- Possible solutions
- Recommended solution
- Institutional selection of solution

The presentation began with a review of the research question to ensure a collective understanding of the purpose of the study and proposed solutions. The research question, included in Figure 37, aligns with Marble State’s mission and vision, focuses on a need identified by the institution, and identifies the research method used to determine sustainable solutions.

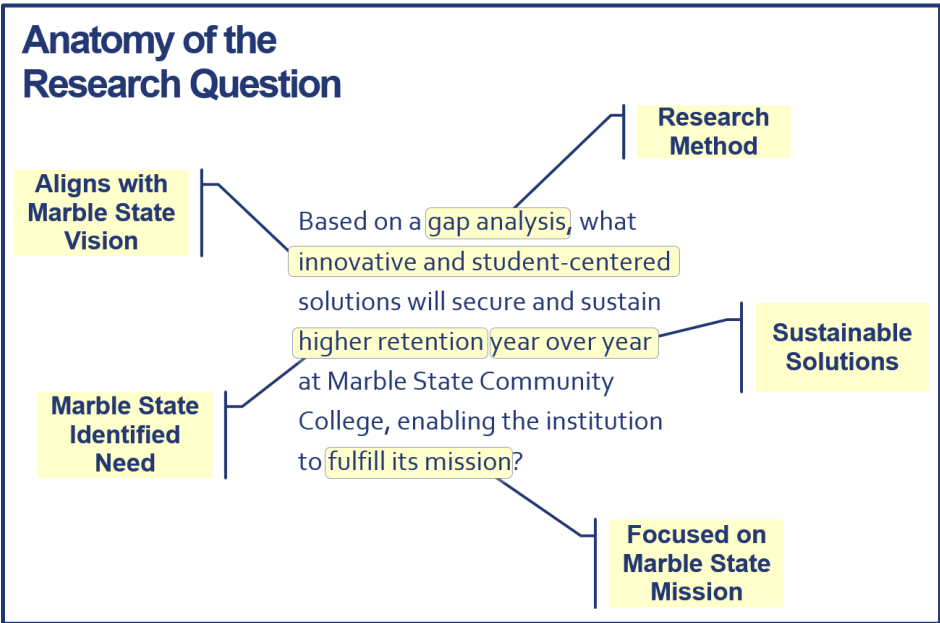


Figure 37. Anatomy of the Research Question.

Briefly touching on the theoretical and conceptual frameworks that inform retention practices, the researcher demonstrated the fundamental concepts underlying the study and resulting solutions. The researcher also summarized the innovative and student-centered retention solutions uncovered in the comprehensive review.

The presentation included a demonstration of the customized methodology framework used to identify possible and ideal solutions holistically. Seventeen possible solutions resulted from the analysis:

- Develop a comprehensive adjunct support framework.
- Expand infrastructure by upgrading student computer labs, updating hardware in administrative areas, creating a virtual learning environment for student success, and growing a collaborative online environment for faculty.
- Actively participate in the PBCC-HBCC Project led by Complete College America to identify and respond to the needs of the college's adult students of color.
- Expand resources by increasing the amount of funds derived from grants and fundraising/donations.
- Increase awareness of industry-focused programs, the highly-skilled faculty who teach them, and the low cost of completing them to demonstrate competitive advantage of attending Marble State.
- Provide comprehensive orientation opportunities to prepare new students for college.
- Implement a holistic student support approach by creating a comprehensive center for student support.
- Strengthen curriculum by increasing standardized online course offerings, increasing institutional accreditations and program certifications, and providing targeted faculty professional development.
- Increase funds derived from grants, fundraising, and donations by developing grant processes (review, monitor, analyze) and a fundraising strategy (evaluate opportunities and prioritize needs).
- Utilize Dropout Detective and Instructor Insight to identify, prioritize, and support at-risk students.
- Engage the Center for Community College Student Engagement to gather, analyze, and benchmark student engagement data.
- Develop and implement a peer mentoring program with experienced students.
- Develop and implement a peer tutoring program utilizing Federal Work-Study funding.
- Develop and implement a recruitment plan to achieve incremental enrollment goals.
- Enhance academic teaching and learning environment by upgrading and renovating academic facilities.
- Increase Student Success resources by adding staff to support current and expand future retention and intervention efforts and mitigate risk to operations.
- Utilize motivational interventions to support student success and improve retention.

The preceding solutions were based on the institution's mission, vision, values, goals, strategies, and critical factors. They were further informed by a detailed SWOT analysis and the TOWS matrix. These possible solutions, or the desired state, were compared to Marble State's actual state of student retention and intervention through a gap analysis. The researcher eliminated all possible solutions in which no gap was identified (i.e., the solutions were already implemented or in progress at Marble State). This gap analysis resulted in a refined list of five potential solutions.

Each potential solution was examined using the seven elements of the McKinsey7-S framework and evaluated to the extent it builds or contributes to the institution's social capital. These analyses incorporated measurable scales so that the solutions could be ranked, resulting in the following ranked list of test solutions:

1. Increase student success resources by adding staff to support current and expand future retention and intervention efforts and mitigate risk to operations.
2. Engage the Center for Community College Student Engagement to gather, analyze, and benchmark student engagement data.
3. Develop a comprehensive adjunct support framework.
4. Develop and implement a peer mentoring program with experienced students.
4. Develop and implement a peer tutoring program utilizing Federal Work-Study funding.

The researcher explained that, while each possible solution is viable and would serve to improve retention, the test solution selected is:

Increase student success resources by adding staff to support current and expand future retention and intervention efforts and mitigate risk to operations.

The test solution was chosen because it was the highest-ranked possible solution. It was the highest-ranked because the analysis determined that it is a comprehensive solution that would, minimally, accomplish the following:

- Provide support for current retention and intervention efforts.
- Support expansion of additional retention and intervention efforts.
- Provide relief to some overburdened personnel.
- Alleviate gaps in service when the student success specialist is out of the office or unavailable.
- Alleviate the burden placed on other staff and faculty when a student success specialist is out of the office or unavailable.
- Support a staffing backup plan for student success specialist services.
- Support a succession plan for student success specialist services.
- Mitigate risks to student success operations.



During the discussion of the possible and selected test solutions, it was uncovered that at least two of the possible solutions are already under consideration at Marble State. The director of institutional effectiveness is currently examining the feasibility and logistics of engaging in data analytics opportunities with the Center for Community College Student Engagement. In addition, the dean of students shared that there are conversations underway about implementing a peer tutoring program.

The Marble State representatives unanimously agreed that increasing the student success staff would be the most effective retention solution. There is currently a single student success specialist, and the role is heavily involved in a large proportion of the retention and intervention practices at Marble State. The representatives acknowledge the risk to operations posed by having a single specialist. The group also discussed how a single specialist limits retention and intervention efforts and the student support provided when that individual is out of the office.

The primary concern with this solution is budget-related. The 2022–23 budget has already been approved, so the institutional representatives feel confident this is not an immediate solution. Setting budgets for an academic year months before it starts is standard and required by the ACCS and the State Board of Education. However, the Marble State representatives believe that a change management plan focused on increasing the student success staff could support a funding request in the subsequent budget year.

The test solution, as presented to Marble State, was authorized without modifications.:

Increase student success resources by adding staff to support current and expand future retention and intervention efforts and mitigate risk to operations.

While the Marble State representatives selected and authorized the preceding test solution, they were also interested in information about the additional test solutions not selected. The researcher explained that information about the solutions, including the research that serves as their foundation and the analysis that led to them being viable test solutions, would be included in the final report.

The researcher prepared a presentation and authorization review form summarizing the business case presentation and the selected test solution. The Marble State point of contact for this applied doctoral project signed and dated the form, accepting and authorizing the researcher to move forward with developing a change management plan in support of the selected test solution. Appendix E includes a copy of this document.

Section 3 identified innovative and student-centered retention and intervention best practices that are proven to secure and support sustained retention results. Section 4 uncovered the innovative and student-centered solutions currently in place at Marble State. In applying the customized methodology framework developed in Section 4, the researcher discovered that Marble State experiences frequent changes in its retention and intervention practices and that many of them fall under the purview of a student success specialist, as noted in Appendix D.

The authorized solution, included in Figure 38, addresses the driving research question by providing additional resources and expertise needed to develop standards and documentation for retention and intervention practices. Additional staff in this area would also allow the institution to expand existing practices, implement new practices, assist in alleviating the burden of an overextended faculty and staff, and mitigate the risk to student success operations.

