UNDERSTANDING UNACCEPTABLE GRADUATION OUTCOMES FOR HISTORICALLY EXCLUDED TRIO STUDENT SUPPORT SERVICES STUDENTS

Erica Willis
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UNDERSTANDING UNACCEPTABLE GRADUATION OUTCOMES FOR
HISTORICALLY EXCLUDED TRIO STUDENT SUPPORT SERVICES STUDENTS

A Dissertation
Submitted to the School of Education

Duquesne University

In partial fulfillment of the requirements for
the degree of Doctor of Education

By
Erica Lynn Willis

December 2023
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Erica Lynn Willis

2023
UNDERSTANDING UNACCEPTABLE GRADUATION OUTCOMES FOR
HISTORICALLY EXCLUDED TRIO STUDENT SUPPORT SERVICES STUDENTS

By
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ABSTRACT

UNDERSTANDING UNACCEPTABLE GRADUATION OUTCOMES FOR HISTORICALLY EXCLUDED TRIO STUDENT SUPPORT SERVICES STUDENTS

By

Erica Lynn Willis

December 2023

Dissertation supervised by Dr. Rick McCown, PhD

The primary purpose of this mixed-methods study is to define the problem and to understand the system that has been leading to unacceptably low graduation outcomes for historically excluded Trio Student Support Services (Trio SSS) students at Mid-Atlantic University (MAU), a pseudonym. To achieve the primary purpose extant documents and institutional data that can shed light on system processes and institutional conditions that perpetuate disparities in graduation outcomes, particularly for historically excluded racial groups that exist at the intersection of first-generation status and/or low socioeconomic status, will be analyzed. The secondary purpose of this study is to identify potential change ideas that might improve graduation rates for Trio Student Support Services students at MAU. Achieving the second purpose will yield an improvement agenda that can (1) contribute to improved outcomes for historically excluded Trio SSS students at
MAU and (2) instigate new data-based continuous improvement practices using the Carnegie Foundation for the Advancement of Teaching’s Six Principles of Improvement and build capacity for systemic problem identification using the 5S framework.

The research questions that guide this study are: (1) What are the 6-Year graduation rates within MAU’s campus, MAU’s university system, and National Trio SSS programs disaggregated by race and Trio SSS status? (2) How are MAU’s institutional conditions (policies and practices) contributing to low graduation rates for Trio SSS students? And (3) How do we improve the MAU system to increase graduation outcomes for Trio SSS students? The researcher will answer these questions by establishing baseline data relating to 6-year graduation outcomes for historically excluded Trio SSS students compared to their peers and utilize insights from campus discussions to examine MAU-specific dynamics that perpetuate systemic inequity, with the goal of understanding how the Trio SSS system at MAU can be improved and leveraged to better support graduation outcomes for historically excluded Trio SSS students. The study aims to foster a culture of equity-minded practice, organizational accountability, routine analysis of data disaggregated by race/ethnicity and Trio SSS participation status, and continuous improvement inquiry within MAU's Trio SSS system to achieve more equitable graduation outcomes for minoritized students.

The researcher is viewing this problem through an equity-minded cognitive lens. The literature review centers racism as a core element of institutionalized inequity, explores racialized inequity in postsecondary education, focuses on the persistent disparities in educational experiences and outcomes for racial/ethnic groups that have
faced historical discrimination and exclusion, emphasizes the necessity of explicitly anti-racist policies and language in designing interventions that support minoritized students, presents institutional systems and conditions that advance equity and racial justice, and underscores institutional responsibility for educational equity and the necessity of equity-minded organizational learning to drive change. The social justice implications presented in the study are sustained economic inequality, inequitable access to opportunities that facilitate social mobility, the compromised standing of the U.S. as a global leader in education, and that anti-racist policy and legislative language is a requisite to advancing educational equity.

The quantitative data findings for the first research question demonstrated that African American and Hispanic Trio SSS students are graduating at lower rates than their more privileged peers. The qualitative data yielded the following themes that answered the second and third research questions: existence of a hidden curriculum that first-generation college students are not privy to, a lack of system alignment both interdepartmentally at the university level and between secondary and postsecondary education systems, unclear academic pathways, prevalence of faculty members acting as gatekeepers and not advocates, infrastructure challenges due to budgetary constraints, and inadequate centering of student voice in decision making and learning experiences. The improvement agenda recommended by the researcher focuses on training equity-minded practitioners and creating equity-minded pathways that center anti-racist language in policy and intervention design.
DEDICATION

This dissertation is dedicated to Trio professionals across the country who work tirelessly to get Trio students over the finish line to graduation.
ACKNOWLEDGEMENT

First and foremost, I give honor to God, who has been the guiding force in my life, providing unwavering love and care. Throughout this dissertation process, I have experienced moments of doubt and loss of motivation, yet God showed himself faithful, sustaining me and granting me the strength to persevere. I vividly recall the challenges I faced, such as submitting the application essay before the deadline while sitting in Children's Express with my nearly one-year-old daughter, or the day of the interview process when I was running late and contemplated turning back. Becoming pregnant during my final year of coursework and navigating the whirlwind of parenting three small children led me to almost give up. In those moments, I am so very grateful for God's still small voice, urging me to continue. Thank you, Lord, for your constant presence and encouragement.

I honor my children, Sebastien, Eliana, and Isabella, who have been my greatest motivation and support system throughout this entire journey. During countless late nights writing, they sat by my side, as I was often working to get everything submitted before a midnight deadline. I was pursuing my dream that would shape our future, and you were all so patient and understanding. To my children, always remember that I will be there for you on your own journeys. You are my legacy, and I am so very proud of you.

To my husband, Ozzie, your support during this final stretch has meant the world to me. Your presence, encouragement, and belief in my abilities have fueled my determination to reach the finish line. Thank you for being my rock.
I pay tribute to the remarkable legacy of my grandparents, Mr. Darnell Cook Sr., Mrs. Lola Cook, and Mrs. Anne Norton. Their values, wisdom, and support throughout my life shaped my character and instilled in me the importance of education, service, and perseverance.

I honor my parents, Mr. Darrell Cook and Rev. Joann Cook, who have always been advocates for education and sacrificed immensely to afford me the opportunities I have pursued. Your unwavering belief in me has been a driving force behind my accomplishments. You have both walked in integrity and valued service to God the church and our community. Your tireless work ethic and commitment to excellence are values you have instilled in me. I’ve watched you put God first, and you raised me to live a life that honors my Lord and Savior Jesus Christ. Thank you for your unconditional love and support. I love you both.

I would like to honor and express my deepest gratitude to Mrs. Connie Thompson and Tyra Lynn Thompson for being my village and support system when it came to taking care of my children while I pursued my studies. Their unwavering dedication and love provided me with immense peace of mind, knowing that my children were in excellent care. This assurance allowed me to focus wholeheartedly on my academic pursuits. I am forever grateful for their invaluable contribution to my success.

Special recognition goes to Dr. Rick McCown, my dissertation chair, who has been by my side since the very beginning, from the initial interview process to this moment of completion. Your consistent outreach and encouragement have been instrumental in keeping me on track, even during times when I wanted to give up. You never compromised the program's high standards, yet your empathy and understanding
provided a supportive environment throughout this rigorous doctoral journey. Semester after semester, you pushed me forward, and today, we stand together at the finish line. I would also like to acknowledge my dissertation committee for their valuable support and guidance during the culmination of this arduous journey.

I offer my deepest respects to my cohort and, in particular, the memory of Michael Morris, who embarked on this journey with me but tragically passed away. Michael's passion for life, his faith, his courage, unwavering spirit in the face of illness, and his positive attitude continue to inspire me to this day. His memory will forever hold a special place in my heart.

I extend my heartfelt appreciation to Dr. Jacqueline Edmondson, who recognized my leadership potential and valued my voice and contributions within the academic realm. Your belief in me instilled confidence and served as a constant source of encouragement throughout your tenure. I am grateful for your unwavering support and the inspiration you provided to finish what I started.

Lastly, I express my sincere gratitude to Dr. Anthony Barron Mitchell, who recognized the scholar within me long before I saw or acknowledged it within myself. As a mentor, your guidance and encouragement have been invaluable throughout this journey. Your belief in my abilities has been transformative, and I am forever grateful for your mentorship.

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Chapter 1 Introduction

Academia and industries throughout the United States have asserted that “a college education is a cultural asset critical in social mobility” and a legitimate pathway to realizing financial security (Pitre & Pitre, 2009, p.9; Haveman & Smeeding, 2006; Oyserman, Terry & Bybee, 2002). Research has supported this claim and postsecondary education has proven to be effective in reducing persistent economic inequalities, increasing preparedness for in-demand high-wage occupations, and strengthening the economic health of our nation (Alliance for Excellence in Education, 2012; Haveman & Smeeding, 2006). Inequality in educational outcomes for historically excluded students is an exigent issue (Bensimon, 2005). While college access across demographic groups has continued to rise, students from minoritized and historically excluded racial groups (African American and Hispanic/Latino) continue to experience significant barriers to graduation (Pell Institute for the Study of Opportunity in Higher Education, 2022; U.S. Department of Education 2015, 2010). The primary purpose of this study is to examine institutional conditions that create obstacles and perpetuate disparities in Trio Student Support Service students' graduation outcomes, particularly for historically excluded racial groups that exist at the intersection of first-generation status and/or are low socioeconomic status. The secondary purpose of this study is to identify potential change ideas that can improve graduation rates for Trio Student Support Services students at Mid-Atlantic University (MAU). The next section will present the U.S. Department of Education’s role in supporting participation in higher education, identify the problem of practice, establish institutional accountability as the guiding perspective of the evaluation, highlight the focus of the evaluation, and discuss the significance of conducting an
improvement inquiry of the campus system that the Trio Student Support Services program is embedded within.

The U.S. Department of Education has advanced the agenda of widening participation in higher education by funding federal initiatives that provide academic support to students who are first-generation, low-income, and/or students with learning or physical disabilities. Trio Student Support Services is one of eight federal initiatives funded by the U.S. Department of Education, designed to support college students who have historically encountered systemic and institutional barriers to educational success (COE, 2015; Muraskin, 1997; U.S. Department of Education, 2022). Trio programming has been a critical component to coordinating the nation’s response to low college graduation outcomes for marginalized students. While this investment has resulted in increased college access, students eligible to receive Trio SSS services continue to experience significant barriers as it pertains to retention and graduation rates (U.S. Department of Education 2010, 2015; Pell Institute for the Study of Opportunity in Higher Education, 2022). This is evidenced by the latest data from the U.S. Department of Education (2010, 2015) that indicates degree completion rates for Trio SSS students at four-year institutions was 51% in 2013-14, an increase from 49% in 2010-11 (Dept. of Ed, 2017).

**Problem of Practice**

Inadequate graduation outcomes, particularly among historically excluded Trio SSS students who are first-generation and/or low-income, is the problem of practice and a high leverage issue that leadership at MAU University and the U.S. Department of Education are eager to address. This has been a persistent issue at both the campus and
the national Trio SSS program level. In addition to the high leverage nature of this issue, the disparity between graduation outcomes being achieved and those that are desired is a key indicator that a problem exists (Hinnant-Crawford & Anderson, 2022; Mintrop, 2016). The problem of practice exists within the researcher’s sphere of influence, as the researcher is the director of MAU’s Trio SSS program. Additionally, the researcher is the leader of the Diversity, Equity and Inclusion Principle Group for the campus strategic planning committee and lead grant writer for a pilot Equity Evaluation Training Program. The researcher’s focus on assessing campus conditions that impact graduation outcomes for Trio SSS students, lends itself to be tested in short iterative cycles, which is a key component to Mintrop’s (2016) framework and improvement inquiry (Duquesne Action Collective, 2019; Bryk, Gomez, Grunow & LeMahieu, 2015). The researcher’s priority in this study is to understand the obstacles that lead to low graduation outcomes for Trio SSS Students and then see the system in which the problem exists as students navigate through the campus system in which the Trio SSS program operates. This focus will help illuminate gaps in equity and inform the articulation of a theory of action that addresses the inequitable conditions experienced by historically excluded Trio SSS students. This issue clearly aligns with MAU’s priorities detailed within the 2020-2025 strategic plan and the strategic goals of the U.S. Department of Education. Improved conditions that increase college graduation rates would be greatly valued at each level of leadership, and there is potential for replication throughout the MAU university system, and nationally to other Trio SSS programs. Again, this speaks to the importance of designing an evaluation process that can be institutionalized and scaled to maximize impact. The next sections will examine the legislative and institutional frameworks of the Trio Student Support
Services system. “Every system is perfectly designed to get the results that it gets” (Bryk et.al, 2015; Langley et al., 2009), and “seeing the system” from legislative and institutional perspectives is critical to the accurate assessment of how current conditions are contributing to disparities in graduation outcomes of minoritized Trio SSS students.

**Seeing the System: Trio Student Support Services Overview**

Trio is “one of the early national college access and retention programs to address the serious social and cultural barriers to education in America” (COE, 2015). It emerged from the Economic Opportunity Act of 1964, and described what was to be the first of three federal educational initiatives – Upward Bound, Educational Talent Search, and Student Support Services (McElroy & Ermesto, 1998), over the years it has grown to include Educational Opportunity Centers, Veterans Upward Bound, Training Program for Federal Trio Programs, the Ronald E. McNair Post-baccalaureate Achievement Program, and Upward Bound Math and Science (U.S. Dept. of Education, 2015).

Trio Student Support Services (SSS) programming provides academic support and enrichment services to marginalized undergraduate students. Students targeted to participate in this program must meet predetermined criteria that include being a college student who is first-generation (i.e., neither parent has earned a baccalaureate degree), low-income (i.e., at 150% of poverty), have a learning or physical disability, and must demonstrate an academic need (i.e., low high school GPA’s, low predicted college GPA’s, and placement in remedial math and reading courses, etc.) (Ward, 2006).

According to the U.S. Department of Education SSS website (2023), FY 2021 total funding allocated for Trio SSS programming was $363,222,465, with 1,149 awards made
and 207,699 students being served. The average number of participants per program was 181, with the average cost per participant being $1,750.

**Seeing the System: Trio Student Support Services Legislative Framework**

One of the purposes of legislation is to provide structure for how state and federal initiatives are carried out. Additionally, there are instances throughout American history where legislation has been used to satisfy moral and ethical obligations owed to historically excluded groups. This is especially true within the field of education, and even more so as the nation began to recognize the “moral imperative – to equitably provide all students with a quality education – [as being] a critical factor in maintaining the United States national economic strength” (Alliance for Excellent Education, 2012, p. 1). Particularly, the Economic Opportunity Act of 1964; Title VI of the Civil Rights Act of 1964 (prohibiting race, color, and national origin discrimination); the Higher Education Act of 1965; Title IX of the Education Amendments of 1972 (prohibiting sex discrimination); Section 504 of the Rehabilitation Act of 1973 (prohibiting disability discrimination); Title II of the Americans with Disabilities Act of 1990 (prohibiting disability discrimination by public entities); and the Age Discrimination Act of 1975 (prohibiting age discrimination), are defining legislative moments that addressed inequities and ethical shortcomings within the United States while continuing to shape educational policy.

The Higher Education Act of 1965, Title IV, Part A, Subpart 2 is the legislative framework that details the Trio Student Support Services system, including program objectives, services offered, eligibility requirements, outcome criteria, and measures of progress (www.ecfr.gov, 2023), and can be found in Appendix A. Specifically, Trio SSS
program objectives are (1) increased college persistence and graduation rates and (2) fostering an institutional climate of support for SSS participants. This legislative context is important in understanding how the Trio SSS system supports the work of MAU and operates within the institutional framework.

More simply put, the U.S. Department of Education has determined that this specific combination of required and permissible activities should adequately support the attainment of required outcomes, with the primary measure of program success being the postsecondary degree completion rates of Trio SSS participants from the grantee institution. The legislation can be more concisely displayed in the following logic model the researcher has prepared below:

**Table 1.1**

*Trio Student Support Services Logic Model based on Higher Education Act of 1965*

<table>
<thead>
<tr>
<th>Inputs</th>
<th>Required Outputs</th>
<th>Outcomes</th>
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<tbody>
<tr>
<td>Federal Funding</td>
<td>1. Academic Tutoring</td>
<td>1. Persistence</td>
</tr>
<tr>
<td></td>
<td>4. Financial Aid Information</td>
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<tr>
<td></td>
<td>5. Assistance with Graduate School</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. Transfer Assistance</td>
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While some may argue that the Higher Education Act of 1965 does not do enough to address the issue of inadequate college graduation outcomes of Trio SSS students, I would contend that this legislative act only provides a basic outline of system components and does not provide explicit guidance on how each piece should function.
together collectively. I suggest that herein lies part of the problem. Each program has latitude to interpret how to implement the requirements as they see fit within their practice context, which can be both a strength and a weakness. The strength is found in the ability to design context specific interventions that fit into the system, but the weakness lies in the possibility of implementing a poorly designed intervention that negatively affects graduation outcomes.

A more concerning issue is the color evasiveness of the legislative language. It has been extensively documented that racial groups of color have been intentionally historically excluded from participating in higher education opportunities. In my opinion, the precision and intentionality presented within historical legislative language to exclude racial groups of color, should be just as precise and intentional when looking to support equity and the educational advancement of historically excluded persons of color. My specific critique of The Higher Education Act of 1965 is that it does not go far enough in identifying criteria for participation in the program and should have explicitly included students from historically excluded races as one of the requirements to participate within the legislation.

Another issue to consider is that the legislative framework must also operate within the institutional framework. Creating synergy between the legislative and institutional frameworks will go a long way in advancing equity and improving conditions for Trio SSS students at MAU. The next section will examine the legislative and institutional components to better understand how the system is operating to produce its current outcomes.
Seeing the System: Trio Student Support Services Institutional Framework at MAU

Trio SSS at Mid-Atlantic University (MAU), a pseudonym, is a federally funded program that provides academic services that support marginalized undergraduate student populations as they progress towards graduation including, first-generation college students, low-income college students, students with disabilities, and students aging out of the foster care system. MAU is one of twenty campuses within the university system located throughout the state. The MAU campus that is the focus of this study is the most diverse campus within the MAU system and has an approximate enrollment of 400 students. Within the entire MAU system Trio SSS programs are only offered at two campuses. Approximately 60% of the MAU campus qualifies for the Trio SSS program, and it is required to serve 175 students. The Trio SSS program at MAU is required to meet the following objectives, stipulated by the U.S. Department of Education, to remain in good standing and continue to receive federal funding.

Trio SSS Program at MAU Objectives

1. **Persistence Rate (4-year institution):** 78% of all participants served by the SSS project will persist from one academic year to the beginning of the next academic year or will have earned a bachelor’s degree at the grantee institution during the academic year.

2. **Good Academic Standing Rate (4-year institution):** 78% of all enrolled SSS participants being served will meet the performance level required to stay in good academic standing at the grantee institution.
3. **Graduation Rate (4-year institution):** 19\% of new participants served each year will graduate from the grantee institution with a bachelor’s degree or equivalent within six (6) years.