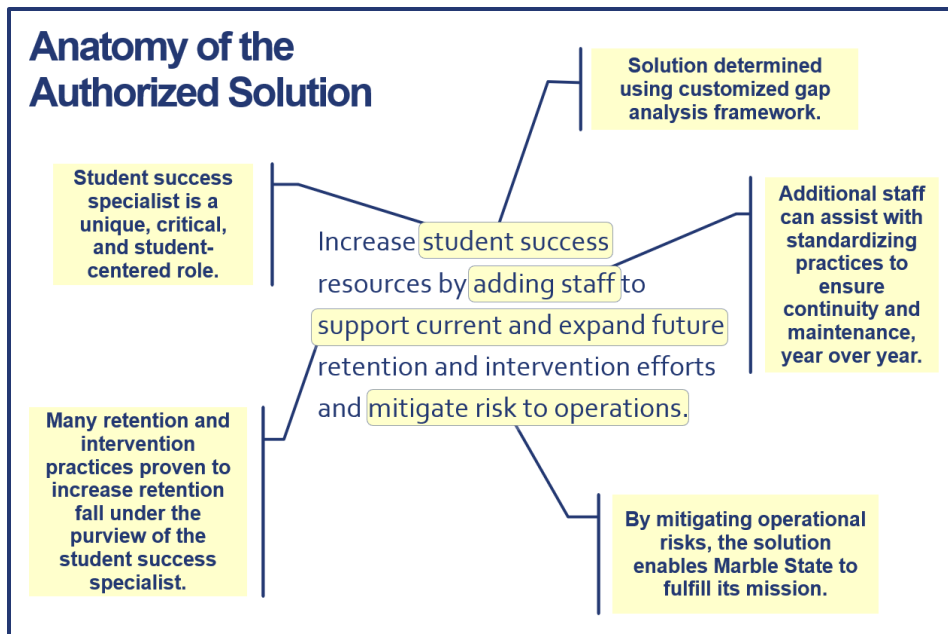


Figure 38. Anatomy of the Authorized Solution.

## REFRAMING THE ORGANIZATION

Implementing the authorized solution and realizing its benefits and value will require embracing change and envisioning a different version of the organization. The authorized solution involves making a developmental change. Developmental changes are changes made “to existing processes or procedures to make them more effective” (Austin, 2021, para. 16).

The developmental change involves hiring additional staff to support student success operations. The position would fall under the direction of the Dean of Students. There is currently a single student success specialist responsible for many critical student retention and intervention strategies for all students. In addition, there is not a sufficient backup or succession plan for the position, which impedes growth and puts current operations at risk.

The required qualifications for the student success specialist position are such that cross-training and providing short-term coverage in instances of illness, vacation, or other absences are not easily or sufficiently possible. Moreover, when pairing those qualifications with the institution's job posting and hiring procedures, it means that should the position be vacated for any reason, it could not be filled without significant disruption to the activities of the office and the support system provided to students.

By hiring an additional student success staff member, the institution would mitigate risks and expand retention, intervention, and student support efforts. There are forces that drive and resist a change, and a force field analysis is a tool for examining them. Figure 39 demonstrates the force field analysis of the authorized solution.

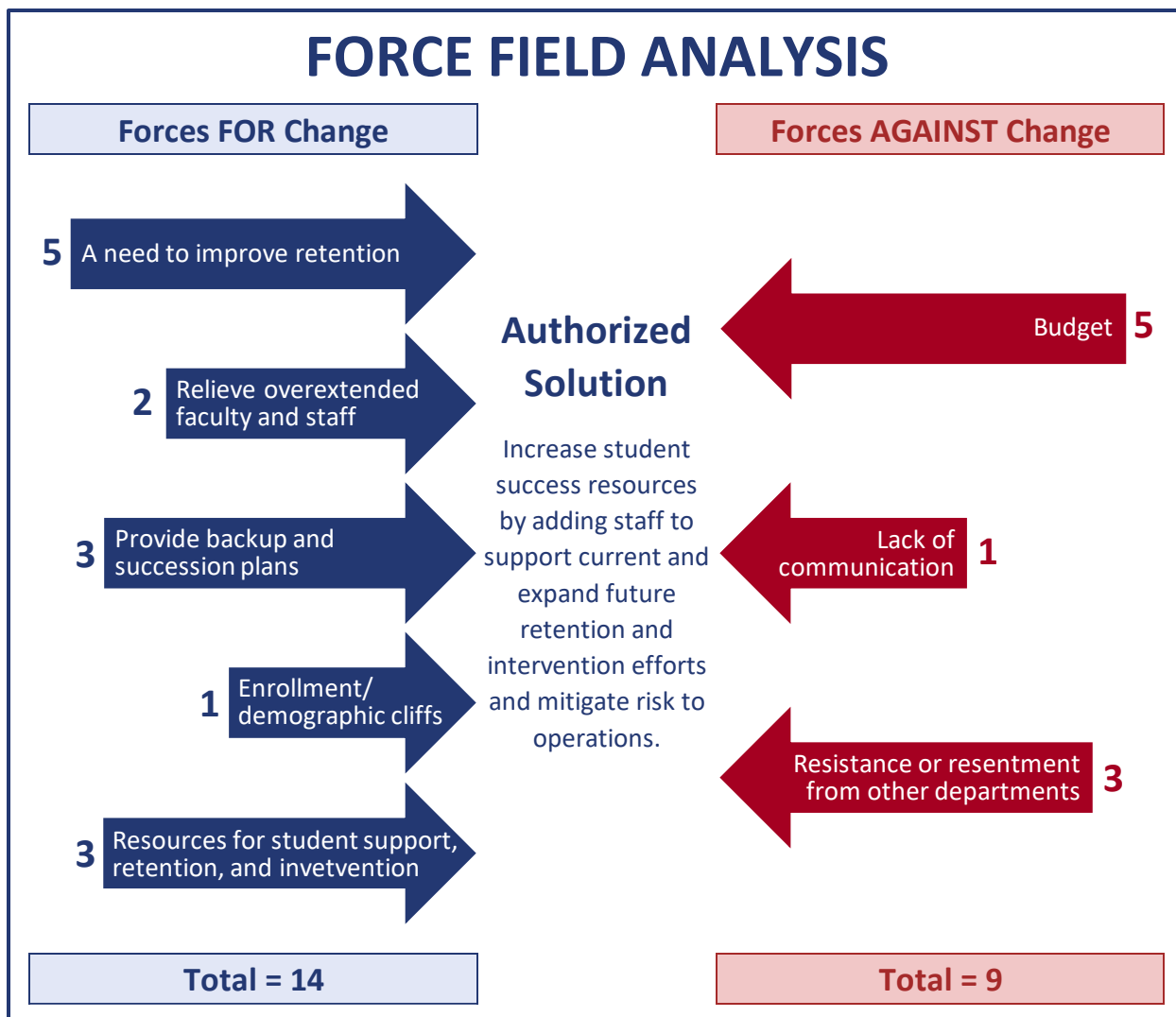


Figure 39. Force Field Analysis.

The forces for the authorized solution are:

- **A need to improve retention.** As the focus of this study, retention is the strongest force for change.
- **Relieve overextended faculty and staff.** One of the institution’s weaknesses is overextended faculty and staff, which can lead to burnout. The solution can alleviate this weakness in some areas.
- **Provide backup and succession plans.** The lack of backup and succession plans puts some student support, retention, and intervention activities at risk of significant disruption. The solution will help mitigate that risk.
- **Enrollment/demographic cliffs.** Two enrollment cliffs due to declining birth rates are expected to begin in 2025 and 2037. While not specifically addressing enrollment, improving retention rates will help offset the decline in freshman prospects.
- **Resources for student support, retention, and intervention.** An increase in staffing will help sustain and improve current efforts and expand additional efforts.



The forces against the authorized solution are:

- **Budget.** As the upcoming academic year budget has already been approved, the solution would be considered for the 2023–24 academic year. With limited funds, budget constraints are the primary force against the change.
- **Lack of communication.** One identified institutional weakness is a lack of communication that leads to silos and resistance to change. This is a serious force against the change. However, this report and change management plan will help alleviate this weakness.
- **Resistance or resentment from other departments.** Other departments within the institution may be understaffed and could benefit from increased resources. Paired with a limited budget, this could lead to resistance and resentment from other departments.

The force field analysis provides information about the primary forces for and against the authorized solution. The researcher assigned a score to each force to identify its strength using a scale of one to five, with one being weak and five being strong. Once each force was scored, the total scores of forces for and against were calculated. Figure 39 demonstrates that the strength of the forces for the authorized solution outweighs the forces against it, providing additional support for Marble State’s authorized solution. By understanding these forces, the institution can work to exploit those that support the solution and weaken those against it, resulting in more successful change.

One key to the success of any change is a clear, compelling, shared vision for the change. A well-developed vision statement can help deepen commitments as well as identify and alleviate resistance to change. The following represents the vision for change:

By adding student success staff, the institution can provide more effective retention and intervention measures to improve student outcomes, supporting the institution’s mission and long-term success.

## USING A MULTIFRAME PERSPECTIVE

Retention is an essential pillar of Marble State and impacts the institution’s ability to fulfill its mission and vision. By implementing and managing the change (i.e., the authorized solution) well, the institution will: (a) protect and support current retention and intervention efforts, (b) expand existing retention and intervention practices and implement new ones, and (c) help alleviate some of the overextended faculty and staff burden.

Institutions are constantly changing and evolving and at a faster pace since the start of the coronavirus pandemic. Change management can help facilitate effective change and minimize disruptions. “Change management is the systematic approach and application of knowledge, tools and resources to deal with change” (SHRM, n.d., para. 1).

A change management (CM) plan outlines the process for implementing a selected change. It can help control many aspects of the change, including the budget, schedule, and scope. The plan can also provide structure, help alleviate resistance, and facilitate effective communication.

Stakeholders must be carefully considered and integrated into the development of the change management plan, including employees and students. Employees are impacted because the change will

alter workflow. Clear lines of authority will need to be established and communicated. Student success activities are student-focused, and changes to the office will require an introduction and explanation that builds trust and comfort.

Many CM models inform effective change and the development of a change management plan. It is important to select or customize a model appropriate to the scale and scope of the change and the needs of the organization and its stakeholders.

## PLANNED CHANGE INTERVENTION MODELING

Kotter's 8-step process for leading change is the change management model underlying the accompanying change management plan. As depicted in Figure 40, Kotter's model is a simple, easily understood, step-by-step guide to managing change. It is instrumental when change is driven primarily by senior leaders, as is the case in hiring decisions at Marble State. Kotter's model helps ensure each step is addressed and that various stakeholders are included in the change process.

The first step in Kotter's model is to create a sense of urgency around the opportunity for change that will make stakeholders want to act immediately. The second step is to build a guiding coalition. This involves gathering together a key, diverse group of individuals who collectively have the insight, power, and motivation to create successful change. Step three is to form a strategic vision that is clear, concise, persuasive, and easily understood. The fourth step is to enlist a volunteer army. The army's size will depend on the scale of the change, but it involves bringing together as many people as possible to effect buy-in, support, and excitement. Step five calls for removing barriers to enable action. Step six involves generating short-term wins to avoid becoming overwhelmed with long-term goals. Step seven is to sustain acceleration. This is supported by celebrating those short-term wins generated in the sixth step and pushing harder after each success. The final step is to institute the change. Each of the previous steps is designed to help ensure the change sticks when implemented.



Figure 40. *The 8-Step Process for Leading Change*. From "8 Steps to Accelerate Change in Your Organization with New Insights for Leading in a COVID-19 Context," by Kotter International, 2020, p. 9. Copyright 2020 by Kotter International.

## PLAN FOR CHANGE MANAGEMENT

The plan for change management consists of six primary components. These include the implementation of interventions which follows the eight steps of Kotter's model. A communication plan, evaluation, reinforcement strategies, and scenario planning are provided to support the change. The section concludes with an action plan to drive the change.

## IMPLEMENTATION OF INTERVENTIONS

### Step 1

Create a sense of urgency around the opportunity for change that will make people want to act immediately.

Marble State’s existence and ability to fulfill its mission depend on attracting and retaining students. Enrollment in public two-year institutions has steadily declined over the last decade, and the impending demographic cliffs due to low birth rates further threaten enrollment. These factors place an even greater imperative on the institution to retain the students that it does enroll. In addition, the ACCS uses retention as one of the metrics to help measure how well two-year schools fulfill their missions. The institution’s retention rates currently fall below the average for the ACCS. Improving retention at Marble State is necessary for the institution to survive and thrive.

Effective retention and intervention practices are innovative and student-centered. Many of those practices currently fall under the purview of the student success specialist at Marble State. Having a single specialist with no backup or succession plans puts those practices at risk and limits the institution’s capabilities. Adding student success personnel will support and protect current retention and intervention practices and allow the institution to expand future initiatives.

### Step 2

Build a guiding coalition of key, diverse individuals who collectively have the insight, power, and motivation to create successful change.

The guiding coalition (i.e., the change management team) will lead the charge to effect the needed change. The coalition will include allies and stakeholders who recognize the urgency, believe in the vision, and can spread support for the initiative. The individuals should be visible members of the institution, willing and able to operate as a cohesive team and be the face of the change. Including individuals at various levels within the institution will compensate for one another’s weaknesses and represent different levels of power and strength.

The following is the suggested change management team. Current changes in staffing may necessitate a revision of the team’s composition.

Change Management Team	
Individual	Perspective
President	Leads the institution
Dean of Students	Will supervise the new staff
Student Success Specialist	Will work most closely with the new staff
Director of Institutional Effectiveness	Provides data and analysis
Director of Fiscal Affairs	Provides financial and budgeting support
Human Resource Specialist	Provides hiring policy and procedure support
Coordinator of Student Engagement and Safety	Supports retention and intervention activities

**Step 3** Form a strategic vision that is clear, concise, persuasive, and easily understood.

As noted previously, the vision statement for this change is:

By adding student success staff, the institution can provide more effective retention and intervention measures to improve student outcomes, supporting the institution’s mission and long-term success.

While the vision statement is a succinct method of conveying the change, the change management team must understand and be prepared to expand on that vision and address inquiries as they arise, particularly those noted in the force field analysis.

Supporting the institution’s mission and long-term success includes many things. Adding student success staff will help relieve overextended faculty and staff. In addition, it will facilitate backup and succession plans for the student success specialist, a position relied upon by the institution's students, faculty, and staff. Adding staff will increase the student support, retention, and intervention resources to help sustain, improve, and expand those efforts.

As noted in the force field analysis, budget constraints are the primary force against the change. Because funds are limited, there may be resistance or resentment from other departments that may be understaffed and need additional funds. Therefore, it is crucial that the sense of urgency be combined with an explanation of how an increase in student success expenditures can lead to an increased institutional budget, as depicted in Figure 41. The increased budget can provide additional resources for departments and programs in the future.

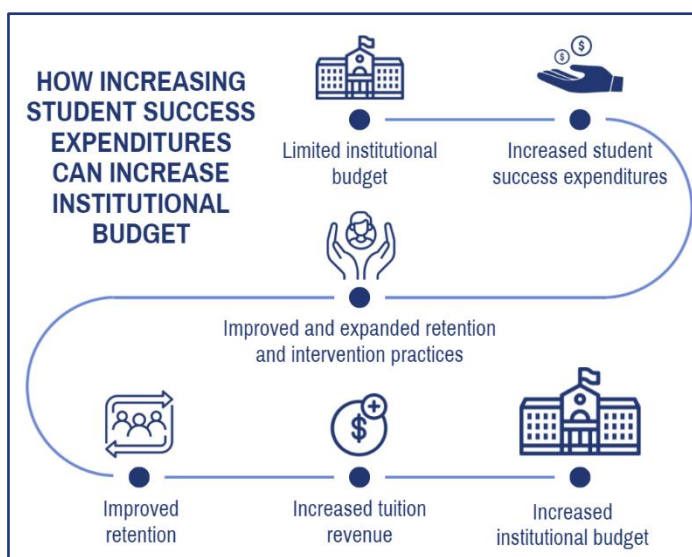


Figure 41. Increasing Expenditures to Increase Budget.

**Step 4** Enlist a volunteer army to bring together as many people as possible to effect buy-in, support, and excitement for the change.

A volunteer army includes individuals across the institution who want to participate in the change vision and initiative. The key to this step is to identify people who understand the urgency, believe in the vision, and want to see the change become a reality. This includes students who can attest to the value and impact of the student success services they receive. Faculty members who rely on the services and support of student success will be crucial to the effort. Staff and administration across the institution are

instrumental in leading by example and providing varied perspectives and insight into the need for the change.

A well-developed army can lead by example to increase buy-in and support. It can also decrease resistance and help remove barriers to the change, resulting in a greater likelihood of lasting change.

## **Step 5** Remove barriers to enable action.

Building upon the previous step, step 5 is to enable action by removing barriers. Organizational change efforts inevitably face barriers. The primary barrier will likely be resistance to change. Throughout the process, it is critical to identify those that are most resistant to the addition of new student success staff. Discussions will be key to determining their hesitancy and concerns and addressing them. This solution is grounded in comprehensive theory, frameworks, and industry best practices. As identified in Section 4, it is also aligned with Marble State's mission, vision, values, and goals and based on a thorough analysis of the institution and its needs. The preceding sections provide a sound basis for addressing most concerns that arise.

Adding new staff can cause people to fear the change's impact on their work or job security. Data and analysis will likely not be sufficient to address resistance based on personal concerns. In those cases, leadership must use their skills and training to address those personal concerns.

Barriers to change must be addressed as soon as they are identified. Successfully addressing the barriers will require understanding their cause. Resistance often stems from a lack of understanding of the change and its need. This can be addressed by effective communication from the change management team and the volunteer army. In addition, recognizing and rewarding those who support and contribute to the change effort early on will help address barriers to change.

## **Step 6** Generate short-term wins to avoid becoming overwhelmed with long-term goals.

Substantive change can take an extended period of time. Due to budget constraints and institutional policies, adding new student success staff is expected to take 12–16 months. In this case, it is essential to generate short-term wins to keep the project visible and on track and prevent additional barriers that could impede progress and success. Short-term wins can improve momentum and help ensure enthusiasm around the change. The action plan milestones provide guidance for short-term wins.

## **Step 7** Sustain acceleration by celebrating short-term wins and pushing harder after each success.

By the time the institution has reached step 7, there is a sense of urgency, change management team, strategic vision, and volunteer army. Barriers have been removed, and short-term wins are being generated. It is now time to sustain that momentum and reinforce milestones by celebrating the short-

term wins and recognizing the individuals who helped achieve them. It is also important to push forward to reach additional milestones as sustaining acceleration is vital to change permanency. Sustaining acceleration can benefit from including other stakeholders to provide different viewpoints and ideas.