**Trio SSS at MAU as an Institutional Agent**

In this dissertation, the concept of an institutional agent will be applied to MAU’s Trio SSS program. Stanton-Salzar’s (2011) Social Capital framework will be used to articulate how the Trio SSS program at MAU operates within the campus system as an institutional agent. This framework identifies the roles of institutional agents and how they operate across a spectrum of support. Stanton-Salazar’s definition of an institutional agent has traditionally been ascribed to individuals who “act to directly transmit, or negotiate the transmission of, highly valued institutional support, defined as resources, opportunities, privileges, and services that are highly valued” (Stanton-Salazar, 2011, p. 1075). Bensimon (2007) corroborates Stanton-Salazar’s (2011, 2001, 1997) definition and speaks to institutional agents' predisposition that motivates their desire to engage in student advocacy and an inner ethical compass to use their expertise for the good of promising students who otherwise might be overlooked (p.443). The Trio SSS program works similarly, as an institutional entity comprised of institutional agents focused on developing a network of services that effectively support the academic performance of students. Trio SSS practitioners serve as liaisons that connect participants to student success advocates who are willing to meet them where they are, help them navigate the campus system, facilitate connections within the campus community, and help them gain access to key resources, opportunities and academic support. The goals of the Trio SSS office at MAU are to:
• Outline clear academic pathways and provide guided support that leads to college graduation, professional employment, and personal well-being.
• Provide a comprehensive network of support that coordinates the delivery of services and resources.
• Help students maximize the use of campus and community resources on a habitual basis.
• Reduce institutional barriers by simplifying processes.
• Proactively reach out to students to connect them with timely and relevant support services.
• Helping students navigate complex policies and bureaucratic practices relating to academic concerns, financial aid verification issues, and dependency reviews.
• Leverage technology to engage more students in our student success efforts.

The Trio SSS program at MAU is a student-centered learning environment that coordinates the delivery of services, support and resources throughout the participants collegiate experience. Trio SSS programming is designed to improve learning environments, particularly beyond the classroom, to promote “excellence and equity; improving for all learners’ access to powerful and effective learning opportunities” (Fishman, Penuel, Allen, Cheng & Sabelli, 2013, p. 137). Research has shown that adequate academic and personal support is paramount to educational success. Researchers have identified that “among a number of institutional characteristics that are considered important to the retention [and graduation] of students in higher education, the availability of support services, is key to the attainment of this goal” (Thomas, Farrow & Martinez, 1998, p. 390). This aligns with Engstrom & Tinto’s (2008) assertion that
“access without support is not opportunity, and that too often conversations about access ignore the fact that without support many students, especially those who are academically underprepared, are unlikely to succeed” (Engstrom & Tinto, 2008, p. 50). Trio SSS at MAU views all participants as valued members of the campus community and seeks to provide them with the level of support that enables them to “translate their access into success” (Engstrom & Tinto, 2008, p. 50).

**Purpose**

The problem of practice, which is the unacceptable graduation outcomes of historically excluded Trio Student Support Services students, is situated within the educational context of a Trio Student Support Services (SSS) program which is embedded within a commonwealth campus system that is part of a larger institutional system. For the purposes of this study the problem of practice is grounded in the premise that it is an institutional responsibility to address educational inequities that perpetuate inadequate graduation outcomes for students who participate in the Trio Student Support Services program. This is the lens the researcher will be examining the Trio SSS system through, to understand how institutional conditions are contributing to inadequate graduation outcomes. Institutionalized change is the goal, and the methodologies selected can help facilitate system change at the nexus of equity-mindedness, data analysis, and continuous improvement. Cultivating systemic change at the campus level is the end goal, and by examining the MAU Trio SSS system, a change idea can be identified, developed, tested, improved, and then scaled.
Research Questions

1. What are the 6-year graduation rates within MAU campus, MAU university, and National Trio SSS programs disaggregated by race and Trio SSS status?

2. How are MAU’s institutional conditions (policies and practices) contributing to low graduation rates for Trio SSS students?

3. How do we improve the MAU system to increase graduation outcomes for Trio SSS students?

Summary

This chapter focused on the importance of college education as a means of social mobility and financial security. It highlighted the persistent educational inequities faced by historically excluded students and provided an overview of the legislative framework for the Higher Education Act of 1965 which provides structure for the Trio Student Support Services system. While the legislation provides a basic outline, the researcher critiqued its limitations including the lack of explicit guidance on how each component should function collectively and the color evasiveness of legislative language that in turn perpetuates educational inequity. The researcher emphasized the importance of creating synergy between the legislative and institutional frameworks to advance equity and improve conditions for Trio SSS students. The researcher presented the problem of inadequate graduation outcomes, especially among historically excluded Trio students as a pressing issue for both MAU University and the U.S. Department of Education. The study aims to understand the obstacles faced by Trio SSS students and uncover inequitable conditions within the campus system. Improved conditions and higher graduation rates would align with the priorities of MAU and have the potential for
replication across the university system and other Trio SSS programs. The next chapter will provide a comprehensive overview of literature pertaining to this problem of practice.
Chapter 2 Review of Literature

The purpose of this literature review is to review prior scholarship that illuminates how institutional conditions (policies and practices) can adversely affect the learning experiences and graduation outcomes of historically excluded Trio SSS students. The first section will present contradictory perspectives related to student success and highlight equity issues on campus pertaining to variations in postsecondary graduation rates and learning experiences. The second section will center racism as a core element of institutionalized inequity. It explores the concept of racialized inequity in postsecondary education, focusing on the persistent disparities in educational outcomes for racial and ethnic groups that have faced historical discrimination. This section highlights the racial component of educational inequity, which cannot be minimized or ignored, and emphasizes that an explicitly anti-racist response is necessary. The third section will present institutional systems and conditions that advance equity and racial justice. It will highlight the perspective that educational equity is an institutional responsibility and that a commitment to equity-minded organizational learning is necessary to facilitate change. The fourth section will highlight social justice implications of sustained economic inequality, inequitable access to opportunities that facilitate social mobility, the compromised standing of the U.S. as a global leader in education, and the necessity to utilize anti-racist language in the development of policy and legislative language that advances educational equity. The fifth section will discuss the theoretical and contextual frameworks that are guiding this study and will argue the importance of using non-traditional forms of research to conduct studies in a way that will encourage more practitioners to engage with the research and begin conducting and documenting research
on their own. The frameworks discussed in this section include Design Based Implementation Research, the Carnegie Foundation for the Advancement of Teaching’s Six Improvement principles, and the 5S framework.

**Evolution of the Student Success Paradigm**

Beyond mere access the nationally accepted measure of student success in higher education are graduation rates (Thomas, Farrow & Martinez, 1998; U.S. Department of Education, 2015 & 2023). Historically, the onus of student success has been placed squarely on the student’s shoulders with many leading scholars (Tinto, 1987; Terezini & Pascarella, 1982; Chickering, 1969 & 1993; Steele, 1992; Engstrom & Tinto, 2008) viewing the gap in graduation outcomes between minoritized students and their more advantaged peers from a dual perspective of student deficiency and student responsibility. The dominant discourse has revolved around the student’s role in perpetuating these outcomes from a student retention perspective (Tinto, 1987), a student’s ability to acclimate to the college environment (Terezini & Pascarella, 1982), a student’s identity development and its impact on academic success (Chickering 1969 & 1993), a student’s ability to develop a positive academic identity (Steele, 1992), a student’s lack of academic preparedness (Engstrom & Tinto, 2008), and racialized stereotypes (Bensimon, 2007, 2005). Although it must be acknowledged that a student’s effort plays a definitive role in achieving college success, this is the variable over which institutions have the least control. Estela Bensimon’s 2007 Presidential Address – The Underestimated Significance of Practitioner Knowledge in the Scholarship of Student Success supports this by saying: “While there is no question that minority students’ chances for success are severely constrained by their K-12 experiences, socioeconomic background, and the
extent to which they and their families possess college knowledge the reality, as frustrating as it may be, is that these conditions, once students are admitted are beyond the control of college practitioners and the institution (p. 456)”. A more worthwhile and economically advantageous endeavor to evaluate student success and graduation outcomes is to base it on variables where institutions of higher education can exert the most influence and control – creating equitable institutional conditions (practices and policies) and curating student-centered learning experiences. “If our goal is to do scholarship that makes a difference in the lives of students whom higher education has been the least successful in educating, we must expand our scholarship on student success and take into account the influence of practitioners – positively and negatively. If we continue to concentrate only on what students accomplished or failed to accomplish when they were in high school and what they do or fail to do once they enter college, our understanding of student success will be flawed, as well as incomplete” (Bensimon, p. 445, 2005). For the purposes of this study, I am following Bensimon’s (2005) lead and framing student success (graduation outcomes) as a learning problem of practitioners and institutions. The study will make practitioner knowledge and institutional practices the focal point of racial disparities in educational outcomes, which will lead to a greater potential for systemic change (Bensimon, 2005).

**Equity Gaps in Postsecondary Graduation Outcomes**

The current condition of the higher education system is reflective of the educational crisis that is producing disparate graduation outcomes across minoritized and marginalized groups. More specifically, the collegiate experience has been standardized in a way that has compromised equity-centered education and fostered unacceptable
outcomes for historically excluded students who are also first-generation college students and/or students from low-income backgrounds and/or students with disabilities. Institutions must begin to situate interventions within a context that centers race and values equity, particularly for students from historically excluded racial groups. Improving the educational outcomes of Trio SSS students at MAU is imperative, and a synergistic paradigm must emerge if these inequities are to be dramatically reduced.

Findings from the 1996-2001 Beginning Postsecondary Study (BPS), a longitudinal study that collected data on approximately 12,000 students, revealed disparities in six-year college graduation outcome, across institution types, for first generation, low-income students were 11% compared to 55% of their peers who did not possess these risk factors (NCES Beginning Postsecondary Study 96/01). In public four-year institutions, 34% of first-generation low-income students earned a bachelor’s degree compared to 66% of their peers (BPS). In private, not-for-profit institutions first-generation, low-income students graduated at a rate of 43 percent compared to 80 percent of their peers who were non-FG/LI (BPS). Low-income, first-generation students were nearly four times more likely to leave higher education after the first year than their more advantaged peers (Pell Institute, 2022). Also, according to the Pell Institute for the Study of Opportunity in Higher Education (2022) in 2020, Blacks were 14 percent of the population age 18 to 24 but received 10% percent of bachelor’s degrees (73% of parity). Data from the Department of Education indicates that college access and degree completion for Trio SSS eligible students is on the rise, however the data also shows that many Trio SSS students are experiencing significant barriers to degree completion. As previously stated, the completion rate for Trio SSS participants at four-year institutions
was 51% in 2013-14, a meager increase from 49% in 2010-11 (Dept. of Ed, 2017). The following data points emphasize more recent educational inequities in higher education:

1. Six-year graduation rate for first time, full-time undergraduate students who began their pursuit of a bachelor’s degree at a 4-year institution in Fall 2010: White Students 64% and Black students 40% (National Center for Education Statistics & US Department of Education, 2018).

2. Undergraduate enrollment: In 2016, of the 16.3 million undergraduate students enrolled 9.1 million (55.8%) were White and 2.2 million (13.5%) were Black. The gap between female and male enrollment was widest for Black students - Black females enrolled (62%) and Black males enrolled (38%) (National Center for Education Statistics & US Department of Education, 2018).

3. The U.S. Census Bureau data considered college enrollment status of 2019 high school graduates: 32% of Black high school graduates enrolled in 4-year colleges by the coming fall versus 47.9% of White students.

4. In 2019, 39.7% of Black females who graduated from high school in 2019 enrolled in a 4-year college by October of that same year, 23.6% of black males enrolled in four-year institutions (Institute of Education Sciences, 2020).

**Graduation Outcomes at MAU**

The data presented below is based on MAU’s 2016 incoming freshman cohort. The 6-year graduation rates presented include rates for the entire MAU system, which includes multiple campuses, the MAU campus, which is the location that the Trio SSS program is housed, and MAU’s Trio Student Support Services 6-year graduation rate reported to the U.S. Department of Education. It is important to note that the graduation
data for MAU campus reflects students who may have attained a bachelor’s degree after transferring to another MAU campus. The Trio SSS 6-Year Graduation Rate from Annual Performance Report (APR) reflects 2016 cohort who started at and graduated from MAU campus. As an APR requirement all Trio SSS programs must report within campus graduation rates, which can only include the students who graduate from the specific campus that received the Trio SSS grant award.

- MAU Total University 6-Year Graduation Rate - 73.8%
- MAU Campus 6-Year Graduation Rate – 52.7%
- MAU Trio SSS 6-Year Graduation Rate - 36%

MAU’s Trio SSS 6-Year Graduation Rate is 37.8% less than MAU’s system rate, and 17.6% less than MAU’s campus rate. The 6-Year graduation rate reflected in the section is based on annual performance report data submitted to the Department of Education. The MAU Trio SSS data point reflected above does not take into account MAU Trio SSS students who transferred to another campus within the university system and graduated, because as stated above grant requirements stipulate that only Trio SSS students who graduate from the MAU campus can be included in the APR report. Later in chapter four I will report MAU’s Trio SSS 6-year graduation data to include their graduation from other MAU campuses within the system which is consistent with how graduation data is reported at the university and campus level.

The most recent data on national Trio SSS 6-year completion rates at four-year institutions are between 2009–10 and 2013–14.

- Between 2009–10 and 2010–11, the completion rate increased from 42% to 49%.
• The completion rate at four-year institutions increased from **49% to 51%** between 2010–11 and 2013–14.

• MAU Trio SSS 6-Year Graduation Rate for AY 2016-2017 - **36%**

MAU’s Trio SSS 6-Year Graduation Rate reported on the annual performance report is 15% less than the national Trio SSS 6-Year Graduation Rate which is 15% less than the 2013-2014 rate. Ultimately, MAU’s Trio SSS graduation outcomes are significantly less than MAU University, MAU Campus, and national Trio SSS programs. This disparity demonstrates that a problem exists.

**Equity Gaps in Learning Experiences**

Modern education, with higher education being no exception, has continued to engage in traditional practices that have resulted in demoralizing learning experiences for minoritized students and an ever-widening gap in academic achievements, with European American students academically outperforming and graduating at greater rates than historically excluded students. Minoritized students are often viewed from a deficit perspective and forced to navigate educational systems that have devalued their cultural knowledge, worldviews, and experiences (Woodson, 2005; Barry, 2005; Lee Spencer & Harpalani, 2003). Further, this point of view has often informed the design and implementation of university initiatives and interventions that are designed to address inadequate graduation outcomes. This narrative is based in deficit ideology which is “a perspective that blames an individual student (or their family or culture) for lacking the appropriate skills and behaviors necessary for academic success rather than examining institutional norms and values” (Castro, 2013). This is in alignment with Kendi’s (2019) statement that “when we believe that a racial group’s seeming success or failure redounds
to each of its individual members, we’ve accepted a racist idea” (p. 94). The propensity of professionals in our educational system to actively engage in behaviors that are inherently racist, whether intentional or not, stifle the academic potential of minoritized students will only escalate the devastating consequences that are presently playing out.

“The sociopolitical dynamics of structural racism, poverty, and educational neglect disproportionately pose obstacles for [marginalized] students in achieving readiness for college” (Castro, 2013, p. 306) while also negatively impacting graduation outcomes. Collectively these dynamics have resulted in expanded disparities between desired and achieved college graduation rates among marginalized students and their more advantaged peers. Systemic racism, historically directed towards African American students is a primary driver of inequitable conditions found within the educational system. Genuine efforts to advance educational equity must highlight the racial dynamic that is embedded within the educational experience for minoritized and historically excluded students. For many students of color, school is synonymous with failure, inferiority, negativity, low expectations, and alienation (Howard, 2003; Whaley & Noel, 2011; Castro, 2013; Kendi, 2019). Students who participated in Howard’s (2003) study described a learning experience that included the failure of teachers to care, failure to encourage and support academic pursuits, subtle actions and expressions of teachers that communicated low student expectations, and experiences of racism, prejudice and discrimination at the hands of teachers, principals, and counselors (2003). Conversely, in Estela Bensimon’s 2007 presidential address she discusses a marginalized student who described a positive experience with her instructor and emphasized that although the course was challenging, she felt that the instructor was providing criticism to improve her
performance not to disprove or confirm they did not belong. Unfortunately, the negative interactions, at all levels of leadership, experienced by students in Howard’s (2003) study speak to the common systemic and pervasive nature of inequity and racism. It is a daunting task to persist, let alone excel in this type of environment, and these failures within the educational systems have impeded the ability of minoritized students to graduate from college. The dysfunctional dynamics between educators and students, as evidenced in Howard’s (2003) study, does not allow for unhindered access to a cosmopolitan social network that can improve graduation outcomes or cultivate an environment that allows for equity and student success to flourish. As stated by Bryk, Gomez, Grunow and LeMahieu (2015), if educational [institutions] continue to do what they have always done, education [will] continue to get more of the same – great variability in outcomes that often further disadvantages the most disadvantaged in society.

Racialized Inequity

The persistence of inequitable educational outcomes for racial and ethnic groups with a history of past discrimination in postsecondary education is an intractable issue (Bensimon, p. 100, 2005). The racial component within educational equity cannot be ignored or minimized. Educational inequity is pervasive, destructive, and racialized. It has created an educational debt (Ladson-Billings, 2006) owed to historically excluded students and is a root cause for the large disparity seen in educational achievement spanning all grade levels. From its inception the construct of race was meant to create a hierarchy – valuing one race over all others (Kendi, 2019; Woodson, 2005). African American culture, and by extension its peoples, were viewed as inferior to European
American culture, with no effort being made to incorporate the African American reality into the educational curriculum except to denounce and pity it (Woodson, 2005). Racialized inequities are birthed from this skewed perspective and opens the door for “racism which is the marriage of racist policies and racist ideas that produces and normalizes racial inequities” (Kendi, 2019, p. 2019) to run rampant. The normalization of racialized inequities within education has fostered a propensity for institutions of higher learning to view students of color as deficient and inferior. Recognizing racialized inequity matters because many Trio SSS students exist at the intersection of a historically excluded race, first-generation status, disability status, and low-income status and they experience significant barriers to graduation.

According to McNeil (2000), “standardization equates sameness with equity in ways that mask pervasive and continuing inequalities” (p. 10). The educational system has viewed all children through a narrow lens that assumes the “singular pathway for child and adolescent development and learning is based on European and European American adolescents” (Lee, Spencer & Harpalani, 2003, p. 6). Carter G. Woodson (2005) acknowledges this when he states that “when African Americans were granted access to education the intention was for the African American people to fully assimilate and adopt European American culture”. Most efforts to deviate from the established norm are met with resistance, because the European American student has been held up as the “ideal benchmark” (Barry, 2005, p. 47), against which all students are measured. Anything that appears to create a disadvantage for the dominant group is rejected even if it is at the expense of so many other students. The educational environment has been designed to ensure the success of European American students, to the detriment of minoritized
students. According to Woodson (2005), “the same educational process which inspires and stimulates the oppressor with the thought that he is everything and has accomplished everything worthwhile, depresses and crushes at the same time the spark of genius in the Negro by making him feel that his race does not amount to much and never will meet the standards of other peoples” (p. x, preface). This message makes it difficult for minoritized students to develop a concept of their [academic] abilities that is different than the stereotype that the rest of society holds. Even when persons believe themselves to be unique, their identity is not created outside of social influence (Robinson & Biran, 2006, p. 48). Systemic racism and discrimination coalesced with a one-size fits all model has perpetuated racialized inequity which has led to inequitable graduation outcomes, particularly for Trio SSS students of color within MAU university.

**Institutional Conditions in Higher Education that Contribute to Inequity**

Policy is powerful and has been used to perfectly design a racist system that has simultaneously oppressed people of color and advantaged white people over the course of generations. Racial inequity was born from policies and practices that “actively sought to exclude, marginalize, and oppress people of color” (McNair, Bensimon & Malcom-Piqueux, 2020, p.33). For example, legislation provided legal ways to enslave black and brown people and after slavery was abolished, Jim Crow laws were enacted that continued to oppress (Harper, Patton & Wooden, 2009). The effects of political inequity within the system of education have manifested itself in the ever-widening equity gaps as evidenced in disparate persistence, retention, and graduation rates.