## Step 8

Institute change so that it is embedded in the daily operations and becomes a fundamental part of the institution.

The final step of Kotter’s model is to ensure that the change is embedded in daily operations and becomes a fundamental part of the institution. In addition to a new position(s), there will also be a new individual(s) joining the institution’s staff. Leadership must anchor the position(s) and integrate the new staff member to solidify the change. In addition to the standard human resource steps, the following can help with onboarding and acceptance:

- Have clear direction and expectations for the position(s) in writing.
- Set plans and goals with timelines and measurement criteria.
- Assign a mentor to coach the new staff for success and provide regular feedback.
- Assign a “buddy” to help the new staff acclimate to the institutional environment and make social introductions.

## COMMUNICATION PLAN

Clear, consistent communication will be a critical factor in the change management plan's buy-in, support, and success. Figure 42 illustrates a recommended communication plan, including the audience, substance of the communication, messenger, format, and frequency.

Communication Plan				
Audience	Communication	Messenger	Format	Frequency
President's Cabinet	Announcement of change	President	Face-to-face meeting	Once when change decision is made
Change management team	Announcement of change, team formation, change management plan	President or change management team lead	Face-to-face meeting	Once when change decision is made
Institution	Announcement of change and formation of change management team	President or change management team lead	Email	Once when change decision is made
Change management team	Weekly status update	Change management team lead	Email	Once per week
Change management team	Action plan update	Change management team	Face-to-face meeting	Once per month
Institution	Solicitation of feedback and opportunity to participate	Change management team lead	Email or campus newsletter	During Kotter's model steps 4 and 5 of the action plan
Institution	Job posting	President or HR	Email or campus newsletter	Once when job is posted
Institution	Announcement of new hire	New hire supervisor	Email or campus newsletter	Once when new hire is selected

Figure 42. Communication Plan.



## EVALUATION: MEASURING THE MANAGED CHANGE

Measuring the effectiveness of the planned change is critical to the success of the change management plan. The following includes a list of measures and metrics most appropriate for this project, from the implementation of the change management plan to the success of the change.

- **Adherence to the timeline** is the extent to which the change management team has adhered to the timeline for the change management process. This metric can be calculated for each action as a number of days beyond the finish date for that action.
- **Adherence to the action plan** is the extent to which the action plan is adhered to. This metric will review the action plan to the extent that each step is successfully completed before moving on to the next.
- **Change management team satisfaction** is the extent to which those involved in the change management plan are satisfied with the process. A change management team survey should measure the individuals' satisfaction with the change management plan, including leadership, process, team members, and individual factors.
- **Employee buy-in** is the extent to which institution employees buy into the change. An employee survey can gather feedback about the change. As this is a targeted change, another option is to seek candid feedback from leaders in departments across campus.
- **Time to fill** is the amount of time it takes to hire the new student success staff. It can be measured as the number of days from when the position is posted to when it is filled.
- **Time to productivity** is the length of time it takes for the new hire to reach satisfactory productivity. It can be measured as the number of days from when the new hire starts to when they are sufficiently productive.
- **Improved student retention** is the aim of the solution and change management plan. As such, measuring changes in retention rates over time will be useful in measuring the effectiveness of the authorized solution.
- **Student satisfaction** with the resources and services provided by the student success staff will provide insight into the success of the implemented change. Point of service surveys can provide feedback in this area.
- **Number of retention and intervention practices** can be measured as a count of the practices employed at the institution. Part of the goal of the solution is to expand those practices, and a comparison of the number before and after the solution is implemented will assist in measuring the success of the change.

## REINFORCEMENT STRATEGIES

Reinforcement strategies will help cement the implemented change and prevent the organization from reverting to the old way of doing things. As mentioned previously, Kotter's model includes generating and celebrating short-term wins. This includes recognizing the individuals who are instrumental in achieving those wins. These reinforcement strategies help keep individuals focused and moving forward:

- Frequent check-ins with the team to evaluate progress and publicly celebrate and recognize wins
- Check-ins to solicit feedback and address hiccups or concerns
- Tracking and reporting the measures and metrics for measuring the managed change

## SCENARIO PLANNING

Scenario planning is integral to a change management plan as it helps organizations plan for future challenges. It increases agility and will allow the institution to capitalize on the planned change, even if the environment is disrupted. As seen in Figure 43, the scenario planning focuses on the two factors most critical to adding student success staff as the change initiative, people and funding. The driving forces in the scenario planning process are employment factors, work flexibility, enrollment cliffs, and state funding. Each factor was evaluated to determine the key uncertainties most relevant to Marble State.

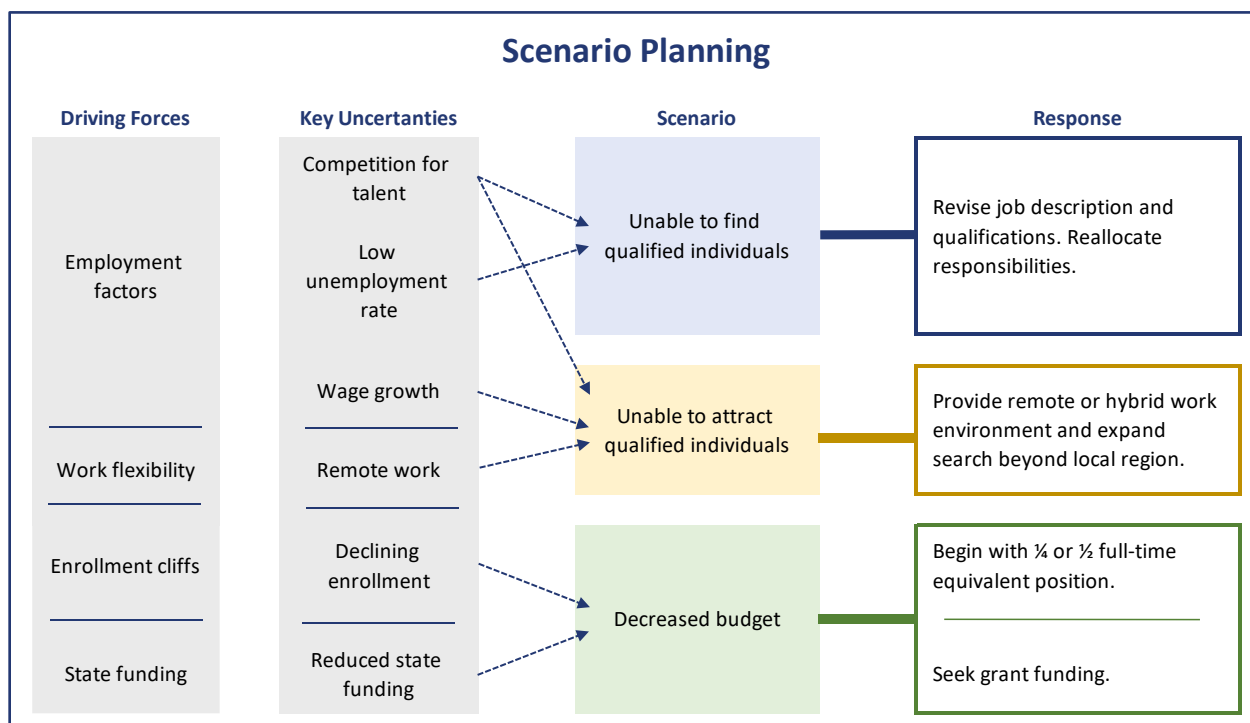


Figure 43. Scenario Planning.

The key uncertainties related to employment factors include increased competition for talent, a low unemployment rate, and wage growth (Agovino, 2022). In addition, remote work, which used to be a rarity, is becoming the norm and is expected to continue to grow into the future (Robinson, 2022). These uncertainties combine to influence two primary scenarios, an inability to find and attract qualified individuals. As discussed earlier in this report, impending enrollment cliffs are expected to have a significant impact on community college enrollment in the future. Declining enrollment and a reduction in federal support of states due to the expiration of COVID-19-related funding put state funding of community colleges at risk. These uncertainties combine to create a scenario where Marble State has a decreased budget and cannot afford to hire new staff.

In examining each scenario, it is important to develop possible responses that will provide the institution options should the environment change before the solution is implemented. If the institution cannot find qualified individuals, the job description and qualifications can be revised to make the position available to a larger group of candidates. This response will also require reallocating responsibilities among other team members to ensure that qualified individuals carry out all functions.

If the institution is unable to attract qualified individuals within the bounds of the salary schedules dictated by the state, Marble State can offer other incentives that are becoming increasingly valuable.

This includes offering remote or hybrid work environments. Employees working remotely for part or all of their week improve their quality of life and reduce costs (e.g., fuel, meals, etc.). In addition, a remote work option would allow Marble State to expand the search beyond the local area to find talent across the country. If declining enrollment or state funding leads to a decreased budget, Marble State could seek funding through grants or reduce the financial cost of implementing the solution by scaling back and starting with less than a full-time equivalent staff addition.