While policies have been enacted at the national and institutional level to mitigate inequity, so much work still needs to be done. I argue that an inherent limitation to new
legislation that has been enacted, specific to the lingering impacts of racism, is that while race was centered to oppress people of color, policies designed to create “equality” and to advantage individuals historically excluded by race, often do not speak specifically to race. Impactful solutions must not skirt around the issue of race but must boldly and explicitly call it out. Court Justice Harry Blackman wrote in 1978, “in order to get beyond racism, we must first take into account race. There is no other way. And in order to treat some persons equally, we must treat them differently” (Kendi, p. 19, 2019).

Kendi (2019) himself states that “the only way to undo racism is to consistently identify and describe it – and then dismantle it” (cover page). In other words, equality is not sufficient, a decisive move towards equity through the implementation of anti-racist polices is what is needed. Even within the Higher Education Act of 1965, which provides the framework for the Trio SSS program, race is at the periphery whereas income status, first-generation status, and disability status are explicitly stated as the primary eligibility determinants to participate in the program. This must change, and race must be centered, if we hope to see a definitive improvement in graduation outcomes for black and brown Trio SSS students.

According to Gillborn (2005, 2008) and Castro (2013), educational inequity persists because “education policy is not designed to eliminate racial inequality but to sustain it at manageable levels” (Castro, 2013, pp. 293-294). I would argue that any policy that sustains racial inequality is intrinsically racist. Kendi (2019) corroborates this assertion when he states, “a racist policy is any measure that produces or sustains racial inequity between racial groups” (Kendi, 2019, pg 18). Gillborn (2005, 2008) and Castro (2013) go on to argue that resistance to educational equity (i.e., structural racism and
poverty) allows education policies to serve as vehicles for White racial supremacy, reinforcing White privilege. This allows racial discrimination to thrive because “racial discrimination is an immediate and visible manifestation of an underlying racial policy. When someone discriminates against a person in a racial group, they are carrying out a policy or taking advantage of the lack of protective policy. We all have the power to discriminate but only an exclusive few have the power to make policy. The central agents of racism are racist policy and racist policymakers or what I call racist power” (Kendi, 2019, p. 18-19). Racist power is rooted in white supremacy and has effectively worked to disrupt the implementation of antiracist policies and hinder equity-minded movements.

Resistance to educational equity is often manifested in flawed assumptions and displaced blame. Research indicates that the “public’s view of the Black-White gap in achievement has shifted from the disparity in resources and blocked educational opportunity to African American culture as the explanation for Black students’ underachievement” (Whaley & Noel, 2011, p. 26). Justifications like these attempts to take the focus off socialstructural inequities and place the blame on the student. Beyond this erroneous justification there is an attitude of complacency grounded in Joyce King’s (1991) concept of “dysconscious” racism, which is “an uncritical habit of mind that justifies inequity and exploitation by accepting the existing order of things as given” (Castro, 2013, p. 294). Further, Castro (2013) states: Operating dysconsciously means that one tacitly accepts the social order of society and therefore fails to challenge the status quo, accepting “the given as inevitable”. This “given” entrenched racial and class-based educational inequality is the context in which programming for college and career readiness exists (p. 294). This dysconsciousness affects all facets of society, and
this blind acceptance of things as a “given” will continue to produce and perpetuate educational inequities for marginalized students of color. Policies that sustain racial inequality foster hostile institutional conditions and negatively impact the learning experiences of students which inevitably produces gaps in equity. Realizing racial equity in education requires a genuine commitment to advancing equity, improving practice, and the implementation of anti-racist policies.

Universities have long been aware that poverty, racial segregation, and unequal access to a high-quality education are key determinants in the academic success of students (Castro, 2013). And while it is true that “students must fully engage in the pursuit of their educational goals, the institution must also create a learning environment that promotes equity and inclusion by understanding the diversity of the students that it seeks to educate” (McNair, Bensimon & Malcom-Piqueux, 2020, p. 4). This is grounded in the knowledge that institutions have intentionally provided disparate opportunities to students of color generationally, even with the knowledge that what has been done is not working. A system perfectly created to disadvantage students of color. Castro (2013), states that conceptual and evaluative paradigms need to account for differentials in readiness by situating interventions within the larger context of racial and socioeconomic inequality. Any conversation about how to best make college readiness [and ultimately graduation] a reality for all must acknowledge that students of color are at a disadvantage in achieving readiness for college and career not because of something they did but because of what they have been denied” (p. 306). Again, this supports the need for institutional responsibility and accountability as it relates to facilitating student success and designing equity-centered interventions that improve graduation outcomes.
This is important because Trio SSS students have often experienced racial and socioeconomic inequality while also being the first in their families to attend college, and institutions should be prepared to meet their needs and help them reach their graduation goals. An equity-grounded approach that addresses these issues should drive educational advocates “to rethink the notion of intervention by focusing less on “fixing” individual students and more on the sociostructural dynamics that reinforce their status” (Castro, 2013, p. 306). In other words, the responsibility is upon the institution to improve institutional conditions that facilitate educational equity and not the student.

**Institutional Systems and Conditions that Advance Equity and Racial Justice**

Improving graduation outcomes of Trio SSS students, particularly those from historically excluded racial groups, relies on the creation of equity-centered policies that synthesize justice, anti-racism, collaboration and are systemic. “Systemic equity is a complex combination of interrelated elements consciously designed to create, support, and sustain social justice. It is a dynamic process that reinforces and replicates equitable ideas, power, resources, strategies, conditions, habits and outcomes” (Annie E. Casey Foundation, 2021). It requires the realization that equity and equality in education are not synonymous. Institutional conditions that foster equity allow for flexibility in delivery of services based on individualized needs. They create space for student success to be realized by “understanding students’ needs and addressing those needs by providing the necessary academic and social support services to help level the playing field so students can achieve their goals” (Bensimon, McNair & Malcolm-Piqueux, 2020, p. 2). Equity is
transformative and serves as a means of corrective justice (McPherson, 2015) for the educational debt (Ladson-Billings, 2006) owed to the descendants of enslaved people and other minoritized populations willfully excluded from higher education (Bensimon, McNair & Malcolm-Piqueux, 2020, p.20). Educational equity, in a sense, provides partial reparations for the grave injustice of educational exclusion afflicted upon generations of minoritized citizens which has resulted in unacceptable graduation outcomes.

Educational equity actively confronts racism that has become normalized and embedded itself into all facets of the higher education experience. Anti-racism goes hand in hand with equity and is the act of identifying, confronting, and opposing racism (Boston University, 2022; Kendi, 2019; Pollock, 2009). The goal of anti-racism is to actively change policies, behaviors, and beliefs that perpetuate racist ideas and actions (Boston University, 2022). Anti-racism requires discernment and strategic action that confronts overt and covert racism embedded in institutional structures, policies, and practices (Pollock 2009). Anti-racism removes blinders and allows “practitioners to see whiteness as a norm that operates, unperceived, through structures, policies, and practices that racialize the culture and outcomes of higher education in institutions” (Bensimon, McNair and Malcolm-Piquex, 2020, p. 21). The insidious nature of educational inequity requires a unified and collaborative network of collaborators that are committed to facilitating parity in learning experiences, institutional conditions, and graduation outcomes for minoritized Trio SSS students.

Partnerships are important in the sustainability of promising efforts that institutionalize educational equity. Establishing collaborative partnerships and bridging
interdisciplinary boundaries enhances student learning experiences and opportunities which can positively impact graduation rates. Systemic equity requires a network approach and movement beyond separate efforts to create an ecosystem of equity-minded collaborators. When considering potential partnerships, it is important to strategically develop Networked Improvement Communities (NIC) which “are a social mechanism through which the collaborative designs and practical theories produced by Design Based Implementation Research can become live resources for the improvement of systems (Dolle, Gomex, Russell & Byrk, 2013, p. 444). This works in conjunction with a “cosmopolitan network, which is a set of relationships with a diverse constellation of people that include different kinds of institutional agents who can provide privileges, institutional resources, opportunities for career mobility, wealth creation, political empowerment, and [academic] achievement” (Stanton-Salazar, 2011, p. 1077). The addition of NIC’s to Stanton-Salazar's social capital framework leverages resources and tools from improvement science to practical problems in educational contexts (Dolle, Gomez, Russel & Byrk, 2013, p. 444). NIC’s allow institutions to meet equity goals that they could not accomplish on their own, “bringing in needed expertise or resources from new relationships, allowing information exchange and communication, and aligning work and activities” (Kezar, 2011, p. 206). Improving graduation outcomes will require methods of inquiry that center equity-minded collaborations that focus on improving work systems and processes.

**Educational Equity in Higher Education – An Institutional Responsibility**

The issue of educational equity in postsecondary education, particularly as it relates to graduation outcomes of first-generation college students, has risen in
prominence over the last several years, with institutions across the country launching student success initiatives and dedicating departmental resources to improve graduation outcomes for underrepresented and underserved students. A less discussed, yet vital perspective in resolving the issue of educational equity for minoritized students, is institutional complicity in contributing to the ongoing inequities through established systems, policies and practices (Bensimon & Malcolm, 2012; McNair, Bensimon & Malcom-Piqueux, 2020; Malcom-Piqueux, 2017). Contemporary scholars have challenged institutions to shift their view to a more inward focus, identifying and rectifying institutional deficiencies that are not serving students well (Bensimon & Malcolm, 2012; McNair, Bensimon & Malcom-Piqueux, 2020; Malcom-Piqueux, 2017). This is a marked departure from the emphasis on student responsibility to an emphasis on institutional deficiency, complicity, responsibility, and accountability. This contemporary point of view guides this study and aligns with the theory of student success that focuses on “knowledge and behaviors of practitioners and institutions, rather than on the knowledge and behaviors of students (Bensimon & Malcolm, 2012, p. 18)”.

In order to effectuate transformative equity work within a system of higher education, one must acknowledge the role that race plays in perpetuating systemic inequity. Educational inequities are often racialized and have disproportionately and adversely affected minoritized students throughout their educational experiences (Bensimon & Malcolm, 2012; McNair, Bensimon & Malcom-Piqueux, 2020; Malcom-Piqueux, 2017). The next step is to understand that adequate academic and personal support is paramount to educational success and must be at the forefront of conversations related to student success (Engstrom & Tinto, 2008; Thomas, Farrow & Martinez, 1998).
Engstrom & Tinto (2008) argue that “access without support is not opportunity”, that even though institutions are not intentionally excluding students from college resources and opportunities it does not mean that they are being fully valued as members of the institution and are being provided with the support that enables them to translate their access into success. Institutions must invest in efforts that provide adequate support and advocacy for students. This includes helping students “decode the system” (Stanton-Salazar & Quintanar, 2013, p. 1092) while positioning them to gain access to key resources and elite opportunities that positively reinforce their belief that they have a place in higher education and that their contribution within the context of higher education is valuable. The Trio SSS program at MAU was designed for this purpose but to improve program impact a more nuanced understanding of institutional conditions is needed. As previously stated in chapter 2, Thomas, Farrow & Martinez (1998) agrees with Engstrom & Tinto (2008) highlighting the importance of support services stating that: “among a number of institutional characteristics that are considered important to the retention [and graduation] of students in higher education, researchers have identified one characteristic, the availability of support services, as key to the attainment of this goal” (p. 390). Further, “institutions have to believe that all students, not just some, have the ability to succeed under the right set of conditions – and that it is their responsibility to construct those conditions” (Engstrom & Tinto, 2008, p. 50). Again, this statement reasserts the study’s focus on institutional responsibility in creating conditions that facilitate student success (AAC&U, 2015; Bensimon, 2005; Bensimon, 2007; Bensimon, Rueda, Dowd & Harris, 2007). Student success for the collective requires a commitment that is not only geared towards supporting the highest performing and most advantaged
students but looks to support all students. Ultimately, increased graduation outcomes will “rely on the academic success of the most neglected and vulnerable students in our nation” (Castro, 2013, p. 293).

**Equity-Minded Organizational Learning**

Historically, colleges and universities have not been interested in using their research skills to engage in institutional self-study and improvement (Baumann, 2005, p. 25). However, a growing body of research around institutional accountability and responsibility (AAC&U, A&B, 2015; Bensimon & Malcolm, 2012; Bensimon, Rueda, Dowd & Harris, 2007; Malcolm-Piqueux & Bensimon, 2017) suggests that institutions have begun to look at their failings. A commitment to organizational learning on how to view outcomes through a DEI lens is a critical step to improving outcomes for minoritized and historically excluded students. Institutions of higher education have not been particularly successful in analyzing accountability data disaggregated by race and ethnicity to increase student learning outcomes (Bensimon & Malcolm, 2012 p. 192; Dougherty, 2002; Dowd & Tong, 2007). To address the underrepresentation of low-income and minority students who are graduating from higher education many leaders are recognizing the need to engage in ongoing data analysis to measure the progress in terms of reducing gaps in graduation rates (Bensimon & Malcom, 2012, p. 192). Many institutions are in a mode to engage in an organizational learning process to reduce racial and ethnic gaps in student data (Bensimon & Malcolm, 2012, p. 192). MAU’s Trio SSS program, as an institutional agent and equity advocate, can advance the organizational learning process. Applying this shift in perspective to efforts at MAU bodes well for Trio
SSS students and is a promising change that can result in more impactful and equity-minded student support services that improve graduation outcomes.

As previously stated, the persistence of unequal educational outcomes for racial and ethnic groups with a history of past discrimination in postsecondary education is an urgent issue (Bensimon, 2005, p. 100). Addressing this issue requires an institutional willingness to disrupt the current system and advance equity-minded solutions in a bold and daring way. This is new territory for many institutions and there is much to learn as they navigate this new landscape. This is a collaborative effort that can benefit from the theory of organizational learning as propagated by Estela Bensimon in her article “Closing the Achievement Gap in Higher Education: An Organizational Learning Perspective” (2005). Because institutions of higher education are new to data analysis through an equity lens, they must accept their role as a novice. In this space they are not the expert, and must be open to learning. According to David Garwin (1993) and Baumann (2005), for an entity to be a learning organization it must acquire new ideas that lead to improvements in the way it does business. Individuals play a key role in organizational learning and developing new ideas. It is important to include equity-minded practitioners throughout this process. “Individuals facilitate the data collection, inquiry and interpretation process. Organizational learning is done by individuals who are members of an organizational entity and who inquire into a problem collectively on behalf of an organizational entity (Bensimon, 2005, p. 100).” Organizational learning happens when three conditions exist (1) the presence of new ideas, (2) the cultivation of doubt in existing knowledge and practices, and (3) the development and transfer of knowledge among institutional actors (Baumann, 2005, p. 25). When institutional actors
doubt what they have traditionally believed to be true, an opportunity for learning arises (Baumann, 2005, p. 27). Equity-minded practitioners at MAU campus recognize that what used to work isn’t working, and in all honesty has never really worked. The difference now is that this failure is becoming more glaringly evident as enrollment numbers continue to decline.

The design of MAU’s data interrogation process of inequitable outcomes followed Baumann’s (2005) description of high learning groups which are communities of practice that are participating in situated learning. Communities of practice are typically small groups within larger organizations that are drawn together by expertise and passion in a particular area and meet on a regular basis over an extended period of time (Baumann, 2005, p. 32). The Chancellor at the time invited a diverse group of practitioners to participate in a strategic planning community of practice, and their approach aligned with Bensimon’s (2005) view that “inequality in educational outcomes is a learning problem of institutional actors – faculty members, administrators, counselors, and others – rather than as a learning problem of students (p. 100).” The goal of the community of practice was to learn from the data and each other while using the information to improve services to students. This goal aligns with Ewell (1997) who stated that data are critical to institutional learning and improvement, and that becoming a learning organization involves creating institutional capacities for gathering and interpreting data at all levels. This implies that an organization should not only gather and store data but should also engage in analysis that leads to improvement (Baumann, 2005, p.34).
Individuals whose institutional roles can influence whether students are successful or not need to learn cognitive processes that enable them to think about the situation of underrepresented students and their outcomes through the lens of equity (Bensimon, 2005, p. 100). Unfortunately, not all practitioners operate as advocates and allies but instead see themselves as gatekeepers. It is imperative to identify equity-minded practitioners who can become institutional leaders who can influence system change. The reduction of inequities lies within individuals and their capacity to develop equity as their cognitive frame, which is the rules or reasonings used to govern how individuals interpret data and how they design and implement their actions (Bensimon, 2005, p. 100; Argyris, 1991). Not all stakeholders are going to adopt this frame of reference, and in my opinion the decision must be made on what time, energy and resources will be used to change their cognitive frame. Understanding cognitive frames is important because at the same time that frames make some things visible, they also function as cognitive blinders in that whatever is out of frame may be imperceptible (Bensimon, 1990, 2005). Individuals with a deficit cognitive frame may value diversity and have positive attitudes towards increasing participation in higher education among minoritized students, but they are inclined to attribute differences in educational outcomes to cultural stereotypes, inadequate socialization, or lack of motivation and initiative on the part of the students (Bensimon, 2005, p. 103). Individuals who are guided by an equity cognitive framework view the unacceptable graduation outcomes of minoritized students from the context of a history of exclusion, discrimination, and educational apartheid (Bensimon, 2005, p. 103). These are the practitioners who should be at the forefront of this work.
Table 2.1

*Bensimon’s 2005 Deficit and Equity Cognitive Frames Compared on 3 Dimensions (p. 104)*

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Deficit Cognitive Frame</th>
<th>Equity Cognitive Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation</td>
<td>Focus on stereotypical characteristics associated with the culture of disadvantage and poverty.</td>
<td>Focus on institutional practices and the production of unequal educational outcomes for minority group students.</td>
</tr>
<tr>
<td>Discourse</td>
<td>Lack of preparation, motivation, study skills, blaming students and/or their background.</td>
<td>Institutional responsibility for student outcomes, the manifestation of institutionalized racism, color conscious, awareness of racialized practices and their differential consequences, awareness of white privilege.</td>
</tr>
<tr>
<td>Strategies</td>
<td>Compensatory educational programs, remedial courses, special programs, all focused on fixing the student.</td>
<td>Institutional transformation, developing accountability of equitable educational outcomes, changing individual’s cognitive frames.</td>
</tr>
</tbody>
</table>

The purpose of analytic hubs or NIC’s who are addressing educational inequities is to hold a mirror up to their institution that reflects clearly and unambiguously the status of minoritized students with respect to basic educational outcomes (Bensimon, 2005, p. 104). This study will reflect the condition of the institution based on graduation outcomes as it is borne out in the data. The study and improvement of our own institutions should be honest and rigorous. Part of this rigor, which is grounded in social justice, includes practitioners reprogramming their thought processes from deficit-minded to equity-minded. Bensimon (2005) speaks to work involved in fostering an equity mindset. Equity thinking requires double-loop learning which focuses attention on the root causes of a
problem and the changes that need to be made in the attitudes, values, beliefs, and practices of individuals to bring about enduring results (Baumann, 2002). The development of equity as a cognitive frame is a double loop learning problem because it requires the willingness of individuals to make the disaggregating of data on student outcomes by race/ethnicity and gender a routine and necessary practice to self-assess progress toward equity in educational outcomes, identify equity in educational outcomes as an essential indicator of institutional indicator of institutional performance and quality and assume responsibility for the elimination of unequal results (Bensimon, 2005, pp. 103-104)

Looking inward is the capacity to reflect on how practices at the individual and institutional level produce racial inequalities (Bensimon, 2005). Equity-minded individuals are more cognizant of exclusionary practices, institutional racism, and power asymmetries impact on opportunities and outcomes for historically excluded students. Equity-minded individuals attribute unequal outcomes to institution-based dysfunctions and reflect on their own and colleague’s role in and responsibility for student success (Bensimon, 2007, p. 446). Practitioners can develop the funds of knowledge for equity-minded practices by working collaboratively with researchers in contextualized problem-defining and solving (Bensimon, 2007, p. 447). Organizational learning, at the local level, by individuals who are closest to the problem may have a greater impact in reversing inequality in higher education resulting in an internal change that transforms the institution (Bensimon, 2005, p. 12). Bensimon’s (2005) statement regarding individuals who are closest to the problem brings to mind the necessity of having student voice
regarding their lived experience within an institutional system prominently reflected in
the data collection and analysis process.

Social Justice Implications

Disproportionately lower college graduation rates for marginalized Trio SSS students
impedes equitable access to opportunities that facilitate social mobility, sustains
economic inequality, and compromises the global standing of the U.S. as a world leader
in education and industry. Beyond the immediate consequence of poor graduation
outcomes, continued educational inequities leads to the perpetuation of generational
poverty, decreased rates of self-sufficiency, and a diminished capacity to replace a skilled
labor force that is retiring. Generational poverty negatively impacts not only
impoverished African American communities but society at large. Income inequality
disproportionately affects African Americans, which is evidenced by data collected in the
2003 and 2020 US census. In 2003 the aggregate rate of poverty in the United States was
12.4%; with 24.7% being African American compared to 8.2% being White (King &
Madsen, 2007). In 2020, among non-Hispanic Whites, 8.2 percent were in poverty in
2020, while Hispanics had a poverty rate of 17.0 percent. Among the major racial groups
examined in this report, Blacks had the highest poverty rate 19.5% (census.gov, 2020). In
addition, research shows that “90% of African American families spend at least one year
in poverty, which means that they begin building wealth anew in each generation” (King
& Madsen, 2007, p. 396). Improving the educational experience of historically excluded
Trio SSS students is imperative to decreasing income inequality and increasing student
readiness to pursue occupational opportunities that can provide a family sustaining wage.
The unacceptable outcome of low college graduation rates on the surface may seem of
concern to only a small group of constituents, however it should in fact concern anyone who cares about economic equality, equitable access to opportunities that facilitate social mobility, the global standing of the U.S. as a world leader in education and industry, and social justice. This matters because many Trio SSS students are pursuing a college degree in an effort to facilitate social mobility. The final reason that low college graduation rates for Trio SSS students should be studied is because we have a moral obligation to ensure that all students, regardless of race, first-generation status, disability status, or socioeconomic status, have access to equitable opportunities that prepare them to fully participate in society and the workforce. The fact that so many marginalized students are accessing college but not graduating from college is an injustice to them and a disservice to our communities.

**Sustained Economic Inequality**

Sweeping changes in America’s demographics and the economic reality have merged the moral imperative with the economic imperative; the focus must now be on equity and the economy (Alliance for Excellent Education, 2011, p. 1). This joint imperative cannot and must not be ignored. Parents, community members, business leaders, and policymakers must understand that the nation can no longer afford – morally or economically – to be complacent about the gaps in achievement and graduation rates and the impacts they have on the country’s economic future (Alliance for Excellent Education, 2012, p. 5). Understanding and addressing educational disparities has far-reaching implications for the economic viability of our country as our ability to be competitive in a global market becomes increasingly compromised (Ward, 2006, p. 53). “With two-thirds of the U.S. economy driven by consumer spending, it is only by
increasing the financial resources of large portions of the population – specifically among rapidly growing communities of color – that the national economy will reap huge benefits” (Alliance for Excellent Education, 2012, p. 5). Increasingly, these consumers and workers will be citizens of color as the United States continues to experience sweeping demographic changes (Alliance for Excellent Education, 2012, p.1).

Marginalized students are missing the opportunity to become full participants in society and the workforce (Alliance for Excellent Education, 2012, p. 5). In turn, the nation’s society and workforce has become less productive than it could be, resulting in a loss of tax revenues (Alliance for Excellent Education, 2012, p. 3). Technological advances today necessitate a diverse, increasingly skilled, and educated workforce (Alliance for Excellent Education, 2012, p. 5). If we are serious about creating more equitable outcomes, we must be willing to identify and remove barriers that are detrimental to accomplishing this goal. Improving educational outcomes for students from traditionally underserved and underrepresented groups is a major factor in breaking the cycle of poverty (Alliance for Excellent Education, 2012, p. 4). Sustained economic inequality is a pervasive problem affecting many citizens in the United States, and research indicates that “postsecondary education will be among the most important determinants of labor market success, and therefore one of the nation’s most crucial means of reducing persistent economic inequalities” (Haveman & Smeeding, 2006, p. 126). Many people rightly assume that there is a direct correlation between economic position and college graduation, with college graduation being considered a primary pathway to increased preparedness for in-demand high-wage occupations and economic self-sufficiency. Failure to improve college graduation rates will continue to perpetuate
inadequate graduation rates placing disadvantaged students at a greater risk of marginal employment, unemployment, continued generational poverty, increased levels of student loan debt, and a reduction in lifetime earnings (Oyserman, Terry & Bybee, 2002).

It has become increasingly urgent to prepare marginalized populations for the “academic and occupational challenges of the next millennium” (Alliance for Excellent Education, 2012, p. 1). College degree completion is a primary pathway to increasing preparedness for in-demand high-wage occupations, facilitating economic self-sufficiency, and strengthening the economic health of the nation. Three-quarters of the fastest-growing occupations require post-secondary education (Darling-Hammond, 2010, p. 3). Knowledge and skills once reserved for an “elite few” (McElroy & Armesto, 1998, p. 374) must be disseminated to segments of the population who have been historically excluded. Globalization has given rise to the need for postsecondary education in the attainment of individual and national success (Alliance for Excellent Education, 2011, p. 1).

**Inequitable Access to Opportunities that Facilitate Social Mobility**

Inequitable access to opportunities that facilitate social mobility is a persistent issue. As previously stated, research indicates that “a college education is a cultural asset critical in social mobility” (Pitre & Pitre, 2009, p. 106). College graduation has proven to be a clear pathway from low socioeconomic status to higher levels of socioeconomic status. Higher education is expected to “promote the goal of social mobility and make it possible for anyone with ability and motivation to succeed” (Haveman & Smeeding, 2006, p. 129). In other words, social mobility is a meritocratic construct, which in theory, should allow any individual to transcend to the upper levels of the social strata with hard
work. This theory is not always actualized hence continued equity gaps. Although Pitre & Pitre’s (2009) statement clearly communicates one of the pathways to social mobility, students, particularly those who are first-generation and/or low-income (FG/LI), face formidable barriers to college access and graduation. Further these barriers hinder their social mobility. At least 70% of U.S. jobs now require specialized knowledge and skills, as compared to only 5% at the dawn of the last century, when the current system of schooling was established (Darling-Hammond, 2010, p. 2). In the United States of America, only 1 in 10 low-income kindergartners become college graduates, with a greater number joining the growing ranks of inmates in what the New York Times has dubbed our “prison nation” (Darling-Hammond, 2010, p. 3). This is unacceptable, and partially explains why there is still a significant gap “in four-year degree completion among low-income and high-income students” (Engstrom & Tinto, 2008, p. 50). Disparity in resources, academic support, academic preparedness, and educational quality widens the economic divide between social strata. Additionally, according to Bensimon (2007) racialized practices and the unconscious dynamics of White privilege play an important role in who has access to forms of engagement that have greater value exchange. Stanton-Salazar (2011) observes that practitioners as well as researchers assume that institutional support systems are already in place and that motivated students take advantage of them. However, some students may not know how to become engaged, or they may not feel entitled to being engaged, particularly if it involves requests for help, or they may avoid the activities that signify engagement to avoid failures or the risk of rejection (Bensimon, 2007, p. 452). Most significantly, forms of engagement that provide opportunities for leadership development and connections to social networks of
influence are likely to be less accessible to minority students (Bensimon, 2007, p. 453). Institutions often fail to realize that many measures of student effort (ex. NSSE of CCSSE) reflect middle-class culture and values and fail to consider the “cultural effort” associated with being a minority student, such as coping with racial hostility, shouldering the responsibilities of work and family, worrying about being undocumented, or concerns about the unpredictability and insufficiency of financial aid (Bensimon, 2007).

**Compromised Global Standing of U.S. as Leader in Education and Industry**

The United States global position as a leader in education and industry has significantly declined over the years. What was once an advantage has deteriorated as the educational position of our nation has plummeted. “Today, the moral imperative – to equitably provide all students with a quality education – is now a critical factor in maintaining the United States national economic strength” (Alliance for Excellent Education, 2012, p. 1). Remaining a principal player in the global economy requires an educational infrastructure that can produce human capital of the highest caliber. Current educational outcomes have ranked the U.S. near the bottom among developed nations belonging to the Organization for Economic Co-operation and Development (OECD) (Alliance for Excellent Education, 2011; Pew Research Center, 2017). Additionally, in other “international assessments of academic proficiency, American secondary school students’ performance varies from mediocre to poor” (Alliance for Excellent Education, 2011, p. 1; Pew Research Center 2017). For instance, once a world leader, the U.S. was ranked twelfth out of thirty-two developing nations (Alliance for Excellent Education, 2011, p. 2). In 2015, the United States ranked 38 out 71 in math and science according to the PISA assessment. American labor once held a distinct advantage in competing for
emerging jobs in high skill industries (Alliance for Excellent Education, 2011). This is no longer the case.

**Anti-Racist Policy and Legislative Language a Requisite to Advancing Educational Equity**

Although college graduation rates among minoritized students may seem like a concern limited to the individuals directly affected, it is a matter of social justice. Even further, pursuing educational equity for historically excluded students using anti-racist policy and legislative language is a matter of social justice. The reality is that while minoritized and historically excluded students can gain access to college, their access is not translating into college graduation rates that are keeping pace with their more advantaged peers. This is an injustice to marginalized students and a disservice to our communities. As a nation, we have a moral obligation to ensure that all students have access to equitable opportunities that prepare them to pursue careers in high-demand fields. As part of this obligation there must be a commitment to transforming color evasive language within educational policies and legislation to be explicitly and intentionally anti-racist in its design. Addressing racial inequality [in all facets of society] is therefore an act of justice that demands system-changing responses and explicit attention to structural inequality and institutionalized racism (McNair, Bensimon & Malcom-Piquex, p. 34, 2020).

This becomes particularly pertinent as we witness the judicial system deliver decisions that disproportionately and adversely affect black and brown communities, and the gravity of these decisions is clear. The Supreme Court’s 2023 decision, for instance, has terminated the use of affirmative action in college admissions. Concurrently, there is
resistance to the inclusion of critical race theory (Ladson-Billings & Tate, 1995) in educational curriculums. This theory underscores that racism is intrinsically woven into our laws, policies, and institutions, thereby sustaining racial disparities. It posits that racial bias permeates many aspects of western society, especially its legal and social frameworks, given their predominant shaping by White individuals. Additionally, funding for diversity, equity, and inclusion initiatives has been systematically reduced at several publicly funded universities. Given this backdrop, it becomes imperative to champion the inclusion of anti-racist verbiage in legislation and policies, specifically those that impact students from historically excluded backgrounds.

**A Call for Transformative Research**

In discussions of scientific inquiry, a controversial issue that has emerged has been the question of rigor when it comes to allowing nontraditional methods of inquiry to be used in research studies. On one hand, the U.S. Department of Education is a proponent of traditional methods of scientific inquiry, like randomized controlled studies, being singular in meeting the golden standard of rigor. On the other hand, many educational researchers (Means & Harris, 2013; Gutierrez & Penuel, 2013) argue that there are other methods of scientific inquiry, like Design Based Implementation Research, that can be used to enhance educational research without compromising rigor. I agree with Means & Harris (2013) who state that “common ground can be found in drawing strengths from design-based research methods and traditional research designs that permit causal inference about program impacts” (p. 351).

The U.S. Department of Education applies traditional methods of scientific inquiry to educational research to determine “what works”. Trio programs are “research
based educational opportunity models that reflect much of the literature on improving higher education access and experiences for students from historically marginalized groups” (Pitre & Pitre, 2009, p. 107). As a federally funded program, acceptable educational research is measured based on criteria established in the Education Sciences Reform Act of 2002 (ESRA), which calls for “scientifically based research that would apply rigorous, systematic, and objective methodology to obtain reliable and valid knowledge relevant to education activities and programs” (Gutierrez & Penuel, 2014, p. 19). In response to ESRA the “What Works Clearinghouse” (WCC) was established as an initiative of the Institute of Education Sciences (What Works Clearinghouse, Procedures & Standards Handbook, Version 3.0). The WCC is a centralized online resource that assesses research quality, summarizes research studies, and documents evidence of program, policy, and outcomes related to student achievement (What Works Clearinghouse, Procedures & Standards Handbook, Version 3.0). The work of WCC supports its mission of being a “central, and trusted source of scientific evidence for what works in education (What Works Clearinghouse, Procedures & Standards Handbook, Version 3.0). It embodies review process standards found in the Education Sciences Reform Act of 2002, and “these standards support randomized controlled studies as the highest standard of scientific research within this domain” (Means & Harris, 2013, p. 351). Research designs that do not utilize randomized assignments can meet WCC standards, but with reservations (Means & Harris, 2013, p. 351). The willingness of the WCC to allow research designs with reservations to be included presents a window of opportunity for other methodologies to be presented by educational researchers.
The WCC was created under the “basic assumption that there are clearly defined
education programs or interventions that either “work” or “don’t work’’” (Means &
Harris, 2013, p. 353). However, “it takes more than sound evidence to bring about and
sustain excellence and equity in systems. Just because research may be rigorous does not
mean it will be judged as relevant by practitioners and policymakers” (Fishman, et. al.,
2013, p. 138). A major consideration should also be how the research is viewed by
practitioners. It has been found that “practitioners make limited use of the WCC to
identify evidence-based practices” (Means & Harris, 2013, p. 353). While I would agree
that traditional standards of research are valuable and necessary, its findings are not
always accessible and practical for practitioners. On the other hand, DBIR researchers
ask questions such as, “What works when, for whom, and under what conditions?” and,
“How can we make this innovation work under a wide range of conditions?” (Fishman,
Penuel, Allen, Cheng & Sabelli, 2013, p. 146). Beyond ascertaining what works, there is
an effort to “understand the conditions under which designs can improve learning”
(Fishman et. al., 2013, p. 138). A singular focus on tradition limits the contribution that
educational research can make to theory and practice. The basic assumption of
interventions “working” or “not working” conflicts with Means and Harris’ (2013) claim
that educational interventions, [and by extension educational research] are variable and
complex. Therefore, it stands to reason that the method of inquiry used in educational
research must be able to account for this complexity and variability:

“Educational interventions are complex combinations of human actions,
organizational supports, and instructional resources that play out differently in
different contexts and with different kinds of students. The complexity and
variability of outcomes across contexts undermines the clearinghouse notion that you can refer to a catalog of effective interventions with confidence that they will work in your own context” (Means & Harris, 2013, p. 353).

While it is true that traditional scientific methods of inquiry are valuable, it is also true that other approaches, working in concert with traditional methods, can provide more meaningful research that can better inform theory, improve practice, and be utilized more widely by practitioners. One such approach is Design Based Implementation Research (DBIR), which is a research method that can better account for variability across practice contexts. “The evidence framework underlying DBIR treats educational interventions, not as fixed objects, but as practices that will be adapted to local circumstances and can be expected to undergo modifications and improvements throughout their lifetimes.” (Means & Harris, 2013, p. 354). This would be especially useful within the educational context of Trio SSS because there is great variability across all of the SSS programming. It can be argued that this variability is necessary as what may work in one Trio SSS may not get the same results in another.

According to Fishman et. al. (2013), the Institute of Educational Sciences uses a linear model of research and development, whereas DBIR views research and practice as a dialogical relationship (p. 138). He goes on to state that the distinctiveness of DBIR is that the relationship between research and practice is mutually transformative (Fishman et. al., 2013, p. 138). This process clearly illustrates a model that would facilitate improvement. However, the obvious challenge with introducing DBIR to educational research is that “IES evidence standards are deeply ingrained in federal policy for education research policy” (Means & Harris, 2013, p. 353). Disrupting this approach will
surely meet with resistance from proponents of more traditional methods of scientific inquiry. Many scientific traditionalists would object to any modifications, however there are members of the scientific community that would support the use of alternate approaches. Dr. Donald Berwick, a renowned doctor and former faculty member of Harvard Medical School, asserts “it is possible to rely on other methods [of research] without sacrificing rigor” (2008, p. 1183). This statement aligns with other educational researchers who share this view (Means & Harris, 2013). Berwick goes on to say that:

“to study linear, mechanical or natural, tightly coupled causal relationships most efficiently, an OXO design, may be exactly correct. But with social changes – multicomponent interventions, some of which are interpersonal, all of which are nonlinear, in complex social systems – then other, richer, but equally disciplined, ways to learn (such as CMO designs) are needed (2008, p. 1183).

In other words, when choosing the method of inquiry to be executed in any given study one must consider the focus of the research and be willing to adapt methodologies that will generate the most usable and beneficial research findings. Embracing a wider range of scientific methodologies is a stance championed by Berwick (2008), and one that he claims will accelerate improvement. Ultimately, as Means and Harris (2013) state: “This is not to argue that the types of research included in the IES goal structure are not useful. To the contrary, we think the education research enterprise needs both DBIR models and rigorous efficacy and effectiveness studies” (p. 364). Furthermore, Berwick (2008) would assert that depending on the research application qualitative methods “has more power to inform about contexts than randomized controlled trials… [in certain instances qualitative methods] are not compromises in learning how to improve; they are superior” (p. 1183).
Design Based Implementation Research

Traditional evaluations can provide critical data that help researchers better understand the problem of practice. However, as it relates to Trio SSS programs the evaluators and the U.S. Dept. of Education fall short in identifying what specific process supports the attainment of student outcomes. I would argue that a limitation of Muraskin’s (1997) study is that it did not evaluate Trio SSS work processes and systems or how it functions with the larger institutional system, and this is where Designed Based Implementation Research (DBIR) principles can help scholarly practitioners improve practice.

DBIR is defined by a family of activities that employs collaborative and systematic inquiry, designing tools and processes to improve teaching and learning, and creating a balance between research and practitioner expertise” (Hinnant-Crawford, 2020, p. 301). DBIR is a methodology that uses disciplined methods of inquiry to inform and improve practice, although it is not strictly based in scientific inquiry. Its uniqueness lies in the intersectionality of its principles. DBIR is a departure from traditional scientific methodologies, as it does not rely primarily on random assignment studies to determine the study’s merit and level of rigor present in the research (Gutierrez & Penuel, 2014). DBIR also borrows methods from fields outside of education, such as public health and medicine (Fishman, Penuel, Allen, Cheng & Sabelli, 2013; Berwick, 2008). DBIR expands methods available for developing evidence related to the implementation, efficacy, and scaling of innovations (Fishman, Penuel, Allen, Cheng & Sabelli, 2013, p. 145). The specific DBIR principles include -

1. Focus on persistent problems of practice from multiple stakeholder’s perspectives.
(2) A commitment to iterative, collaborative design.

(3) A concern with developing theory and knowledge related to both classroom learning and implementation through systematic inquiry.

(4) A concern with developing capacity for sustaining change in systems.