## ACTION PLAN

An essential component of strategic planning is to visualize the cause-and-effect relationship between implementing the authorized solution and improvements within the institution. Figure 44 includes the strategy map for adding student success staff. This map will be instrumental in demonstrating the change's value and garnering buy-in for the action plan.

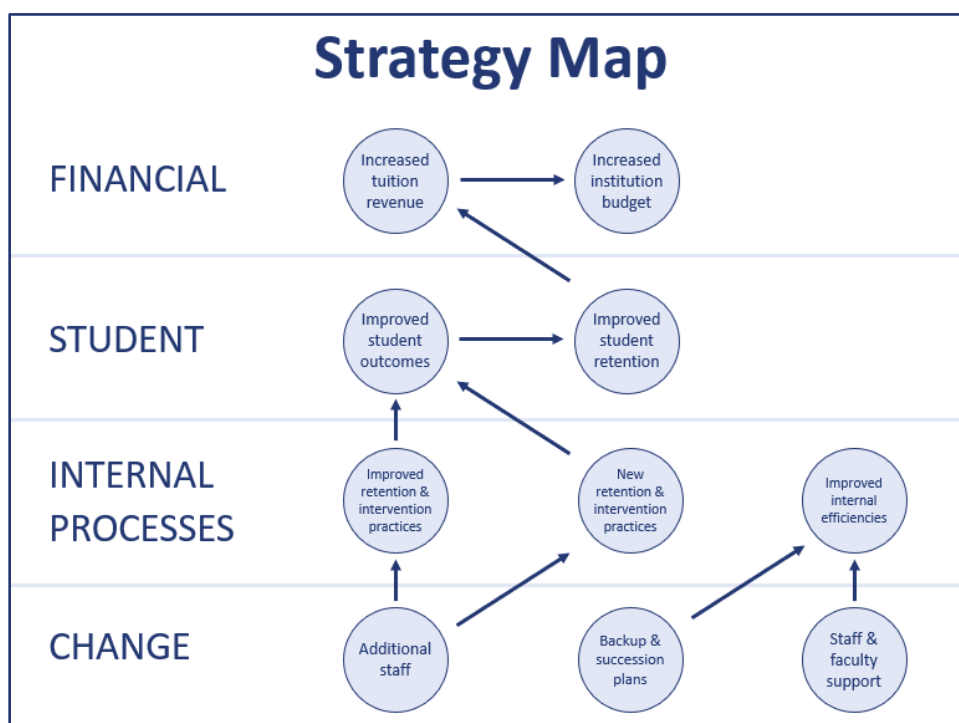


Figure 44. Strategy Map.

The change must be implemented strategically and methodically to give the project the best chance of realizing improvements identified in the strategy map. An action plan can provide that structure. It will be instrumental in providing direction, prioritizing tasks, and tracking the progress of the authorized solution. Figure 45 demonstrates the action plan developed for Marble State to add student success staff.

The action plan can be adjusted as needed to accommodate unidentified policy requirements or the changing time demands of the individuals associated with the project. The suggested timeline spans 14 months, with the solution implemented at the beginning of the 2023–24 budget period. Time and expertise of current staff and administration are the primary resources needed throughout the action plan. The financial resources necessary will be the compensation of the new student success staff. Compensation will depend on whether the institution chooses to add a single full-time staff member or more than one part-time staff member and the state salary schedule for which the individuals would qualify.

# MARBLE STATE ACTION PLAN

PROJECT NAME	PROJECT MANAGER	START DATE	END DATE	OVERALL PROGRESS
Improve Retention, Improve Lives	To Be Appointed	8/1/2022	10/1/2023	

AT RISK?	ACTION	KOTTER MODEL STEPS	RESPONSIBLE	START	FINISH	DURATION (DAYS)
<input type="checkbox"/>	Determine whether to move forward with solution.	Step 1. Create a sense of urgency.	President	8/1/22	8/31/22	30
<input type="checkbox"/>	Form change management team and assign roles.	Step 2. Build a guiding coalition.	President	9/1/22	9/30/22	29
<input type="checkbox"/>	Review change management plan and make edits deemed necessary.	Step 3. Form a strategic vision.	Change management team	10/1/22	10/31/22	30
<input type="checkbox"/>	Enlist volunteers to help create a vision for the new position.	Step 4. Enlist a volunteer army.	Change management team	11/1/22	12/31/22	60
<input type="checkbox"/>	Identify barriers and develop plans to remove them.	Step 5. Enable action by removing barriers.	Change management team and volunteer army	11/1/22	12/31/22	60
<input type="checkbox"/>	Determine staffing needs (a single FT or more than one PT)	Step 6. Generate short-term wins. Step 7. Sustain acceleration.	Change management team	1/1/23	1/31/23	30
<input type="checkbox"/>	Develop job description.		Dean of students or designee	2/1/23	2/28/23	27
<input type="checkbox"/>	Prepare and present budget request.		Dean of students or designee	3/1/23	3/31/23	30
<input type="checkbox"/>	Create and post job notice.		Human resources	6/1/23	6/30/23	29
<input type="checkbox"/>	Conduct search.		Hiring committee	7/1/23	8/31/23	61
<input type="checkbox"/>	Onboard new student success staff.	Step 8. Institute change.	Dean of students or designee	10/1/23	10/31/23	30

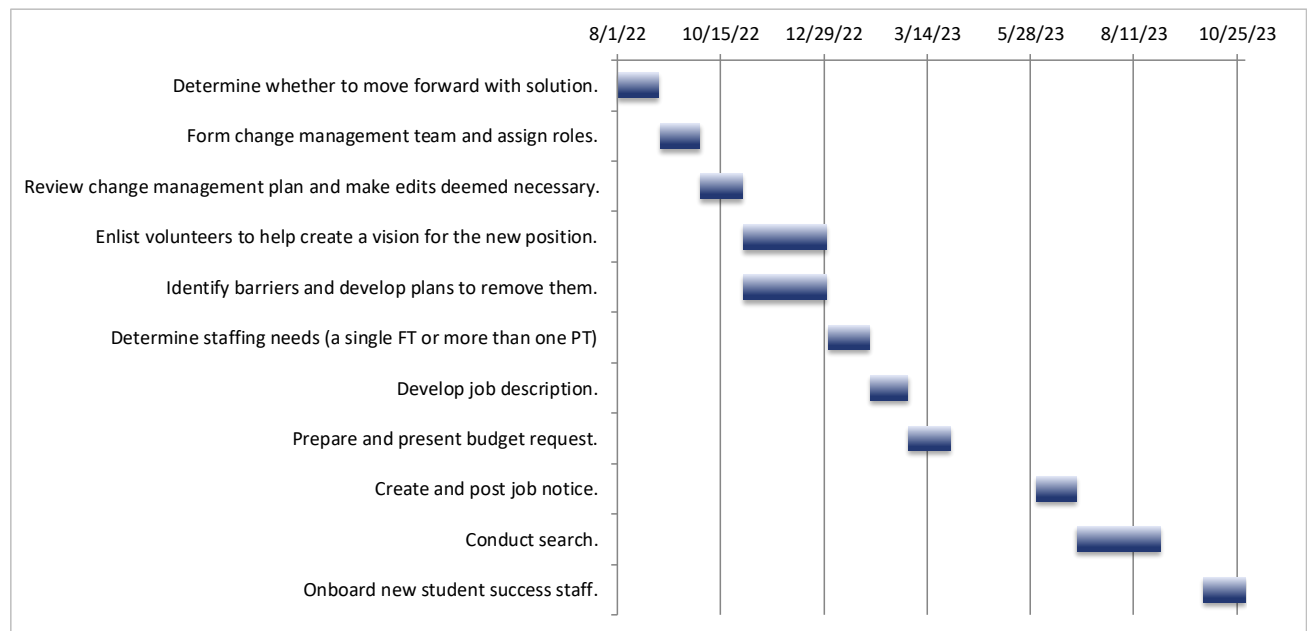


Figure 45. Marble State Action Plan.

# CONCLUSION

Section 5 provided a comprehensive change management plan that will support and guide Marble State in the implementation of the authorized solution of adding student success staff. To develop the CM plan, the section began by making the case for the change, including identifying the authorized solution, connecting the solution to the driving research question, and developing a vision statement for the planned change. The plan follows Kotter’s 8-step process for leading change and includes a communication plan, effectiveness metrics, reinforcement strategies, scenario planning, a strategy map, and a detailed action plan.

Community colleges are a vital part of society. They provide education to over one-third of undergraduates and provide the majority of the country’s health care workers and first responders. Community colleges provide economic support and societal savings while giving graduates the means to break cycles of poverty and give back to their communities. The value and benefits that community colleges provide are only realized when students are retained through to completion, and community colleges have a problem with retention.

While this study examines Marble State in particular, the research can inform further studies in retention and facilitate retention improvement at other community colleges. The customized methodology provides a comprehensive framework that will allow other institutions to conduct a holistic analysis and examination of retention and intervention practices with the aim of improving retention. By improving retention rates, community colleges can improve lives by more effectively meeting the needs of the institutions’ students and society.