As previously stated, “The evidential framework underlying DBIR treats educational interventions, not as fixed objects, but as practices that will be adapted to local circumstances and can be expected to undergo modifications and improvements throughout their lifetimes” (Means & Harris, 2013, p. 354). Again, DBIR researchers ask questions such as, “What works when, for whom, and under what conditions?” and, “How can we make this innovation work under a wide range of conditions?” (Fishman, Penuel, Allen, Cheng & Sabelli, 2013, p. 146). These questions focus on achievement rather than failures, which is an important perspective to have when dealing with underrepresented students who have historically been viewed through a lens of deficiency. DBIR would expand on this and ask the questions “How do we improve this reform strategy to make it more sustainable? What capacities does the system need to continue to improve” (Russell, Jackson, Krumm & Frank, 2012, p. 158). Examples of educational research using the DBIR framework include studies conducted by Cobb, Jackson, Smith, Sorum & Henrick (2013) and The Carnegie Foundation for the Advancement of Teaching Quantways and Statways project (2010-present). In 2010, the Carnegie Foundation initiated a networked community of practice, which included faculty, researchers, designers, students, content experts, and improvement specialists to create a new system that would increase student success in developmental mathematics (Carnegie Math Pathways, 2010). The motivation for this study came from the rising
The proportion of community college students who placed into remedial math courses, but ultimately failed to complete the course and graduate. The aim was to reduce completion time for the existing sequencing of courses from two years to one year, and since the program’s launch students in the program have completed introductory math requirements at triple the rate of their peers and go on to transfer and graduate at significantly higher rates (Carnegie Pathways, 2010). Cobb, Jackson, Smith, Sorum & Henrick (2013) partnered with four urban school districts serving 360,000 students. Researchers focused on the third element of DBIR and developed an “empirically grounded theory of action” intended to guide leaders in designing policies and strategies to improve mathematics instruction at scale (p. 321). Researchers developed a rigorous evidence gathering process which included annual data collection, analysis, and feedback. This iterative data collection process resulted in a better understanding of the issue, within its local context, which better informed interventions and revisions (Byrk, et. al., p. 9, 2015). Ultimately, the aforementioned studies support the idea that “it is possible to rely on other methods [of research] without sacrificing rigor” (Berwick, 2008; Means & Harris, 2013, p. 351). DBIR’s focus on system, practice and improvement differentiates from other forms of design research (Penuel, Fishman, Cheng & Sabelli, 2011), and makes it especially relevant for evaluating how the Trio SSS program functions within the MAU University system.

**Carnegie Foundation’s Six Core Principles of Improvement**

An evaluation commissioned by the U.S. Department of Education to assess the effectiveness of Trio SSS programs observed that a singular focus on goal attainment supports “federal interest in assessing project performance” (Muraskin, 1997), and this
dominant focus on outcomes has solely dictated how program success is measured. However, a follow-up study of Student Support Services prepared in 1997 argued that “establishing goals and measuring their attainment is only side of the performance equation. Without concomitant attention to project content and operations, performance assessment cannot be expected to improve effectiveness” (Muraskin, p. 3). This is a clear call to focus on system processes and improvement. The study goes on to state “it is the desire to improve practice that has motivated this project and report” (Muraskin, 1997, p. 3). Despite this observation being made over 25 years ago, there has been limited progress made in incorporating improvement science into the practice of evaluating Trio SSS programming, thus this study will fill this gap in research as it pertains to improvement science being applied within the Trio Student Support Services context.

The use of improvement science within education is a relatively new phenomenon. Early success was achieved in business and healthcare sectors, and later was applied to the evaluation of problems of practice specific to the field of education (Byrk, Gomez, Grunow, LeMahieu, 2015, p. 7). Improvement science is defined as “a methodology that disciplines inquiry to improve practice” (Byrk, Gomez, Grunow, LeMahieu, 2015, p. 10). Improvement science is “the synthesis of existing research, practical design knowledge, and successful ideas generated from interdisciplinary sources” (Mintrop, 2016, p. 14). It theorizes that two distinct types of knowledge are needed: basic knowledge from the discipline of education and “a system of profound knowledge” (Langley et. al, 2009) needed to enact basic disciplinary knowledge within organizations. In this case the researcher is leveraging their knowledge of Trio SSS programming and integrating Improvement Science principles, Design Based Implementation Research and the 5S
Framework to address inadequate graduation outcomes of historically excluded Trio SSS students. According to Byrk et.al. (2015), “improvement science looks holistically at a system and examines process, tools, tasks, policies, organizational structures, and organization norms” (pp. 7-8). According to the Carnegie Foundation the six core principles of Improvement are as follows:

**The Six Core Principles of Improvement**

1. **Make the work problem-specific and user-centered** – It starts with a single question what specifically is the problem we are trying to solve? It enlivens a co-development orientation: engage key participants early and often.

   **How Principle 1 was applied to the study:** The problem has been identified as inadequate graduation outcomes for historically excluded Trio SSS students and the system that is perpetuating these outcomes. The work was user-centered and engaged key front-line workers and administrators that worked collaboratively to analyze the problem by meeting regularly to discuss root causes and potential change ideas.

2. **Variation in performance is the core problem to address** - The critical issue is not what works, but rather what works, for whom and under what set of conditions. Aim to advance efficacy reliably at scale.

   **How Principle 2 was applied to the study:** There is a disparity in the graduation outcomes desired for historically excluded Trio SSS students as compared to the graduation outcomes being achieved. This variation is evidence that a problem does exist. The system is working for some, but we need to ensure that it is working for everyone. Conditions must be changed in order to meet the unique needs of historically excluded Trio SSS students.
3. **See the system that produces the current outcomes** - It is hard to improve what you do not fully understand. Go and see how local conditions shape work processes. Make your hypotheses for change public and clear.

**How Principle 3 was applied to the study:** The researcher used quantitative data and qualitative data to understand the MAU system and uncover how the system is producing inequitable outcomes.

The remaining three principles listed below will be addressed after the conclusion of the study.

4. **We cannot improve at scale what we cannot measure** - Embed measures of key outcomes and processes to track if change is an improvement. Anticipate unintended consequences and measure these too.

5. **Anchor practice improvement in disciplined inquiry** - Engage rapid cycles of Plan, Do, Study, Act (PDSA) IMPROVE to learn fast, fail fast, and improve quickly. That failures may occur is not the problem; that we fail to learn from them is.

6. **Accelerate improvements through networked communities** - Embrace the wisdom of crowds. We can accomplish more together than even the best of us can accomplish alone.

This method of inquiry places significant focus on work systems and processes. Viewing the proposed practice problem through the lens of improvement science will help identify inequitable practices contributing to the unacceptable outcomes of low campus graduation rates and, more importantly, enable practice improvement.
5S Framework

There is a gap between MAU’s aspirational graduation rate for historically excluded students of color and the current graduation rate being achieved. This aligns with how Hinnant-Crawford & Anderson (2022) defines problems, which is a gap between the current state and the aspirational state that requires both further investigation and targeted solutions to close that gap (p. 297). It is important to consider the values and priorities of those who are in the power position to define the problem (Hinnant-Crawford & Anderson, 2022). Having equity-minded practitioners in influential positions is crucial because they can effectively define the problem from an equity-minded cognitive frame. According to Hinnant-Crawford & Anderson (2022) problems stem from gaps in efficiency, quality, and/or justice (p. 297), and systems designed to result in varying outcomes (Mintrop, 2016). Problems, therefore, not only require multifaceted solutions but also a problem-identification process that begins with in-depth analysis to frame and define the problem (Hinnant-Crawford, 2020, p. 298). The researcher will be conducting an in-depth analysis of the problem and will frame the problem through an equity lens. When advocating for action research in 1964, educator and activist Septima Clark said, we must take a look at where we are and where we want to be (Hinnant-Anderson, 2020, p. 300). Once the destination is identified it is important to create a mutually beneficial research agenda that advances education opportunities by granting voice to a wide array of stakeholders in developing the agenda (Hinnant-Crawford, 2020, p. 298).
Significance

Clearly articulating the significance of why a problem should be solved is a key component of this framework. The articulation should include a clear description of “who is impacted, what the impact is, and how alleviating or improving the problem will change lives, experiences or opportunities to learn of those closest to the problem” (Hinnant-Crawford, 2020, p. 305). According to Hinnant-Crawford (2020) there are different rationales ascribed to why a problem should be solved. Some problem improvements are for the purpose of overall system performance, in these examples, the significance would be quality. Other examples of problem improvements would be seeking to remedy disadvantage by dismantling systems that have marginalized many while privileging some; in these instances, the significance is justice (Hinnant-Crawford, 2020, p. 308-309).

Significance: The researcher is engaging in this work because it is within their locus of control/sphere of influence to design a more equity-minded system that supports graduation outcomes. It will benefit Trio SSS students who are amongst the most vulnerable student populations. The dual focus on graduation outcomes and marginalized populations roots this study’s significance in both quality and justice.

Source

The source of the problem is sometimes referred to as the root cause and is often arrived at through various forms of root cause analysis (Hinnant-Crawford, 2020, p. 309). To determine the source or root of the problem, it is best to include the insights of individuals with a variety of perspectives on the problem and at differing levels of power. It is important to include front-line staff who are often the closest to the students and the
issues that they encounter. Bryk and associates (2015) call this a user-centered approach. Failure to adopt a user-centered approach can often result in blaming individuals for their misfortune (deficit ideology) and failure to see the system that is producing the current outcomes. It is in the search for the “source” that diverse voices and perspectives are critical (Hinnant-Crawford, 2020, p. 310). To engage in equitable practice during this process of identifying the source, one must be humble and willing to listen to those closest to the problem. This means shelving their authority as subject matter experts, research experts, or practice experts to listen to those who may have different experiential expertise. And those engaged in this work must hold that different expertise, that is not always credentialed or with position, with the same regard (Hinnant-Crawford, 2020, pp. 311-312).

Source: The causes of the problem are institutional practices and policies. The researcher has firsthand experience with this issue and has worked collaboratively with campus leaders to address.

Substantive Focus

The "what" articulated in the aim statement is the goal of the improvement. Moving from the general to the specific, the substantive focus is an articulation of the mechanisms to manipulate to achieve the “what”. Indeed, the substantive focus serves as the high-leverage, persistent problem area that the improver or improvement team identifies for the improvement work. As we delve deeper, it's clear that this focus recognizes what needs to be improved to ensure equitable and excellent outcomes for each student. This is often determined by variation in outcomes, indicating that there are
groups of students who are not being served well by the current system (Bryk, 2015; Hinnant-Crawford, 2020).

Furthermore, when pondering on the substantial focus, the sustainability of solutions and the opportunity to change policy, practice, and culture should be a top consideration (Hinnant-Crawford, 2020, p. 312). Transitioning to problem diagnosis, problem identification and definition is a multistage process. This method results in narrowing the problem through exploration of the multidimensionality of the problem. The path to improvement typically begins with a shared set of concerns about the focus area, supported by the data. Building upon that, the initial focus of the problem may be established by asking probing questions (Mintrop, 2016) about the organization and current systems, structures, and processes. Such questions become crucial in engaging in activities to identify an ideal state, constraints to reaching that state, and assets to be leveraged to meet the desired state (Hinnant-Crawford, 2020, p. 313).

**Substantive Focus** – We should intervene to address the problem first by seeing and understanding the system in which the problem exists. For the purposes of this study the researcher will not be looking at the whole MAU system, but the Trio SSS system (policies and practices) that are within their locus of control. It is more advantageous to focus on this part of the problem because the researcher can introduce change ideas and test them in short iterative cycles.

**Scale**

According to Hinnant-Crawford (2020) scale encompasses several dimensions: (a) who, (b) how many, (c) at what level, and (d) to what extent various individuals and organizations participate in problem identification and definition (p. 315). Transitioning
from this foundational concept, an integral aspect of scale for continuous improvement rests on the principle that those proximate to the problem are actively engaged. Building on this idea, these processes are democratizing. Specifically, they democratize evidence through the inclusive participation of diverse and representative stakeholders in all stages of improvement research. This ensures that the spotlight remains firmly on problems pinpointed by users as significant and echoing community values. When contemplating involvement, it's paramount for teams to prioritize the voices of those directly affected (Hinnant-Crawford, 2020, p. 315). In this context, it's crucial to accord special emphasis to dynamics of power and to amplify the voices of practicing professionals who are intimately acquainted with the problem (Hinnant-Crawford, 2020, p. 318).

**Scale** – Beyond the researcher’s knowledge and expertise there were other experienced stakeholders who were involved in solving the problem. Stakeholders invited included representation from all student facing departments, faculty members, the campus chancellor and assistant academic officer. There was a collaborative effort in carrying out any potential change ideas and solutions. These individuals are located strategically throughout the institution and are invested in the success of students.

**Scope**

The distinction between scale and scope is essential. While scale revolves around who is involved in problem definition and improvement research, scope, by contrast, concerns itself with who is impacted by the problem and pinpointing where in the system the problem emerges. Drawing from Hinnant-Crawford (2020), the differentiation is clear: scale grapples with problem definition, while scope zeroes in on the level of focus of the problem itself. Expanding on this, scope is intricately tied to substantive focus,
mapping out the organizational level where the problem rests (Hinnant-Crawford, 2020, p. 318). Within the educational landscape, problems often manifest with complexity, their origins sprawling across diverse levels of structures, systems, and organizations. In light of this, an improvement team must thoughtfully assess the scope of the problem, as this understanding inherently shapes both the substantive focus and scale. Utilizing causal analysis to trace the root of the problem provides improvers with a deeper understanding of its scope. If they unearth that the issue spans interorganizational bounds or anchors itself at the system level, it underscores the need to weave in voices from all organizational tiers during problem definition (Hinnant-Crawford, 2020, p. 319).

Moreover, it's crucial to discern what lies within the realm of influence, particularly when mapping the extent, depth, and span of the problem (Hinnant-Crawford, 2020, pp. 319-320). By securing clarity on the 'why', 'what', 'how', 'who', and 'where' early in the improvement research trajectory, teams bolster their chances of achieving their envisioned outcomes within their self-determined timeframe (Hinnant-Crawford, 2020, p. 320).

**Scope** – The problem lies within the institution, but it is a shared issue for the entire university system.

In the realm of educational research, scholars often explicitly identify the epistemology that drives their methodology. Yet, it's intriguing that rarely are researchers required to interrogate the axiology and positionality that determines questions asked and problems they choose to solve (Hinnant-Crawford, 2020, p. 305). Building on this thought, the team’s understanding of the severity, proximity, and causality are a direct function of who is on the team. This underscores the importance that when users or those
closest to the problem are excluded from the definition, teams are more likely to situate the fault of the problem on the user (Hinnant-Crawford, 2020, p. 320).

Taking a broader perspective, improvement researchers in education cannot seek equitable outcomes for students if they fail to engage in equitable practices in research and in the initial phases of problem definition. By delving deeper, uncovering the unseen or unquestioned distributions of resources and centering the voices of those often-underserved help scholars and practitioners identify structures and practices that lead to undesirable outcomes. Embracing this ethos can lead to the discovery of unsuspected sources (Hinnant-Crawford, 2020, p. 321).

To further support this iterative process, the cyclical nature of improvement research allows teams to revisit the problem and redefine as necessary. As a guiding principle, the 5S Framework allows those engaged in improvement research to ensure their understanding of the problem is comprehensive and not piecemeal (Hinnant-Crawford, 2020, p. 321).

Summary

This literature review examined the role of racism in perpetuating institutionalized inequity and explored the racialized disparities in postsecondary education. It highlighted the persistent inequities faced by racial and ethnic groups with a history of discrimination and exclusion, emphasizing the need for explicitly anti-racist policies and interventions to support minoritized students. The review also emphasized the importance of institutional systems and conditions that promote equity and racial justice, as well as the responsibility of institutions to prioritize educational equity and engage in equity-minded organizational learning to drive change. The social justice implications discussed in the review include
ongoing economic inequality, unequal access to opportunities for social mobility, the compromised position of the U.S. as a global education leader, and the recognition that anti-racist policies and legislative language are a requisite for advancing educational equity. This chapter served as a foundation for the study, framing it within an equity-minded cognitive frame.

The theoretical frameworks explored in this literature review and that guide this study are Design Based Implementation Research (Gutierrez & Penuel, 2014; Fishman, Penuel, Allen, Cheng & Sabelli, 2013; Anderson & Shattuck, 2012), Carnegie Foundation for the Advancement of Teaching’s Six Core Principles of Improvement Research (Bryk, Gomez, Grunow & LeMahieu, 2015), and the 5S Framework (Hinnant-Crawford & Anderson, 2022; Hinnant-Crawford, 2020). Analyzing the data through these distinct yet complementary lenses can provide new insights into how to better inform and improve practice. This study aims to bridge a research gap and context specific gap.

From a contextual perspective, these insights into MAU specific equity gaps can help establish baseline data and conceptualize interventions that can improve conditions and address dynamics that are impediments to educational equity within this practice context. From a research gap perspective this study aims to bridge this research gap by applying improvement science within the context of Trio Student Support Services. An equity focused evaluation and improvement effort led by MAU’s Trio SSS program will promote “excellence and equity; improving for learners’ access to powerful and effective learning opportunities” (Fishman, Penuel, Allen, Cheng & Sabelli, 2013, p. 137). The examination of these gaps, is to contribute to the advancement of research and practice in the education field, bringing a focus to continuous improvement and enhancing the
effectiveness of Trio SSS programs. Chapter 3 will detail the methodology utilized to conduct this study.
Chapter Three Methods

Introduction

This study examined how MAU’s Trio SSS program could improve its practice within the larger institutional system to better support Trio SSS students as they progress towards graduation. This chapter will detail the purpose of the study, restate the research question guiding the study, and provide a brief description of the researcher’s positionality and its influence on their understanding of the problem of practice. Next the chapter will present the research design, including a reminder of the improvement principles promulgated by the Carnegie Foundation for the Advancement of Teaching (Bryk, 2020; Bryk et. al., 2015) and the 5S framework (Hinnant-Crawford & Anderson, 2022; Hinnant-Crawford, 2020) described in Chapter 2. The chapter will conclude with the delineation of extant data that will be examined to answer the research questions and how the data will be analyzed.

Purpose and Aim of Study

The primary purpose of this study was to define the problem and to understand the system that was leading to the problem: unacceptably low graduation outcomes for Trio Student Support Services students at MAU. To achieve the primary purpose extant documents and other institutional data were examined. Data that could shed light on the system processes and institutional conditions that created obstacles and perpetuated disparities in graduation outcomes particularly for historically excluded racial groups that existed at the intersection of first-generation status and/or low socioeconomic status were examined and analyzed. The secondary purpose of this study was to identify potential change ideas that might improve graduation rates for Trio Student Support Services
students at MAU. Achieving the second purpose yielded an improvement agenda that could (1) contribute to improved outcomes for Trio SSS students at MAU and (2) instigate new data-based continuous improvement practices and build capacity for systemic problem identification and design-based implementation research (Anderson & Shattuck, 2012; Fishman, Penuel, Allen, Cheng & Sabelli, 2013; Gutierrez & Penuel, 2014; Hinnant-Crawford, 2020).

**Research Questions**

As a reminder before addressing my positionality with the regard to the study, the proposed research questions follow:

1. What are the 6-Year graduation rates within MAU campus, MAU university, and National Trio SSS programs disaggregated by race and Trio SSS status?

2. How are MAU’s institutional conditions (policies and practices) contributing to low graduation rates for Trio SSS students?

3. How do we improve the MAU system to increase graduation outcomes for Trio SSS students?

**Positionality of Researcher**

As the researcher, I am a first-generation college graduate, and have worked in multiple capacities within MAU’s Trio Student Support Services for the past 15 years. As the current director of MAU’s Trio SSS program the problem exists within my sphere of influence. In this position, I have significant decision-making authority, and am regarded as an expert in Trio SSS grant administration, evaluation, and programming. In my role, I am expected to meet grant objectives specifically relating to academic standing, retention, and graduation rates and must submit annual reports to the U.S. Department of
Education. As director, I am responsible for developing, implementing, and evaluating equity-centered initiatives that improve graduation outcomes for Trio SSS students. I also play an integral role in strategic planning related to university-wide goals that improve student learning and success. In addition, I serve on the Chancellor’s Strategic Priority Team and provide leadership and support for diversity, equity inclusion and belonging efforts and serves as an advocate for student success.