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**Appendix A**  
Marble State TOWS Matrix Analysis

<h1>TOWS Matrix</h1>		Opportunities	Threats
			<ol style="list-style-type: none"> <li>1. Instructor Institute (online)</li> <li>2. Increase Partnerships</li> <li>3. Greater Opportunities for Pass-Through Funds</li> <li>4. Expand Use of Data Analytics to Proactively Support Student Success</li> <li>5. Technological Advances</li> <li>6. Increase Institutional/Program Accreditations and Certifications</li> <li>7. Improve Adjunct Relations</li> <li>8. Expand and Improve Online Program Options (QM)</li> <li>9. Establish Guidelines and Standards Using Best Practices</li> <li>10. Expand Institutional Capacity for Data-Informed Decision Making</li> <li>11. Implement Culturally Relevant Strategic Interventions</li> </ol>
Strengths	S-O Strategies	S-T Strategies	
<ol style="list-style-type: none"> <li>1. Nurturing / Caring / Student-Centric Personnel</li> <li>2. Strong Financial Position (Efficient and Effective Use of Funds)</li> <li>3. HBCU Status</li> <li>4. Location</li> <li>5. Industry-Focused Programs</li> <li>6. Community Engagement</li> <li>7. Low Cost of Attendance</li> <li>8. Highly-Skilled and Qualified Faculty and Staff</li> <li>9. Personnel Demographics Mirror Student Demographics (Representation)</li> <li>10. Dedicated Adjuncts</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>S</b> 1, 8, 10 / <b>O</b> 1, 7, 9 Develop a comprehensive adjunct support framework.</li> <li>2. <b>S</b> 1, 2, 8 / <b>O</b> 5, 9 Expand infrastructure by upgrading student computer labs, updating hardware in administrative areas, creating a virtual learning environment for student success, and growing a collaborative online environment for faculty.</li> <li>3. <b>S</b> 1, 3, 8, 9 / <b>O</b> 2, 10, 11 Actively participate in the PBCC-HBCC Project led by Complete College America to identify and respond to the needs of the college's adult students of color.</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>S</b> 3, 4, 6, 8 / <b>T</b> 3 Expand resources by increasing the amount of funds derived from grants and fundraising/ donations.</li> <li>2. <b>S</b> 5, 7, 8 / <b>T</b> 1, 4, 5, 6 Increase awareness of industry-focused programs, the highly-skilled faculty who teach them, and the low cost of completing them to demonstrate competitive advantage of attending Marble State.</li> <li>3. <b>S</b> 1, 8 / <b>T</b> 8 Provide comprehensive orientation opportunities to prepare new students for college.</li> <li>4. <b>S</b> 1, 8 / <b>T</b> 8, 9 Implement a holistic student support approach by creating a comprehensive center for student support.</li> </ol>	

Weaknesses	W-O Strategies	W-T Strategies
<ol style="list-style-type: none"> <li>1. Dated Facilities</li> <li>2. Limited Resources for Student Retention and Intervention</li> <li>3. Overextended Faculty/Staff and Potential Burnout</li> <li>4. Lack of Communication Leads to Silos and Resistance to Change</li> <li>5. Lack of Continuous Processes and Improvements</li> <li>6. Declining Enrollment</li> <li>7. Low Retention and Completion Rates</li> <li>8. Lack of Awareness of and Preference for Institution</li> <li>9. Limited Funds from Grants, Fundraising, and Donations</li> <li>10. Limited Formal Measures of Student Engagement</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>W</b> 3, 4, 5 / <b>O</b> 1, 6, 8 Strengthen curriculum by increasing standardized online course offerings, increasing institutional accreditations and program certifications, and providing targeted faculty professional development.</li> <li>2. <b>W</b> 8, 9 / <b>O</b> 2, 3 Increase funds derived from grants, fundraising, and donations by developing grant processes (review, monitor, analyze) and a fundraising strategy (evaluate opportunities and prioritize needs).</li> <li>3. <b>W</b> 2, 7 / <b>O</b> 10, 4 Utilize Dropout Detective and Instructor Insight to identify, prioritize, and support at-risk students.</li> <li>4. <b>W</b> 2, 3, 7, 10 / <b>O</b> 10 Engage the Center for Community College Student Engagement to gather, analyze, and benchmark student engagement data.</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>W</b> 2, 3, 6, 7 / <b>T</b> 2, 8 Develop and implement a peer mentoring program with experienced students.</li> <li>2. <b>W</b> 2, 3, 6, 7 / <b>T</b> 8, 10 Develop and implement a peer tutoring program utilizing Federal Work Study funding.</li> <li>3. <b>W</b> 4, 5, 6, 7 / <b>T</b> 1, 4, 5, 6, 7 Develop and implement a recruitment plan to achieve incremental enrollment goals.</li> <li>4. <b>W</b> 1 / <b>T</b> 1 Enhance academic teaching and learning environment by upgrading and renovating academic facilities.</li> <li>5. <b>W</b> 2, 3, 5, 6, 7 / <b>T</b> 4, 6, 8 Increase Student Success resources by adding staff to support current and expand future retention and intervention efforts and mitigate risk to operations.</li> <li>6. <b>W</b> 2, 3, 7 / <b>T</b> 8, 9 Utilize motivational interventions to support student success and improve retention.</li> </ol>



## Appendix B

### Gap Analysis of Marble State Retention and Intervention Strategies

Associated Potential Solution	Actual State	Desired State	Gap Identified	TOWS Strategy
Develop Adjunct Support Framework	Adjunct meetings each term. Otherwise, sporadic and non-standardized guidance and training.	Comprehensive adjunct support framework.	Yes	Develop a comprehensive adjunct support framework.
Facilitate Instructional Quality Improvement Processes	Upgrading student computer labs, updating hardware in administrative areas, creating a virtual learning environment for student success, and growing a collaborative online environment for faculty.	Expanded infrastructure.	No	Expand infrastructure by upgrading student computer labs, updating hardware in administrative areas, creating a virtual learning environment for student success, and growing a collaborative online environment for faculty.
Expand/Improve Data Collection and Analytics	Currently participating in the two-year PBCC-HBCC initiative.	Member of PBCC-HBCC Network.	No	Actively participate in the PBCC-HBCC Project led by Complete College America to identify and respond to the needs of the college's adult students of color.
None	Seeking to increase the amount of funds derived from grants and fundraising/ donations.	Expanded resources.	No	Expand resources by increasing the amount of funds derived from grants and fundraising/ donations.
None	Branding campaign to create awareness and preference for the institution (including industry-focused programs, the highly-skilled faculty who teach them, and the low cost of completing them).	Increased awareness of and preference for Marble State.	No	Increase awareness of industry-focused programs, the highly-skilled faculty who teach them, and the low cost of completing them to demonstrate competitive advantage of attending Marble State.
Implement Summer Bridge or Orientation Programs	Start Strong New Student Orientation, Orientation 101, STEM Summer Bridge	Comprehensive orientation opportunities to prepare new students for college.	No	Provide comprehensive orientation opportunities to prepare new students for college.
Facilitate Instructional Quality Improvement Processes; Institute Instructional Quality Standards	Increasing standardized online course offerings, increasing institutional accreditations and program certifications, providing targeted faculty professional development, Instructor Institute.	Strengthened curriculum.	No	Strengthen curriculum by increasing standardized online course offerings, increasing institutional accreditations and program certifications, and providing targeted faculty professional development.
None	Developing grant processes (review, monitor, analyze) and a fundraising strategy (evaluate opportunities and prioritize needs).	Increased funds derived from grants, fundraising, and donations.	No	Increase funds derived from grants, fundraising, and donations by developing grant processes (review, monitor, analyze) and a fundraising strategy (evaluate opportunities and prioritize needs).

Associated Potential Solution	Actual State	Desired State	Gap Identified	TOWS Strategy
Expand/Improve Data Collection and Analytics; Provide Faculty Interventions; Implement Intrusive Advising via Identified Risk Factors	Dropout Detective and Instructor Insight	Improved identification, prioritization, and support for at-risk students.	No	Utilize Dropout Detective and Instructor Insight to identify, prioritize, and support at-risk students.
Expand/Improve Data Collection and Analytics	Conducts limited internal surveys of some student engagement activities. No comprehensive student engagement data collection or analysis.	Summative feedback and analysis of student engagement.	Yes	Engage the Center for Community College Student Engagement to gather, analyze, and benchmark student engagement data.
Develop Peer-to-Peer Support Systems	Currently evaluating external virtual counseling services that include peer counseling. No peer tutoring or mentoring on campus.	Peer support services.	Yes	Develop and implement a peer mentoring program with experienced students. Develop and implement a peer tutoring program utilizing Federal Work Study funding.
None	Developing and implementing a recruitment plan.	Incremental enrollment improvement.	No	Develop and implement a recruitment plan to achieve incremental enrollment goals.
Facilitate Instructional Quality Improvement Processes	Upgrading and renovating academic facilities.	Enhanced academic teaching and learning environment.	No	Enhance academic teaching and learning environment by upgrading and renovating academic facilities.
None	One student success specialist	Sufficient staffing of student success specialist office.	Yes	Increase student success resources by adding staff to support current and expand future retention and intervention efforts and mitigate risk to operations.
Develop a Holistic Advising Approach	One-stop shop for student services, one-stop veterans' service center, enhanced advising.	Holistic student support.	No	Implement a holistic student support approach by creating a comprehensive center for student support.
Implement Motivational Interventions	Trellis Text Campaign	Motivational interventions.	No	Utilize motivational interventions to support student success and improve retention.