Throughout my tenure the problem of inadequate graduation outcomes, among the campuses least advantaged college students, has been a high leverage issue that leadership at MAU and the Department of Education have been eager to address. In my previous position as academic counselor, my perspective regarding student success was aligned with a traditional focus on student deficiency being the primary reason students were not progressing towards graduation. My experience was one that understood that many students had attended persistently low-achieving schools and I observed a general lack of college readiness. In my earlier view, students often began their collegiate journey with ambitious goals, even though they often lacked the appropriate level of academic preparation to realize their career aspirations. Their placement exam scores indicated that they were not reading or completing math at grade level, and they spent several semesters in foundational courses spending time and money on courses that did not count towards graduation. My responsibility was to assess academic need and to connect students with resources and support services that would improve their academic performance. I watched in real-time as their frustration grew and many encountered academic roadblocks due to lack of academic preparedness. Retention, persistence, and graduation rates for this population of students declined as many did not graduate because they either
dropped out of school or failed to maintain satisfactory academic progress resulting in loss of their financial aid. However, as I transitioned to the role of director my perspective has evolved and focused on the glaring inadequacies found within the educational system. Underserved students have been systematically denied equitable learning experiences in education. I believe that the educational system is broken and is perpetually hindering the academic trajectory of marginalized students. I am in a position where I can be influential in creating an equitable Trio SSS system design that better supports graduation outcomes for Trio SSS students.

My position as director provides access to data that pertains to research questions. My position also informs the design of the study and the analysis procedures.

**Research Design**

This study adopted a mixed-methods case study design. The rationale for choosing this approach was to delve more deeply into the intricacies embedded within the problem of practice. Establishing a baseline with quantitative methodology was crucial for measuring improvement, while the qualitative methodology could articulate the complex challenges faced by students. The researcher aimed to comprehensively understand the challenges that historically excluded Trio SSS students confronted during their collegiate experience. By integrating qualitative and quantitative methodologies, the researcher identified numerous barriers these students encountered.

The case being studied was the Trio SSS system at MAU. The first research question established the baseline measure of 6-year graduation rates disaggregated by race and ethnicity, the second research question sought to understand how institutional policies and practices are contributing to unacceptable graduation outcomes for Trio SSS
students, and the third research question looked to identify ways that the MAU system can be improved to increase graduation rates for Trio SSS students.

This study was designed to address an institutional responsibility to “see how its systems” (Bryk, 2021; Bryk, Gomez, Grunow & LeMahieu, 2015; Hinnant-Crawford, 2020) are contributing to the production of problematic educational outcomes. Institutions should regularly reflect on educational inequities and routinely use extant data to inform decision making and evaluate improvement efforts. Ultimately the MAU Trio SSS system must align with Engstrom & Tinto (2008), in that “institutions have to believe that all students, not just some, have the ability to succeed under the right set of conditions – and that it is their responsibility to construct those conditions (p. 50).” This requires accurately defining the improvement problem and then identifying ways to improve conditions using approaches grounded in improvement inquiry and research. The specific evidence-based approaches that framed the analysis of this research were the Carnegie Foundation for the Advancement of Teaching’s first three improvement principles and the 5S Framework (Hinnant-Crawford & Anderson, 2020) for problem definition in improvement research.

The first three principles of improvement research in education promulgated by the Carnegie Foundation focus on defining the problem as it is experienced by users in the system (Principle 1), as it reflects variations in outcomes (Principle 2), and as it manifests in a specific practice context (Principle 3) (Bryk, 2021; Bryk et. al., 2015). Hinnant-Crawford (2020) uses the same principles, but as described in Chapter 2, she advocates that using these improvement research principles in education should center
matters of social justice. This study did just that for the historically excluded students who are served by the MAU Trio SSS system.

As discussed in Chapter 2, the 5S Framework for problem definition in educational improvement research answered questions regarding a problem’s significance, source, substantive focus, scale and scope (Hinnant-Crawford & Anderson, 2022).

Table 3.1

5S Problem Definition for Study

<table>
<thead>
<tr>
<th>Components</th>
<th>Connection to the Study</th>
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<tbody>
<tr>
<td><strong>Significance - Why</strong></td>
<td>The researcher engaged in this work because it is within their locus of control/sphere of influence to design a more equity-minded system that supports graduation outcomes. It will benefit Trio SSS students who are amongst the most vulnerable student populations. The dual focus on graduation outcomes and marginalized populations roots this study’s significance in both quality and justice.</td>
</tr>
<tr>
<td><strong>Source – What</strong></td>
<td>The causes of the problem are institutional practices and policies. The researcher has first-hand experience with this issue and has worked collaboratively with campus leaders to address.</td>
</tr>
<tr>
<td><strong>Substantive Focus - How</strong></td>
<td>We should intervene to address the problem first by seeing and understanding the system in which the problem exists. For the purposes of this study the researcher will not be looking at the whole MAU system, but the Trio SSS system (policies and practices) that are within their locus of control. It is more advantageous to focus on this part of the problem because the researcher can</td>
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</table>
introduce change ideas and test them in short iterative cycles.

**Scale - Who**

Beyond the researcher’s knowledge and expertise there were other experienced stakeholders who were involved in solving the problem. Stakeholders invited included representation from all student facing departments, faculty members, the campus chancellor and assistant academic officer. There was a collaborative effort in carrying out any potential change ideas and solutions. These individuals are located strategically throughout the institution and are invested in the success of students.

**Scope - Where**

The problem lies within the institution, but it is a shared issue for the entire university system.

These approaches were selected because the researcher is interested in clearly identifying the improvement problem, seeing the system that is producing unacceptable variations in graduation outcomes, and understanding how the system might be improved to better support historically excluded Trio SSS students at MAU.

**Sources of and Access to Extant Data**

As the researcher, I was asked by campus leadership to participate in town hall and strategic planning meetings convened at MAU over two academic years and specifically addressed systemic barriers related to student success, retention, and graduation based on my position as Trio SSS Program Director. Analytic hub is a term more recently presented in improvement research by Bryk (2020) and will be used to describe the town hall and strategic planning meetings held over these two academic years. The meetings were held to work on student retention and develop plans related to
student success through an equity lens. The function of these analytic hubs aligns with the concept of a Networked Improvement Community (Bryk, 2015). This structure provided access to a wealth of expertise and experience and provided “social connections that could accelerate diffusion” of change ideas (LeMahieu, 2015). The purpose of the analytic hubs was to help leadership and front-line workers corporately strategize to provide a coordinated approach for student success. Our learning community incorporated two of the four essential characteristics posited by LeMahieu (2015) which are to focus on a well specified aim, guided by a deep understanding of the problem and system that produces it. This study expanded on the analytic hub’s work to incorporate the remaining characteristics identified by LeMahieu (2015) being guided by a theory of improvement relevant to the problem and the system, be disciplined by the rigor of improvement science, and coordinated to accelerate the development, testing and refinement of interventions and their effective integration into practice across campus contexts.

As director, I actively participated in over 90% of the town hall and strategic planning meetings and took notes at each meeting. Data from publicly available institutional research reports, agendas, personal notes and minutes of group meetings and individual discussions with members of the analytic hub were consulted to address the research questions.

The first research question related to establishing a baseline of MAU’s 6-year graduation outcomes so that improvement could be measured. The nature of the data I consulted for the first research question was extant data that was publicly available quantitative data. The existing data included enrollment information and 6-year
graduation rates disaggregated by race/ethnicity and first-generation college status. These data were readily accessible to the public through MAU's Digital Digest website. Additionally, the researcher obtained national Trio SSS 6-year graduation rates from the Department of Education's Trio Student Support Services public website.

The nature of the data that I consulted to answer the second research question was qualitative data gleaned from previous discussions during town hall and strategic planning meetings held over the course of two academic years. These meetings were held to discuss obstacles relating to student success, retention and graduation, which were all directly linked to understanding how institutional conditions are impacting graduation rates. The data was collected from extensive written notes the researcher recorded at the meetings.

The secondary function of the meetings correlated with the third research question, which was to identify ways to improve graduation outcomes and experiences for students. Again, I used notes taken from previous meetings to look for ideas that were presented that could improve the system to better support students, which answered how MAU can improve its system to improve graduation outcomes.

The analytic hub was comprised of leaders and front-line workers from departments across campus. The members were experts in their respective departments. Notes and agendas of the meetings of the analytic hub, along with notes and memos from follow-up discussions with small groups and individuals from the analytic hub were consulted in hopes of uncovering insights.

The diversity of the analytic hub provided considerable insights into how students experienced obstacles within and across campus departmental units. That
diversity afforded insights into how each unit could better support student success efforts and improve service to students. Each participant involved in these meetings had a vested interest in the problem of graduation rates from a dual perspective of campus stability and a genuine ethic of care. MAU is a small campus within a large system. From an economic perspective, strong retention and graduation outcomes are paramount to the viability and financial stability of the campus. From an ethic of care perspective, which requires the centering of student well-being when it comes to institutional decision making (Keeling, 2014), over 50% of the analytic hub were first-generation college graduates that understand obstacles faced by Trio SSS students, as some aspects closely mirrored their own academic experiences within higher education.

The members of the analytic hub were highly qualified stakeholders within the campus system, and were recruited to participate purposively, which is when “a subject or subjects are selected based on predetermined criteria about the extent to which the selected subjects could contribute to the research study” (Vaughn, Schumm, & Singagub, 1996, p. 58). The analytic hub concept (Bryk, 2020) also aligns with Bryk, Gomez, Grunow and LeMahieu’s (2015) Networked Improvement Communities (NIC) concept, which harnesses the power of collaboration amongst experienced stakeholders to innovate improvement ideas and learn together how to create equity-relevant solutions that better support student outcomes (Mintrop, 2016).

**Ethical Considerations**

The sources of extant quantitative data used for this study included deidentified demographic variables disaggregated by race and ethnicity readily available to the public through MAU’s digital digest data website and national Trio SSS demographic variables
publicly available through the Department of Education’s Trio SSS website. To ensure compliance with FERPA regulations, the notes that were consulted came only from meetings that focused on how the institution should respond to address systemic barriers faced by students and the institutional programming and resources needed to overcome these barriers. Notes from meetings in which individual student issues or academic records were discussed were NOT a data source for this study.

The program notes that were consulted for this study were generated by the researcher in her role as Director of the MAU Trio SSS program. Although notes that pertained to policies and practices that are thought (a) to contribute to low graduation rates for Trio SSS students and (b) to system changes that might lead to improvement in graduation outcomes for Trio SSS students were consulted, identities of meeting participants were, when known by the researcher, held confidential. No names, positions, or phrases that might identify a discussant in the meetings were used in the study report.

**Data Procedures**

As the program director, I documented discussions and identified actionable statements to improve student outcomes within the Trio SSS program. I took extensive notes because at the end of many meetings we were charged with tasks to complete before the next meeting, and we would need to report our progress. The hub met on a regular basis to discuss what could be done to improve educational outcomes for the campus’s most vulnerable student populations. Categories of qualitative data collected from this series of meetings, focused on student success, retention and graduation.

The sources of extant quantitative data that were used to determine variations in graduation outcomes between Trio SSS and Non-Trio SSS students were collected from a
deidentified report available through the digital data digest platform. These data were used to ascertain graduation rates for Trio SSS students compared to non-Trio SSS students and thus, evidence of variation in performance to help define the problem. As researcher, I also utilized existing deidentified annual performance report data submitted to the U.S. Department of Education, and available publicly on the campus website, to identify participants in the Trio Student Support Services program. Any documents containing identifying information from this portion of the collection process were kept in a locked desk and all computer files associated with this evaluation were saved on a password protected computer that could only be accessed by the researcher. The specific quantitative data obtained to develop baseline data relating to variations in graduation outcomes between the incoming cohort of Trio SSS students and non-Trio SSS students from fall of 2016 is detailed below.

1. Demographics - Race/ethnicity and Trio SSS participant status.
   1. Comparison of 2016 incoming cohort versus graduating cohort – has demographic representation remained the same or is it different?

2. 6-year Graduation Rate
   1. 6-year graduation rate – disaggregated by race and Trio SSS participation status.

A summary of the qualitative data presented earlier in this section is included in the section below:

RQ 1 - What are the 6-year graduation rates within MAU campus, MAU university, and National Trio SSS programs disaggregated by race and Trio SSS status?
The nature of the data the researcher consulted for this question was extant quantitative data that included de-identified 6-year graduation rates disaggregated by race/ethnicity demographic variables readily available to the public through MAU’s data website, and national Trio SSS demographic variables publicly available through the Department of Education’s Trio SSS website.

RQ 2 - How are MAU’s institutional conditions (policies and practices) contributing to low graduation rates for Trio SSS students?

RQ 3 - How do we improve the MAU system to improve graduation outcomes for Trio SSS students?

To address the second and third research questions, the nature of the data I consulted for these questions were qualitative data from town hall and strategic planning meetings convened at MAU over two academic years and specifically addressed systemic barriers related to student success, retention, and graduation. The notes that were consulted came only from meetings focused on how the institution should respond to address systemic barriers faced by students and the institutional programming and resources needed to overcome these barriers. Notes from meetings in which individual student issues or academic records were discussed were NOT a data source for this study.

I facilitated a problem specification meeting that followed-up with town hall and strategic planning participants to conduct a root cause analysis related to challenges experienced by minoritized Trio SSS participants. During the meeting, I described the purpose of the meeting as being a discussion that would examine the dynamics that either reinforced systemic inequity or created more equitable outcomes at the campus level, and then used that information to identify equity-centered interventions that have the potential
to improve educational outcomes for Trio SSS students. This allowed participants to conduct a causal system analysis related to this issue. Extensive field notes were taken at this meeting by the researcher. An exhaustive list of questions can be found in Appendix B, but some of the guiding questions included:

1. Why do these disparities in graduation outcomes exist at MAU?
2. What is it about the MAU system that allows or is causing these equity gaps in graduation outcomes to exist?
3. How are institutional conditions (policies and practices) contributing to the disparity in graduation outcomes between the Trio SSS students and non-Trio SSS students?

Emergent themes from these conversations were used to create a fishbone diagram that depicted root causes of systemic challenges, a driver diagram that depicted improvement ideas that have been generated and informed the theory of practice improvement and an improvement agenda.

**Data Analysis**

For the purposes of this study the researcher analyzed existing notes to answer the research questions and make recommendations for future implementation. The researcher mined notes from these meetings, identified themes and developed a fishbone diagram that visually depicted systemic contributors to the unacceptably low graduation outcomes of Trio SSS students. The researcher conducted a systemic analysis of the existing documentation and coded data based on thematic issues that emerged over the course of the analysis based on Peel’s (2020) framework, which is informed by Braun & Clarke (2006), Creswell (2013) and Saldana (2021). Peel’s (2020) Framework includes the
phases of preparing and engaging with the data, analyzing thematically the data, interpreting the data analysis, and composing findings and generalizations (p. 1). The researcher highlighted institutional conditions, relative to the aforementioned themes, that have created obstacles for Trio SSS students.

The themes identified in this study captured a specific pattern that is crucial to answering the research questions (Xu & Zammit, 2020; Peel 2020). Even further this analysis process allowed the researcher to “sort and organize data into manageable, connected chunks of synergies (Peel, 2020, p. 7)”, around the overarching themes of student success, retention and graduation and included other themes that emerged. Field notes were analyzed and the common themes from the discussion were organized using a fishbone diagram that was used to inform the development of a “working theory of practice improvement” (Bryk, Gomez, Grunow & LeMahieu, 2015). At the conclusion of this process the theory of practice improvement developed was used to help prioritize which equity concerns should be addressed first and how.

Moving From Notes to Themes

The analysis of the notes enabled the researcher to interpret and establish themes that became central to the study's findings. The qualitative data analysis involved identifying triangulation within the meeting notes spanning the specified time frame of the study. Triangulation (Fusch, P., Fusch, G. & Ness, 2018) refers to the identification of recurrent themes across varied contexts. In the case of this study the varied contexts were personal meeting notes and documents from strategic planning and town hall meetings held over the span of two academic years. During these meetings, common themes
consistently emerged. These themes, which were identified through their recurrent mention across different notes, are highlighted in the findings presented in Chapter 4.

The researcher entered the study with prior knowledge concerning equity gaps and the challenges faced by historically marginalized Trio SSS participants, informed by their own professional and personal experiences. Although this a priori knowledge was kept in mind, the researcher was also open to new and emergent themes. Deductive coding was conducted based on this prior experience, yet room was made for open coding to capture and document emergent themes. Analyzing the data was an iterative process, which encompassed a thorough review of all the data, pinpointing areas of congruence and alignment. The researcher utilized a narrative inquiry approach presented by Clandinin & Connelly (1989, 2004). The prominent narratives focused on barriers and equity gaps aligned with the deductive codes identified. Subsequently, the researcher’s approach to engaging in the data was informed by Saldana (2021) and included inductive coding, revisiting the notes multiple times to highlight emergent themes. These themes were then synthesized into analytical memos (Maxwell, 1996; Maxwell & Chmiel, 2014), which were cross-referenced with the original meeting notes to ensure the consistency and reliability of the findings.

**Summary**

This study utilized insights gathered from discussions within town hall and strategic planning meetings to examine institutional dynamics, specific to MAU, that reinforced systemic inequity. The primary goal of this study was to understand how MAU’s Trio SSS system could be improved and better leveraged to support the graduation outcomes of historically excluded Trio SSS students. This study established
baseline data, disaggregated by race and ethnicity, to determine variations in graduation outcomes among different student groups. The aims of this study were to foster a culture of equity-minded practice, organization accountability and develop a system of continuous improvement within MAU’s Trio SSS system as it relates to producing more equitable graduation outcomes for minoritized students. Chapter four will discuss the findings from this study.
Chapter 4 Results

This chapter will discuss findings from this study which was conducted to examine the systemic conditions at MAU that contribute to variations in graduation outcomes for historically excluded Trio SSS students, how to improve the MAU system, and increase graduation outcomes for historically excluded Trio SSS students. As noted in chapter 2, Design-Based Implementation Research asks questions such as, “What works when, for whom, and under what conditions? How can we make this innovation work under a wide range of conditions? And there is an effort to understand the conditions under which designs can improve learning” (Fishman, Penuel, Allen, Cheng & Sabelli, 2013, p. 146). The first section will present findings for the first research question in tables and figures that disaggregate data by demographic groups. The figures and tables will provide a visual representation of 6-year graduation outcomes for different student populations, allowing for a clear comparison and identification of disparities. The findings will highlight the graduation rates for historically excluded Trio SSS students, such as African American and Hispanic students, in comparison to other demographic groups. The second section will utilize a fishbone diagram to illustrate themes that emerged from the analysis of the second research question. The fishbone diagram will visually depict elements that contribute to the systemic conditions impacting graduation outcomes for historically excluded Trio SSS students. The diagram will help identify root causes and potential areas for intervention and improvement. The chapter ends with a summary of the findings organized using questions posited by Design Based Implementation Researchers referred to above.
The findings from this study begin to answer these questions as it pertains specifically to MAU campus. The findings of the study were guided by the following research questions:

1. What are the 6-Year graduation rates within MAU campus, MAU university, and National Trio SSS programs disaggregated by race and Trio SSS status?
2. How are MAU’s institutional conditions (policies and practices) contributing to low graduation rates for Trio SSS students?
3. How do we improve the MAU system to increase graduation outcomes for Trio SSS students?

Findings

RQ 1: What are the 6-Year graduation rates within MAU campus, MAU university, and National Trio SSS programs disaggregated by race and Trio SSS status?