**Appendix C**  
 McKinsey 7-S and Social Capital Analysis of Possible Solutions

<b>McKinsey 7-S and Social Capital Elements Evaluated</b>	
<b>Shared Values</b>	All solutions were developed to be intentionally aligned with the shared values of the institution. This was accomplished by incorporating the institution's mission, vision, values, goals, strategies, critical issues, strengths, weaknesses, opportunities, threats, and strategic plans into the framework for identifying solutions.
<b>Staff</b>	The institution has nurturing, caring, student-centric personnel. In addition, the faculty and staff are highly-skilled and qualified. At current, the faculty and staff are overextended, putting them at risk of burnout.
<b>Skills</b>	The faculty and staff are highly-skilled, qualified, and experienced.
<b>Style</b>	Marble State exhibits a democratic leadership style and promotes shared governance, collaboration, and inclusion. Faculty and staff have representation in the decision-making process through service on committees and an administrative council that consists of at least one representative from every department within the college. Marble State collaborates with community members, local universities, and professional organizations through advisory boards to the president and academic units across campus.
<b>Systems</b>	Many processes are standardized within the institution, including those that are part of the Alabama Community College System which provides defined policies and procedures for many operations. There are defined guidelines, policies, training, and feedback processes available for full-time faculty and staff.
<b>Structure</b>	While Marble State has a centralized management system, it empowers individuals in functional areas to make routine decisions that impact day-to-day operations, including directors, deans, chairs, and managers. To assist in decision-making, the institution utilizes advisory committees comprised of individuals external to the college, including local universities, the business community, and professional organizations. Marble State also has internal committees made up of individuals from across campus to ensure the institution considers diverse views and meets needs throughout the college community.
<b>Strategy</b>	Marble State has four institutional priorities that drive their strategic planning, and those are to serve more students, promote student success, strengthen the curriculum, and expand resources and infrastructure. Each institutional strategic goal falls under one of those four priorities and is developed collaboratively with key stakeholders' input, including students, staff, faculty, administration, advisory boards, and the community. Strategic planning and evaluation are part of a formalized, iterative process with routine feedback and status updates.
<b>Social Capital</b>	Marble State has strong relationships and social capital with its internal and external stakeholders.

<b>Solution: Develop a comprehensive adjunct support framework.</b>		
<b>Shared Values</b>	The solution was developed to be intentionally aligned with the shared values of the institution.	✓
<b>Staff</b>	This solution would be time-intensive from development through deployment, putting additional strain on faculty and staff.	<b>3</b>
<b>Skills</b>	No skills gaps are identified. Faculty and staff have demonstrated the expertise and skills needed to formalize an adjunct support framework.	<b>5</b>
<b>Style</b>	This solution aligns with Marble State's leadership style.	<b>5</b>
<b>Systems</b>	While some adjunct faculty have access to some of the processes that guide and support full-time faculty, there is no consistent, formalized system for providing support to adjunct faculty.	<b>4</b>
<b>Structure</b>	This solution is aligned with and would not disrupt Marble State's current structure.	<b>5</b>
<b>Strategy</b>	This solution aligns with the institution's strategic planning by promoting student success and strengthening the curriculum.	<b>5</b>
<b>Social Capital</b>	This solution builds on the social capital of the institution by prioritizing the adjunct stakeholder relationship. The support adjuncts receive would be improved through service to and sincerity for the adjuncts.	<b>3</b>
<b>Score</b>		<b>30</b>

<b>Solution: Engage the Center for Community College Student Engagement to gather, analyze, and benchmark student engagement data.</b>		
<b>Shared Values</b>	The solution was developed to be intentionally aligned with the shared values of the institution.	✓
<b>Staff</b>	This solution would be slightly time-intensive, putting additional strain on faculty and staff.	<b>4</b>
<b>Skills</b>	No skills gaps are identified. The institution has an Office of Institutional Effectiveness and Student Success personnel.	<b>5</b>
<b>Style</b>	This solution aligns with Marble State's leadership style.	<b>5</b>
<b>Systems</b>	The Office of Institutional Effectiveness and Dean of Students have systems in place that facilitate the solution.	<b>5</b>
<b>Structure</b>	This solution is aligned with and would not disrupt Marble State's current structure.	<b>5</b>
<b>Strategy</b>	This solution aligns with the institution's strategic planning by promoting student success.	<b>5</b>
<b>Social Capital</b>	This solution builds on the social capital of the institution by prioritizing the student stakeholder relationship. The support students receive would be improved through analytics aimed at identifying the service and sincerity provided to students.	<b>3</b>
<b>Score</b>		<b>32</b>

<b>Solution: Develop and implement a peer mentoring program with experienced students.</b>		
<b>Shared Values</b>	The solution was developed to be intentionally aligned with the shared values of the institution.	✓
<b>Staff</b>	This solution would be time-intensive, putting additional strain on faculty and staff.	<b>3</b>
<b>Skills</b>	Staff and faculty have education, experience, and skills in mentoring students. Skills to deploy a peer-to-peer mentoring program will need to be acquired.	<b>4</b>
<b>Style</b>	This solution aligns with and would not disrupt Marble State's leadership style.	<b>5</b>
<b>Systems</b>	Systems specific to a peer mentoring program would need to be adapted from current systems or developed anew.	<b>4</b>
<b>Structure</b>	This solution aligns with and would not disrupt Marble State's current structure.	<b>5</b>
<b>Strategy</b>	This solution aligns with the institution's strategic planning by serving more students and promoting student success.	<b>5</b>
<b>Social Capital</b>	This solution builds on the social capital of the institution by prioritizing the student stakeholder relationship and exploiting the social capital currently dormant in peer networks.	<b>3</b>
<b>Score</b>		<b>29</b>

<b>Solution: Develop and implement a peer tutoring program utilizing Federal Work Study funding.</b>		
<b>Shared Values</b>	The solution was developed to be intentionally aligned with the shared values of the institution.	✓
<b>Staff</b>	This solution would be time-intensive, putting additional strain on faculty and staff.	<b>3</b>
<b>Skills</b>	The institution has substantial skills, experience, and expertise in utilizing federal financial aid programs. Staff and faculty have education, experience, and skills in providing tutoring services students. Skills to deploy a peer-to-peer tutoring program will need to be acquired.	<b>4</b>
<b>Style</b>	This solution aligns with and would not disrupt Marble State's leadership style.	<b>5</b>
<b>Systems</b>	Systems specific to a peer tutoring program would need to be adapted from current systems or developed anew.	<b>4</b>
<b>Structure</b>	This solution is aligned with and would not disrupt Marble State's current structure.	<b>5</b>
<b>Strategy</b>	This solution aligns with the institution's strategic planning by serving more students and promoting student success.	<b>5</b>
<b>Social Capital</b>	This solution builds on the social capital of the institution by prioritizing the student stakeholder relationship and exploiting the social capital currently dormant in peer networks.	<b>3</b>
<b>Score</b>		<b>29</b>

<b>Solution: Increase Student Success resources by adding staff to support current and expand future retention and intervention efforts and mitigate risk to operations.</b>		
<b>Shared Values</b>	The solution was developed to be intentionally aligned with the shared values of the institution.	✓
<b>Staff</b>	This solution would help lessen the current strain on faculty and staff. As staff is one element that was not ideally aligned in any of the other solutions, additional personnel would also facilitate implementing additional solutions. It would also help create a backup plan and succession plan for the current student success specialist position.	<b>5</b>
<b>Skills</b>	The institution has substantial skills, experience, and expertise in student success. The hiring process could ensure that a new staff member possesses skills that align with the institution's needs and provide any training needed.	<b>5</b>
<b>Style</b>	This solution aligns with and would not disrupt Marble State's leadership style.	<b>5</b>
<b>Systems</b>	This solution aligns with and would not disrupt Marble State's current systems.	<b>5</b>
<b>Structure</b>	This solution aligns with and would not disrupt Marble State's current structure.	<b>5</b>
<b>Strategy</b>	This solution aligns with the institution's strategic planning by serving more students and promoting student success.	<b>5</b>
<b>Social Capital</b>	This solution builds on the social capital of the institution by prioritizing employee and student stakeholder relationships.	<b>3</b>
<b>Score</b>		<b>33</b>