The 6-Year graduation rates MAU University, MAU Campus, MAU Trio SSS program, and the National Trio SSS are as follows:

- MAU University – 73.8%
- MAU Campus – 52.7%
- MAU Trio SSS Program Overall – 60.7%
- MAU Trio SSS Within Campus reported on APR – 36%
- National Trio SSS Programs 2013-2014 – 51%

As mentioned in chapter three, the specific quantitative information obtained to develop baseline data detailing variations in graduation outcomes between the incoming cohort of Trio SSS students and non-Trio SSS students from fall of 2016 focusing on demographic data and 6-year graduation rates.
1. Demographics - Race/ethnicity and Trio SSS participant status.
   a. Comparison of 2016 incoming cohort versus graduating cohort – has
demographic representation remained the same or is it different?

2. 6-year Graduation Rate
   a. 6-year graduation rate – disaggregated by race and Trio SSS participation
status.

Research Question 1 resulted in the following findings:

Demographics - Race/ethnicity and Trio SSS participant status.

Table 4.1

<table>
<thead>
<tr>
<th>Student Group</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Trio Students</td>
<td>30.3%</td>
</tr>
<tr>
<td>Non-Trio Students</td>
<td>69.7%</td>
</tr>
<tr>
<td>All Students</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 4.1 shows the number and percentage of Trio SSS students compared to non-Trio
SSS freshman students who started in the fall of 2016. The total number of incoming
freshman in the 2016 cohort was 201 students. Trio SSS students who received services
made up 30.3% of this cohort compared to 69.7% of students who were non-Trio SSS
students. It is important to note that within the 69.7% of non-Trio SSS students there are
students included who may have met the eligibility criteria for the Trio SSS program but
did not apply to participate.
Table 4.2

Demographic Data for Incoming Freshman Academic Year 2016 – All Students

<table>
<thead>
<tr>
<th>Student Group</th>
<th>% of All MAU Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American Students</td>
<td>17.41%</td>
</tr>
<tr>
<td>Hispanic Students</td>
<td>3.98%</td>
</tr>
<tr>
<td>Asian Students</td>
<td>5.97%</td>
</tr>
<tr>
<td>White Students</td>
<td>64.68%</td>
</tr>
<tr>
<td>2 or More Races Students</td>
<td>3.98%</td>
</tr>
<tr>
<td>Race/Ethnicity Unknown Students</td>
<td>1.99%</td>
</tr>
<tr>
<td>International Students</td>
<td>1.99%</td>
</tr>
<tr>
<td>All MAU Students</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 4.2 shows the race and ethnicity demographic breakdown of incoming freshman students for the fall 2016 cohort. The total number of incoming students in this cohort was 201 students. Of all students 17.41% students were African American, 3.98% were Hispanic/Latino, 5.97% were Asian, 64.68% were White, 3.98% were 2 or More Races, 1.99% were Race/Ethnicity Unknown, and 1.99% students were International.

Table 4.3

Demographic Data for incoming Freshman Academic Year 2016 – Trio Students

<table>
<thead>
<tr>
<th>Student Group</th>
<th>% of All Trio Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American Trio Students</td>
<td>24.6%</td>
</tr>
<tr>
<td>Hispanic Trio Students</td>
<td>3.3%</td>
</tr>
<tr>
<td>Asian Trio Students</td>
<td>11.5%</td>
</tr>
<tr>
<td>White Trio Students</td>
<td>52.5%</td>
</tr>
<tr>
<td>2 or More Races Trio Students</td>
<td>6.5%</td>
</tr>
<tr>
<td>Race/Ethnicity Unknown Trio Students</td>
<td>1.6%</td>
</tr>
<tr>
<td>International Students</td>
<td>0</td>
</tr>
<tr>
<td>All Trio Students</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 4.3 shows the race and ethnicity demographic breakdown of incoming freshman students for the fall 2016 cohort who participated in MAU’s Trio SSS program. The total
number of Trio SSS students in the 2016 incoming freshman cohort was 61 students. Of the 61 students 24.6% students were African American, 3.3% were Hispanic/Latino, 11.5% were Asian, 52.5% were White, 6.5% were 2 or More Races, 1.6% were Race/Ethnicity Unknown, and 0% students were International. It is important to note that due to federal guidelines international students are not eligible to participate in Trio programming.

**Table 4.4**

*MAU Trio SSS Students who entered in Fall 2016 compared to Trio SSS Students who Graduated within 6-Years disaggregated by Race/Ethnicity*

<table>
<thead>
<tr>
<th>Student Group</th>
<th>% of Trio SSS Students who Graduated w/in 6 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American Trio Students</td>
<td>53.3%</td>
</tr>
<tr>
<td>Hispanic Trio Students</td>
<td>50%</td>
</tr>
<tr>
<td>Asian Trio Students</td>
<td>85.7%</td>
</tr>
<tr>
<td>White Trio Students</td>
<td>62.5%</td>
</tr>
<tr>
<td>2 or More Races Trio Students</td>
<td>50%</td>
</tr>
<tr>
<td>Race/Ethnicity Unknown Trio Students</td>
<td>0%</td>
</tr>
<tr>
<td>International Students</td>
<td>0%</td>
</tr>
<tr>
<td>All Trio Students</td>
<td>60.66%</td>
</tr>
</tbody>
</table>

Table 4.4 shows the number and percentage of Trio SSS freshman students who started in the fall of 2016 and went on to graduate within 6 years. The total number of Trio SSS students in the 2016 incoming freshman cohort was 61 students and the total number who graduated within 6 years was 37 students. 53.3% of African American Trio SSS students who entered in the fall of 2016 graduated within 6 years, 50% of Hispanic Trio SSS students who entered in the fall of 2016 graduated within 6 years, 85.7% of Asian Trio SSS students who entered in the fall of 2016 graduated within 6 years, 62.5% of White
Trio SSS students graduated within 6 years, 50% of Trio SSS students who were 2 or more races graduated within 6 years, 0% of Trio SSS students whose Race/Ethnicity is unknown graduated within 6 years, and as previously stated 0% of international students are permitted to be served by Trio SSS programming.

**Table 4.5**

*MAU non-Trio SSS Students who entered in Fall 2016 compared to non-Trio SSS Students who Graduated within 6-Years disaggregated by Race/Ethnicity*

<table>
<thead>
<tr>
<th>Student Group</th>
<th>% of non-Trio SSS Students who Graduated w/in 6 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American non-Trio Students</td>
<td>20%</td>
</tr>
<tr>
<td>Hispanic non-Trio Students</td>
<td>33%</td>
</tr>
<tr>
<td>Asian non-Trio Students</td>
<td>60%</td>
</tr>
<tr>
<td>White non-Trio Students</td>
<td>55%</td>
</tr>
<tr>
<td>2 or More Races non-Trio Students</td>
<td>50%</td>
</tr>
<tr>
<td>Race/Ethnicity Unknown non-Trio Students</td>
<td>0%</td>
</tr>
<tr>
<td>International Students</td>
<td>100%</td>
</tr>
<tr>
<td>All non-Trio Students</td>
<td>49.2%</td>
</tr>
</tbody>
</table>

Table 4.5 shows the number and percentage of non-Trio SSS freshman students who started in the fall of 2016 and went on to graduate within 6 years. The total number of non-Trio SSS students in the 2016 incoming freshman cohort was 140 students and the total number who graduated within 6 years was 69 students which equates to 49.2% of students from the 2016 non-Trio SSS freshman cohort. 20% of African American non-Trio SSS students who entered in the fall of 2016 graduated within 6 years, 33% of Hispanic non-Trio SSS students who entered in the fall of 2016 graduated within 6 years, 60% of Asian Trio SSS students who entered in the fall of 2016 graduated within 6
years, 55% of White non-Trio SSS students graduated within 6 years, 50% of non-Trio SSS students who were 2 or more races graduated within 6 years, 0% of non-Trio SSS students whose Race/Ethnicity is unknown graduated within 6 years, and 100% of non-Trio SSS students who are International students graduated within 6 years.

**Figure 4.1**

*Comparison of All MAU Students, Non-Trio SSS Students, and Trio SSS Students who Graduated within 6-Years Disaggregated by Race and Ethnicity*

Figure 4.1 shows the comparison between the percentage of All MAU students, Trio SSS students and non-Trio SSS students who were part of the fall 2016 incoming freshman student cohort versus those who graduated within 6 years disaggregated by race and ethnicity.

- The six-year graduation rate for African American Trio SSS students is 67% compared to 34% for all African American MAU students, and 33% for African American non-Trio SSS students. The percentage of African American Trio SSS
students graduating within 6 years is 33% higher than the percentage of all MAU African American students graduating within 6 years and 34% higher than non-Trio SSS African American students.

- The six-year graduation rate for Hispanic Trio SSS students is 33% compared to 37.5% for all Hispanic MAU students, and 67% for Hispanic non-Trio SSS students. The percentage of Hispanic Trio SSS students graduating within 6 years is 4.5% lower than the percentage of all MAU Hispanic students graduating within 6 years and 34% lower than non-Trio SSS Hispanic students.

- The six-year graduation rate for Asian Trio SSS students is 67% compared to 75% for all Asian MAU students, and 33% for Asian non-Trio SSS students. The percentage of Asian Trio SSS students graduating within 6 years is 8% lower than the percentage of all MAU Asian students graduating within 6 years and 33% higher than non-Trio SSS Asian students.

- The six-year graduation rate for White Trio SSS students is 62.5% compared to 56.9% for all White MAU students, and 73% for White non-Trio SSS students. The percentage of White Trio SSS students graduating within 6 years is 5.6% higher than the percentage of all MAU White students graduating within 6 years and 10.5% lower than non-Trio SSS White students.

- The six-year graduation rate for Trio SSS students who were 2 or more races is 50% compared to 56.9% for all MAU students who were 2 or more races, and 50% for non-Trio SSS students who were 2 or more races. The percentage of Trio SSS students who were 2 or more races graduating within 6 years is 6.9% lower
than the percentage of all MAU students who were 2 or more races graduating within 6 years and the same as non-Trio SSS students who were 2 or more races.

- The six-year graduation rate for Trio SSS students with unknown race or ethnicity was 0% compared to 0% for all MAU students with unknown race or ethnicity, and 0% for non-Trio SSS students with unknown race or ethnicity. The percentage of All MAU students, Trio SSS students, and non-Trio SSS students with unknown race or ethnicity graduating within 6 years is 0%.

- The six-year graduation rate for International students is 100% for all International MAU students.

The quantitative data analysis reveals that the current conditions within MAU's campus system appear to be “working” for International students and Asian students. On the other hand, the data demonstrates that African American and Hispanic students enrolled in Trio Student Support Services (SSS) are graduating at lower rates compared to International, Asian, and White students. These findings present the variations in graduation rates and provide further evidence to support the claim that historically excluded Trio SSS students are experiencing unacceptable graduation outcomes.

The findings for research questions 2 and 3 are visually depicted in the fishbone diagram provided in the next section.

RQ 2: How are MAU’s institutional conditions (policies and practices) contributing to low graduation rates for Trio SSS students?

Research Question 2 resulted in the finding the following themes: Hidden Curriculum, Faculty Rigidity/Expectations, Unclear Academic Requirements & Pathways, and Challenging Math Sequencing.
RQ3: How do we improve the MAU system to increase graduation outcomes for Trio SSS students?

Research Question 3 resulted in finding the following themes: Alignment, Infrastructure, and Centering of student voice and learning experience.

**Figure 4.2**

*Fishbone Diagram*

**Hidden Curriculum**

According to Gable (2021) the “hidden curriculum” is described by education scholars as a set of implicit rules in a formal educational context that insiders consider to be natural and universal. Those with prior knowledge of these rules are prepared to succeed because they have learned the rules beforehand, and those with no or little prior knowledge don’t even realize when they are breaking the rules let alone how to use these rules to their advantage. Within the context of MAU's hidden curriculum, several key areas have been identified within the analytic hub and are captured in the following...
quotes “students do not understand the business of academics” and “students do not understand their rights, academic policy processes and procedures”. Another area pertains to the lack of systematic communication of the language and culture of higher education to Trio SSS students. Another area involves the absence of communication to Trio SSS students regarding high-impact practices and how these practices can be utilized for academic and professional growth. Lastly, the significance of establishing campus connections with the Student Success Network is not consistently and promptly communicated to all students. These areas collectively highlight the need for addressing these issues to foster equity and student success.

**System Alignment**

The transition from high school to college presents significant challenges, primarily due to the insufficient alignment and communication between high school and college systems. Many students encounter culture shock when faced with the differing expectations of instructors, the use of technology during exams, and the increased workload demands. During the analytic hub, participants noted a stark contrast between high school and college environments. This contrast is captured in the following quotes “the transition from high school to college is harder for students because colleges and high schools don’t communicate with each other” and “there is a disconnect between how secondary teachers teach and how college faculty teach and their expectations.” In high school, teachers often provide extra credit opportunities and offer additional support to help students recover lost points, whereas such practices are not prevalent at the collegiate level. Another area of misalignment observed within the MAU system is the lack of coordination and collaboration between curricular and co-curricular activities.
Historically, these two realms of higher education have operated independently, but recognizing the potential for equity-centered transformation, it becomes vital to identify and leverage areas of synergy between them. Additionally, participants noticed a lack of interdepartmental alignment even within the curricular and co-curricular silos, as well as a deficiency in coordination with student support offices.

**Unclear Academic Pathways**

Ensuring that students possess explicit knowledge about academic requirements and opportunities is crucial to positioning them for academic and professional success. Oftentimes, students may have a vision for their career or major but lack clarity on the necessary path to achieve it, especially in STEM fields. Participants in the hub identified Entrance-to-Major requirements as a significant barrier within academic pathways. The narrow entrance-to-major window for high-demand, high-wage majors can severely limit students who test into foundational math courses, creating a system that inadvertently filters out potential candidates. Testing into foundational courses does not accurately reflect a student's capabilities or capacity to excel but rather exposes a system that failed to adequately prepare them for success. This truth is captured in the following statement “there is an unspoken weeding out of students based on entrance to major requirements, it’s not that they aren’t capable just many times they aren’t academically prepared or can’t complete the entrance to major requirements at the pace the university requires”.

Another barrier recognized by the hub is the rigorous sequence of math courses imposed on students placed into introductory math. Placement into introductory math courses can impede the academic trajectory of students pursuing STEM majors, placing them at a distinct disadvantage compared to their peers. As a result of these burdensome
math pathways, students, particularly those from historically excluded student groups, are steered towards lower-paying service majors, even if they have little interest in those programs. This forces them to consider alternative majors they may not be passionate about simply because they cannot fulfill the requirements for their intended major within the narrow timeframe and with limited academic support.

Furthermore, the hub noted several academic policies that act as barriers to students' progression. Examples include policies concerning the resolution of foreign language deficiencies for students who did not take a foreign language in high school and credit windows for high-demand majors in STEM and Business. These policies create additional challenges and hinder students' ability to smoothly advance in their academic journey.

**Faculty**

The analytic hub members expressed several concerns regarding faculty-related issues. One significant issue is the limited availability of faculty options for students progressing through the math course sequence. Currently, there is only one instructor for all levels of algebra and introductory statistics. The lack of options creates barriers for students, as they have no alternative if they have a negative experience with a particular professor. Their only options would be to take the course at a community college or at another MAU campus during the summer, incurring additional expenses.

The hub also emphasized the importance of equity-minded professional development opportunities for faculty. It was observed that faculty should engage in training sessions that provide instruction in culturally responsive pedagogical techniques, aimed at supporting student success. This highlights the need for faculty to develop a
deeper understanding of diverse student populations and to adapt their instructional methods accordingly.

Another concern raised by the hub is the issue of faculty rigidity and its impact on the student experience. Students often feel judged, which discourages them from taking intellectual risks in the classroom. This inhibits their ability to fully engage and participate in their learning journey. Analytic hub participants stated that “the tone used in the classroom is not welcoming” and that “students are often made to feel as if something is wrong with them if they don’t understand the content”.

Lastly, hub members observed a tendency among faculty, particularly within STEM and Business majors, to act as gatekeepers rather than advocates. This mindset hinders students' access to higher-wage majors, as faculty members may not actively support and guide them towards those opportunities. It is crucial for faculty to adopt an advocacy role and actively facilitate students' access to academic and professional pathways that align with their aspirations.

**Infrastructure**

Like many other campuses, MAU is grappling with severe budgetary constraints due to lower enrollment numbers in the aftermath of the Covid pandemic, which has had a direct impact on hiring for academic support roles. The hub observed a noticeable lack of investment in the academic support infrastructure resulting in inadequate staffing for roles within academic support departments, leaving them to address complex student needs with very limited resources. This sentiment is captured in the following statements “there needs to be additional resources allocated to support the incoming classes especially in light of the fact that this is a covid generation of students, and we have to
remember how they have learned or not learned over the past several years” and “we need to be able to offer more competitive pay to attract and hire more professional tutors”. These financial constraints have specifically affected the availability of student support staff who can provide tutoring services in STEM-related courses, which are in high demand. The limited number of tutors hampers students' access to the necessary support in these critical subjects.

It is critical to acknowledge that the financial challenges faced by MAU are not unique, as many institutions have experienced similar constraints. However, the hub recognizes the detrimental impact this has had on the availability and quality of academic support services, particularly in the STEM disciplines. Efforts should be made to address these financial limitations and prioritize the allocation of resources to adequately staff academic support departments, ensuring that students receive the necessary assistance to succeed in their studies.

**Student Experience**

The hub made another significant observation regarding the importance of centering student voices in decision-making, evaluation, and programming processes. It has been recognized that there is a pressing need to provide support that effectively addresses the complex needs of students, considering factors such as unlearning habits developed during the Covid pandemic and coping with traumatic events like gun violence, school shootings, race-based stress and trauma, and instances of violence against black and brown individuals perpetrated by the police.

Additionally, there is a clear need to design learning environments that prioritize the needs and experiences of students. These environments should facilitate timely
connections to various opportunities and resources, such as high-impact practices, disability support services, Trio Student Support Services, counseling, and tutoring services. By creating student-centered learning environments, institutions can better support students in their academic journey and overall well-being.

The hub emphasized the significance of actively involving students in decision-making processes, while recognizing their diverse needs and experiences. It calls for the development of inclusive and supportive learning environments that provide timely access to resources and services tailored to students' individual needs.

Summary

In conclusion, in revisiting Fishman, Penuel, Allen, Cheng and Sabelli’s (2013) DBIR question “What works when, for whom, and under what conditions?” (p. 146) the findings show that the current conditions of the MAU’s campus system are working best for International students, followed by Asian students and then White students. Conversely, students of unknown race/ethnicity are faring the worst within MAU’s system with Hispanic and African American students not far behind. The data analysis highlights disparities in graduation outcomes among different student groups, emphasizing the need for targeted support and interventions to address the challenges faced by African American and Hispanic Trio SSS students. By recognizing and addressing these inequities through an improvement agenda, MAU can work towards creating a more inclusive and equitable campus environment that better supports the success of African American and Hispanic Trio Student Support Services Students.
Chapter 5 Discussion

Based on the findings of this study the researcher is proposing an improvement agenda which aligns with key areas addressed within the literature review. The researcher aims to address specific questions within the improvement agenda, including how the findings can be used to advance equity-minded organizational learning, how anti-racist policies, practices, and language can be integrated into an equity-minded pathway design, and whether this research can be utilized and replicated by Trio practitioners. The first section of this chapter will present the driver diagram, which outlines the key drivers and their relationships to the desired improvement aim. The driver diagram will provide a visual representation of the factors that can contribute to improving graduation outcomes for historically excluded Trio SSS students. The second section will provide an overview of an equity-minded training program that can advance organizational learning. This program will be informed by the Equity Scorecard Framework, which provides a systematic approach to evaluating and addressing equity gaps. The training program will focus on equipping faculty and staff with the knowledge and skills to foster an equity-minded culture within the organization. The third section will present a Student Success by Design Plan, which aims to create equity-minded pathways that improve graduation outcomes for historically excluded Trio SSS students. This plan will outline specific strategies and interventions that can be implemented by Trio SSS practitioners to support the success of minoritized students. The emphasis will be on integrating anti-racist policies, practices, and language into the design of these pathways to ensure equity and inclusion. Throughout each section, the common theme of integrating anti-racist policies, practices, and language into the improvement agenda and pathway design will be
interwoven. This theme reflects the commitment to addressing systemic inequities and promoting racial justice within Trio SSS programs. The goal is to provide an actionable plan that can be implemented by practitioners to create more equitable and inclusive educational environments for historically excluded students. The fourth section addresses the limitations of the study, and the final section provides a summary of this research.