## Appendix D

### Marble State Retention and Intervention Practices in Relation to Best Practices

Marble State Practices	Best Practices								Student Success Specialist
	Data Analytics	Summer Bridge and Orientation Initiatives	Student Advising and Support	Peer-to-Peer Support Systems	Instructional Quality and Improvement	Adjunct Training and Support	Motivational Interventions	Faculty Interventions	
Orientation 101		X							X
Start Strong		X							X
STEM Summer Bridge		X							X
Caring Campus			X				X		X
Cup Full Sessions			X						X
Dropout Detective/ Instructor Insight	X		X		X			X	X
PBCC-HBCC Project	X		X						
Degree Completion Pathways			X						
Degree Audits	X		X					X	
Midterm Success Checks	X		X				X		X
Text Campaign via Trellis			X				X		X
Tutoring Services			X						
Library Services			X						
Student Clubs & Organizations			X						
Career Services			X						
Counseling Services			X						X
Disability Services			X						X
Instructor Institute					X				
Adjunct Meetings						X			
Office of Institutional Effectiveness	X								

**Appendix E**  
**Marble State Presentation & Authorization Review Form**



**PRESENTATION & AUTHORIZATION REVIEW FORM**

The business case presentation identifies the alternative solutions and provides the basis for selecting the

1. To present a business case to the Partner Organization to share the discoveries leading to the identification of alternative solutions and the selection of a test solution(s).
2. To acquire the Organization's acceptance and authorization to move ahead with developing a change management plan in support of the selected test solution(s).
3. To obtain any additional insight, as applicable, from the Partner Organization about potential implications of the test solution(s) to better inform the design and development of the change management plan.

This form accompanies the detailed business case presented by the DeVoe School of Business DBA Student **Stacie Hughes** to their Partner Organization **Marble State Community College**, and serves as a record indicating the presentation took place and the level of authorization given for the identified test solution(s) the Student will use when designing and developing the ADP change management plan.

The business case presentation took place on **Thursday, June 2, 2022**.

The presentation was conducted **online (via Zoom)** using the accompanying business case.

The presentation was **not** recorded.

**Three Levels of Partner Organization Authorization of the Test Solution(s)**

The Partner Organization agrees to the following authorization level for the test solution(s) presented by the DBA Student. The authorized test solution(s) will be used in the design and development of the ADP change management plan. There are three levels of authorization.

Mark one of the following:

- The test solution, as presented by the DBA Student, *without modifications*.
- The test solution, as presented by the DBA Student, but *with modifications*<sup>1</sup>.
- A *different test solution*<sup>2</sup> than was presented by the DBA Student.

<sup>1</sup> Any modifications to the DBA Student's original proposed test solution(s) need to be sufficiently described in this document and the bases sufficiently detailed to explain why the modifications are needed. The purpose is to fully support the scholarship and integrity of the Student's doctoral study.

<sup>2</sup> A different test solution(s) authorization requires an explanation of why the original test solution(s) was not selected, identification and description of the replacement test solution(s), and bases for the replacement.

**MODIFICATIONS to the TEST SOLUTION(S)**

Modifications, if any, to the DBA Student's test solution(s) presented in the business case:

**N/A**

Identification of the bases for prompting modifications to the DBA Student's test solution(s) presented in the business case, if changes are being made:

**N/A**

**DIFFERENT TEST SOLUTION(S)**

Explanation for why the proposed test solution(s) was not selected:

**N/A**

Identification and description of the different test solution(s):

**N/A**

Bases to support the selection of the different test solution(s):

**N/A**

Additional information, as applicable:

**N/A**



## Endnotes

- <sup>1</sup> Marble State Community College. (n.d.). *Financial and Contracts Disclosure Data*. <https://www.marblestate.edu/about-marble-state/financial-disclosures>
- <sup>2</sup> Marble State Community College. (n.d.). *Mission & History*. <https://www.marblestate.edu/about-marble-state/mission-history>
- <sup>3</sup> Ibid.
- <sup>4</sup> Ibid.
- <sup>5</sup> Department of Examiners of Public Accounts, State. (2022, June 24). *Report on the Marble State Community College*. <https://examiners.state.gov/PDFLink.aspx?IDReport=6610>
- <sup>6</sup> Marble State Community College Strategic Implementation Plan 2019–2022.
- <sup>7</sup> Partner Organization Engagement Agreement.
- <sup>8</sup> Ibid.
- <sup>9</sup> Department of Examiners of Public Accounts, State. (2022, June 24). *Report on the Marble State Community College*. <https://examiners.state.gov/PDFLink.aspx?IDReport=6610>
- <sup>10</sup> Marble State Community College. (n.d.). *Workforce Development*. <https://www.marblestate.edu/workforce-development>
- <sup>11</sup> Marble State Community College Strategic Implementation Plan 2019–2022.
- <sup>12</sup> Marble State Community College. (n.d.). *Administration*. <https://www.marblestate.edu/about-marble-state/administration>
- <sup>13</sup> Marble State Community College. (n.d.). *Student Achievement Data*. <https://www.marblestate.edu/about-marble-state/institutional-effectiveness/student-achievement-data>
- <sup>14</sup> Personal communication. (2021, February 5). A. Smith, Director of Institutional Effectiveness, Marble State.
- <sup>15</sup> Marble State Community College. (2021). *College Catalog 2021–2022*. <https://www.marblestate.edu/current-students/catalog>
- <sup>16</sup> Marble State Community College 2021 SWOT Analysis.
- <sup>17</sup> Marble State Community College 2017 SWOT Analysis.
- <sup>18</sup> Department of Examiners of Public Accounts, State. (2021, July 31). *Report on the Marble State Community College*. <https://examiners.state.gov/PDFLink.aspx?IDReport=6199>
- <sup>19</sup> Personal communication. (2021, December 7). M. Moore, Director of Public Relations, Marble State.
- <sup>20</sup> Marble State Community College Strategic Implementation Plan 2019–2022.
- <sup>21</sup> Marble State Community College. (n.d.). *Start Strong New Student Orientation*. <https://www.marblestate.edu/admissions/enrollment-services/start-strong-new-student-orientation>
- <sup>22</sup> Marble State Community College. (2021, August). *Student Handbook 2021-2022*. Page 15.
- <sup>23</sup> Ibid.
- <sup>24</sup> Personal communication. (2022, February 14). B. Grant, Student Success Specialist, Marble State.
- <sup>25</sup> Marble State Community College 2020 STEM Summer Bridge Information Session PowerPoint. Personal communication. (2022, May 25). B. Grant, Student Success Specialist, Marble State.
- <sup>26</sup> Ibid.
- <sup>27</sup> Ibid.
- <sup>28</sup> Marble State Community College. (n.d.). *Two new quality initiatives to impact online learning*. <https://www.marblestate.edu/news/two-new-quality-initiatives-to-impact-online-learning>
- <sup>29</sup> Personal communication. (2022, February 14). C. Baker, Dean of Students, Marble State.
- <sup>30</sup> Personal communication. (2022, May 18). A. Smith, Director of Institutional Effectiveness, Marble State.
- <sup>31</sup> Personal communication. (2022, February 14). B. Grant, Student Success Specialist, Marble State.
- <sup>32</sup> Personal communication. (2022, February 14). B. Grant, Student Success Specialist, Marble State.
- <sup>33</sup> Marble State Community College. (2021, August). *Student Handbook 2021-2022*.
- <sup>34</sup> Personal communication. (2022, February 7). D. Hawthorne, Division Chair, Dean of Instruction, Marble State.
- <sup>35</sup> Marble State Community College. (n.d.). *Tutorial Services*. <https://www.marblestate.edu/current-students/tutorial-services>
- <sup>36</sup> Marble State Community College. (n.d.). *Library Services*. <https://www.marblestate.edu/current-students/sc-oneal-library-and-technology-center/library-services>

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- <sup>37</sup> Marble State Community College. (n.d.). *Student Organizations*. <https://www.marblestate.edu/current-students/student-organizations>
- <sup>38</sup> Marble State Community College. (n.d.). *Career Services*. <https://www.marblestate.edu/current-students/career-services>
- <sup>39</sup> Marble State Community College. (n.d.). *Counseling Services*. <https://www.marblestate.edu/current-students/counseling-services>
- <sup>40</sup> Personal communication. (2022, February 7). D. Hawthorne, Division Chair, Dean of Instruction, Marble State.
- <sup>41</sup> Marble State Community College. (n.d.). *Marble State looks to impact online learning with two new quality initiatives*. <https://www.marblestate.edu/news/two-new-quality-initiatives-to-impact-online-learning>
- <sup>42</sup> Marble State Community College. (n.d.). *The Office of Institutional Effectiveness*. <https://www.marblestate.edu/about-marble-state/institutional-effectiveness>
- <sup>43</sup> Personal communication. (2022, May 18). A. Smith, Director of Institutional Effectiveness, Marble State.
- <sup>44</sup> Ibid.
- <sup>45</sup> Personal communication. (2022, February 8). A. Smith, Director of Institutional Effectiveness, Marble State.
- <sup>46</sup> Ibid.
- <sup>47</sup> Ibid.
- <sup>48</sup> Ibid.
- <sup>49</sup> Marble State Community College Strategic Plan 2021–22.
- <sup>50</sup> Marble State Community College Student Success Specialist Job Description.