Central to this improvement agenda is the concept of equity-mindedness, which places equity and racial justice at its core. By cultivating equity-minded practitioners and fostering an institutional commitment to embedding anti-racist language within policies and interventions, we can challenge the existing status quo. This disruption will not only inform the development of equity-minded pathways but also contribute to the overall improvement of graduation outcomes for historically excluded students. Through the collective efforts of equity-minded practitioners and the integration of anti-racist principles throughout the institution, practitioners can work towards creating a more just and equitable educational environment. This transformative approach will support historically excluded Trio SSS students, particularly African American and Hispanic students, addressing the systemic barriers they face, ultimately improving their chances of achieving successful graduation outcomes. The driver diagram presented below details that primary drivers and potential change ideas that can be implemented.
The aim presented in the driver diagram is to increase graduation outcomes of historically excluded Trio SSS students by 10% within 1 academic year.

1. Primary Driver - Equity-Minded Training
   a. Secondary Drivers – (1) Leverage policies that advance equity and support student success; (2) Create systemic collaboration by bridging the curricular and co-curricular divide; (3) Enhance equity-minded training opportunities for faculty and staff.
   b. Change Ideas – First-Generation Equity Practitioner/Evaluator Training Program, Routine Equity Audits.

2. Primary Driver - Trio SSS Course Curriculum
a. Secondary Drivers – (1) Create an intellectually safe and supportive academic pathway that progresses historically excluded Trio SSS students toward graduation; and (2) Connect students to high impact practices and empower students to make informed academic decisions.

b. Change Ideas – (1) Creating a mentoring program that is tied to a course that counts towards general education requirements; and (2) Creating a math pathway sequence taught by a teaching staff that is culturally responsive and advocates for students.

3. Primary Driver - Infrastructure of Academic Support System

   a. Secondary Drivers – (1) Create opportunities for relevant and timely connections to academic support; and (2) Increase financial investment in supporting tutor hiring and training.

   b. Change Ideas - Creating a communication plan that notifies faculty/students of academic support resources available. Use Early Progress Reports to conduct targeted outreach to students. Identify funding opportunities to increase # of tutors.

Training Equity-Minded Practitioners to Routinely Conduct Equity Audits

This study has established a baseline measure of graduation outcomes for historically excluded Trio SSS students and results support the assertion that African American and Hispanic students at MAU are graduating at unacceptable rates. This valuable data can serve as a foundation for the development of an equity audit aimed at implementing an evaluation plan structured around the Equity Scorecard Framework (Bensimon & Malcolm, 2012; Harris & Bensimon, 2007; Center for Urban Education,
By instituting routine equity audits, access, retention, and graduation rates for minoritized Trio SSS students can be improved. The implementation of an equity audit is crucial because it identifies and addresses systemic barriers that hinder graduation outcomes of historically excluded Trio SSS student groups. By using the baseline data gathered through this research, we can tailor interventions and strategies to improve graduation rates for African American and Hispanic Trio SSS students. In addition to the quantitative data gathered during the equity audit it is important to gather qualitative data that captures the insights provided by students, the individuals who are most impacted by system conditions. These change ideas are important because they can be adopted and leveraged by other departmental units, enabling the creation of equity-minded pathways that positively impact graduation outcomes for historically excluded Trio SSS student groups.

As a result of this study, I am proposing the creation of a First-Generation Equity Evaluation Training Program informed by the work of McNair, Bensimon & Malcolm-Piqueux (2012 and 2020), which is the first primary driver listed in the driver diagram. In my opinion the Equity Scorecard Framework centers equity, race and institutional accountability in a way that is not found in DBIR and the Carnegie Foundation’s Improvement Principles. The Equity Scorecard Framework (Bensimon & Malcom, 2012; Hanson & Bensimon, 2014; McNair, Bensimon & Malcolm-Piqueux, 2020) is an evidence-based approach that instead of focusing on perceived deficiencies of minoritized students, it uses routine data analysis that when disaggregated by race, ethnicity, socioeconomic status, first-generation status etc., brings to light patterns of inequitable educational outcomes within institutions (Bensimon & Malcolm, 2012, p.46).
The Equity Scorecard process involves the examination of data and the construction of indicators and goals to populate four scorecard perspectives – access, retention, institutional receptivity, and excellence (Bensimon & Malcolm, 2012, p. 64). The proposed program will focus on three of the following four indicators:

1. Access Perspective, which uses equity indicators of access to show the extent to which underserved students have access to programs and resources that significantly impact their ability to compete for economic and educational advancement.

2. Retention Perspective, which uses equity indicators to determine retention rates of underserved students across programs, from year to year through graduation.

3. Excellence Perspective, which uses equity indicators to depict underserved students’ access to exclusive advantages, benefits, resources, elite programs, and high impact practices.

In addition to the equity indicators listed above I am also recommending the incorporation of a student led student success taskforce. Students are the users of the system who are most impacted, and the incorporation of this element will ensure that their voice and experience will be centered and considered when conceptualizing change ideas.

The proposed program will have two elements, the first will be to equip faculty and staff with the knowledge and skills needed to become equity-minded practitioners and evaluators. These practitioners will be trained to adopt an equity-minded cognitive frame, recognize barriers, and eliminate institutional structures, policies, and practices that perpetuate disparate outcomes for underserved and minoritized students. In addition
to addressing systemic issues, the program will employ the strategy of creating equity-minded paths within the existing system, considering the potential resistance to change. This will allow the reallocation of energy towards supporting student success rather than fighting deficit-minded thinking and thinkers that do not recognize the need for change. This program will not focus on "fixing" individual students, but rather on examining the sociostructural dynamics (Castro, 2013) that reinforces systemic inequity at the campus level. Once inequitable conditions are identified through the evaluation process, practitioners/evaluators will design equity-centered pathways that can lead to more equitable educational outcomes.

The second component of this evaluation plan is to develop the student led student success taskforce. The purpose of this taskforce is to gather student perspectives as it relates to defining student success and their experiences within the MAU system, and secondarily to identify change ideas that improves institutional conditions and services in an effort to produce more equitable outcomes. The discussion questions are informed by an adaptation of Tinto’s 5 Models of Student Success and asks questions that relate to goal clarity, academic integration, college expectations and experiences, social integration and sense of value, financial support and support of family and friends. A list of proposed discussion questions is listed within Appendix C.

Program participants will include students, faculty, and staff from different campus departments, who are from historically excluded racial groups, students/faculty/staff of color, and/or students/faculty/staff who wish to collaborate, advocate, evaluate, and design equity-centered pathways based on campus needs. This program will work to create the “right set” of conditions by regularly evaluating equity gaps specific to
MAU, and conceptualizing interventions that address system dynamics that are impediments to educational equity. This program will also be intentional in creating spaces and opportunities for students, faculty, and staff to meaningfully engage in this process. The implementation process is provided in Appendix D.

The proposed program fosters a culture of organizational learning and aligns with sections in the strategic plan that include (1) creating an Equity Evaluator/Practitioner training program that provides professional development opportunities grounded in equity-mindedness; (2) and developing equity indicators and benchmark goals that help uncover barriers to access, increase access, increase affordability, retention, and graduation rates for historically underserved student populations.

The deliverables anticipated from this program are a Completed Evaluation Plan and Equity Scorecard Template specific to MAU, a completed list of campus specific equity indicators based on collected baseline data, and a Completed Student Success plan that leverages technology, existing university resources to connect students with MAU learning experiences, co-curricular experiences, and high impact practices. Additional learning outcomes for this program have been adapted from Harvard Graduate School of Education’s DEIB outcomes are included in Appendix E, and a data request template are included in Appendix F.

**Student Success by Design: Creating Equity-Minded Pathways that Improve Graduation Outcomes of Historically Excluded Trio SSS Students**

The creation of equity-minded pathways for African American and Hispanic students within the Trio SSS program at MAU will be guided by the second and third primary drivers, which focus on course curriculum and academic support infrastructure.
Student success is not a happenstance occurrence, instead there must be intentionality in creating an equity-minded pathway design that can lead to increased graduation outcomes for historically excluded black and brown students. The two drivers selected focus on creating a student-centered learning experience and environment. Creating intellectually safe classroom experiences and student-centered academic support learning environments for minoritized students can positively impact degree completion rates. Embedded within the pathways should be explicit supports that guide students towards resources and opportunities. Particularly, creating a series of Trio SSS course offerings that count towards general education and major requirements has the potential to improve graduation outcomes. Additionally, these courses can incorporate elements of academic support and the hidden curriculum that was expressed in chapter four. Trio SSS courses also provide the opportunity to expose students to high priority occupations allowing them to increase their preparedness to pursue these opportunities which in turn would create opportunities for social mobility.

Without the guided support that a Trio SSS program can provide, Trio SSS students, particularly from historically excluded racial groups, are at a distinct disadvantage, often missing the opportunity to become full participants in their college experience, society and workforce (Alliance for Excellent Education, 2012, p. 5). The Trio SSS program at MAU is committing to providing a guided support framework that will unapologetically incorporate an explicit commitment to anti-racism and racial justice in course practice and policy language. The promising research-based approaches that will inform the proposed pathway and the academic support infrastructure are the Supporting Success Framework (Casey Family Programs, 2010) and the Completion by
Design and Guided Pathway Framework (Completion by Design, 2016). Both frameworks are designed with complex student needs in mind, and they both align with primary drivers identified in the driver diagram.

The Supporting Success Framework is grounded in the Essential Elements of a Guardian Scholar Program, developed by the San Francisco-based organization Honoring Emancipated Youth, with assistance from the California Youth Connection (Casey Family Programs, 2010). It was designed to support youth in foster care, which is a very vulnerable student population. It is my belief that if a pathway is designed with the most complex needs in mind, such as those experienced by foster youth and minoritized populations, you will have a greater likelihood of serving a broader spectrum of students.

As this program has been designed to support youth in foster care, a vulnerable student population who experiences significant barriers to graduation, I believe that a variation of this framework can be implemented to organize the work and to capture the nuanced needs of historically excluded Trio SSS students. The Supporting Success Framework (Casey Family Programs, 2010) identifies twelve core program elements based on information provided by experienced program coordinators, students, and advocates including: internal/external champions, collaborations with community agencies, data-driven decision making, professional development, sustainability planning, housing/basic needs, financial aid, academic advising, career counseling, supplemental support, planned transitions, and opportunities for student leadership/engagement. These core components provide a conceptual framework that is holistic in its approach to supporting student success and considers curricular and co-curricular resources and experiences as equally important to the process. While this framework does an excellent job of highlighting
individual elements, the Completion by Design framework detailed in the next section provides guidance on how a guided pathway can be designed to support student success.

The Completion by Design (CBD) framework is an example of large-scale systemic reform of the student experience within community college and provides a framework for colleges to identify student barriers to progression, design comprehensive solutions to overcome them, and drive institutional transformation to sustain the new ways of doing business (2016). At the core of the Completion by Design framework are Guided Pathways, which seek to streamline a student’s journey through college. A guided pathway is a clear and coherent map that integrates academic and support services, guiding students at each step of their journey to keep them on track to completion (completionbydesign.org, 2019).

The four pillars of guided pathways are to clarify pathways to end goals, help students choose and enter pathways, help students stay on the path, and ensure that students are learning. The specific components of the guided pathways framework include a structured onboarding process, academic maps, proactive academic and career advising, early alert systems, and instructional support and co-curricular activities. The table below will provide an implementation plan for the guided pathways process at MAU.

Table 5.1

Student Success Intervention – Guided Pathways Process

<table>
<thead>
<tr>
<th>Structured Onboarding Process</th>
<th>• Intentionally recruit African American and Hispanic students during the New Student Orientation Process to participate in Trio SSS.</th>
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<tbody>
<tr>
<td></td>
<td>• Student Needs Assessment – use results to identify potential barriers and connect students with resources and support. Financial Aid Assessment</td>
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</table>
and intentional campus connection with internal champions (Student Success Network).

- **Education Action Plan** – Identify personal, academic, and career goals. Assess progress each semester.
- **Education Funding Plan** – Identify potential gaps in financial aid, and opportunities to fill the gaps.

<table>
<thead>
<tr>
<th>Academic Maps</th>
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<tbody>
<tr>
<td><strong>Graduation Plan</strong> – Develop individualized graduation plans using digital resources. Regularly review progress towards completing baccalaureate degree within 8 semesters, and ETM within 4 semesters; Associates degree within 4 semesters.</td>
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<table>
<thead>
<tr>
<th>Proactive Academic &amp; Career Coaching</th>
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<tr>
<td><strong>Completion of flipped advising/coaching modules in canvas with in-person/zoom follow-up to discuss goals.</strong></td>
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<tr>
<td><strong>Using established criteria assigning students to a “needs” groups (high, medium, or low) each semester after students have been at the institution for at least one semester. This model allows all students to be in regular contact with a mentor/coach.</strong></td>
</tr>
<tr>
<td><strong>All first semester students will be categorized as “high needs”. During the first semester advisors will have at least 3 contacts before early progress reports are issued in the 6th week of the semester, and at least 2 contacts per month thereafter.</strong></td>
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<table>
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<tr>
<th>Early Alert System</th>
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<tr>
<td><strong>Review Early Progress Report list and proactively reach out to students to connect with resources.</strong></td>
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<thead>
<tr>
<th>Instructional Support/Co-Curricular Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student Success by Design First-Year Seminar</strong> – Provides weekly opportunities to connect with support services (workshops, lunch/learns with professional tutors, peer-led learning communities)</td>
</tr>
<tr>
<td><strong>Student Success by Design for Continuing Students</strong> – Ongoing opportunities to connect with support services (workshops, lunch/learns with professional tutors, peer-led learning communities)</td>
</tr>
<tr>
<td><strong>Campus Support Program for Students with Experience in Foster Care/Homelessness</strong></td>
</tr>
<tr>
<td><strong>Food Security Programs</strong></td>
</tr>
</tbody>
</table>
Contacts

- **Types of Coaching contacts include:**
  - Individual in-person meetings with mentor/coach;
  - Group meetings with an assigned advisor to discuss common issues;
  - Completion of Student Success by Design modules on Canvas Participation in Zoom Webinars offered through CampusLabs platform
    - Internships
    - Scholarships
  - Participation in virtual office hours offered through canvas/zoom
  - Attendance at Student Success by Design Workshops;
  - Participation in Learning Community peer led study groups (virtual and face-to-face)
  - Enrollment in Trio SSS-only courses
  - Starfish Referrals
  - Participation in tutoring sessions
  - Attendance at Trio SSS events and approved college workshops; and
  - Email and phone contact with mentor/coach

The Supporting Success Framework and the Completion by Design and Guided Pathway Framework will inform the creation of the inaugural equity-minded pathway and will incorporate three key themes presented in the fishbone diagram: academic pathways, math pathways, and student experience. By incorporating these three themes the equity-minded pathway will provide a comprehensive and targeted approach to improving graduation outcomes for historically excluded Trio SSS students. The goal is to create an inclusive and supportive educational environment that promotes equity, addresses systemic barriers, and ensures that Trio SSS students have an equal opportunity to succeed.
Academic Pathways for Historically Excluded Trio SSS Students

The first theme, academic pathways, emphasizes the importance of providing clear and structured pathways for students to navigate their academic journey. This includes mapping out program requirements, course sequences, and transfer pathways to ensure that students have a clear roadmap towards degree completion. The equity-minded pathway will focus on identifying and addressing any barriers or inequities within academic pathways that may disproportionately impact African American and Hispanic Trio SSS students. By streamlining and enhancing academic pathways, the goal is to improve graduation outcomes and promote equity in access to educational opportunities.

It is important to create this structure because knowledge about academic pathways does not occur spontaneously but requires explicit guidance and support. Institutions of higher education have not done a good job creating and communicating explicit pathways that help students identify strategic pathways that can lead to their desired destination. This is especially true when discussing the issue of historically excluded students being led into lower paying service-related majors as opposed to higher paying in-demand STEM majors due to barriers students encounter when attempting to meet entrance to major requirements.

Mathematic Pathways

The second theme, mathematic pathways, is a critical component to the academic pathway process. This theme recognizes the crucial role that math plays in many fields of study, particularly in STEM, and the challenges that students often face in math-related courses. An equity-minded pathway will prioritize the development of effective math support and interventions to improve math proficiency among historically excluded
Trio SSS students. This may involve targeted tutoring, supplemental instruction, and curriculum redesign to ensure that math education is accessible and inclusive for all students.

The issue of inadequate outcomes in postsecondary introductory math is a nationally recognized issue evidenced by work done at community colleges through Carnegie Math Pathways and Dana Center Mathematics Pathways. Mathematics is a barrier to degree completion and equitable outcomes for student, and this is particularly relevant for students who have placed into foundational math courses and must complete a rigorous sequence of math courses to enter their major. Beyond placement, institutional insistence on a traditional delivery method has often hindered and derailed the academic trajectory of students, placing them at a distinct disadvantage when compared to their peers who have placed into higher levels of math. This is where student centered learning environments that incorporate cognitive apprenticeship into academic support and pedagogical strategies can be impactful.

In addition to institutional barriers, it must be acknowledged that there are other external and internal factors at play. Addressing this challenge for Trio SSS students requires a deep understanding of the intersectionality among a system not designed to help them succeed and multiple spheres of influence that affects student confidence and belief in their ability to succeed in college (Ward, Strambler & Link, 2013). Stanton-Salazar (2011) elaborates on these intersections and describes them as a “social universe composed of the sociocultural worlds of the family, community, peer group, the school, and other predominant institutions” (Stanton-Salazar, 2011, p. 1068). Successful redesign of mathematics pathways requires an expert knowledge of these intersections and a
willingness to adapt teaching methodologies to meet students where they are and foster their mathematical capacity. Increasing math completion and college graduation rates will require a “comprehensive system that involves multiple stakeholders who understand that well-educated [students] benefit their communities and, in turn, build capacity for a diverse, dynamic and competitive workforce” (Ward, Strambler & Linke, 2013, p. 313).

As previously stated, STEM majors require advanced mastery in math, which often excludes many minoritized students. Traditionally, introductory courses for STEM have been used to “weed out” students, by faculty acting as gatekeepers, and “serve as pre-requisites before students have permission to enroll in more advanced coursework needed (to meet entrance to major requirements) and for degree completion” (University of Minnesota, MAEOPP Best Practice, 2014, p. 2). Placement into introductory math courses can hinder the academic trajectory of a student pursuing a STEM major, placing them at a distinct disadvantage. To further illustrate this point, the recommended academic plan for STEM majors at MAU assumes placement into Calculus 1 upon admission to the university and entrance to major requirements require students to complete Calculus 1 & 2 by the end of their sophomore year. For students who place into introductory math their course sequence is as follows:

**Table 5.2**

*Math Course Sequence*

<table>
<thead>
<tr>
<th>STEM Course Sequence</th>
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<tbody>
<tr>
<td><strong>Introductory Math</strong></td>
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<tr>
<td>Statistics</td>
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</table>
Based on this trajectory it will take students who test into introductory math five (5) semesters to complete all requirements for acceptance into a STEM major, with the expectation of entrance to major courses being completed by their 4th semester. Although it is not impossible for students to complete the sequence depicted above, the likelihood of success decreases significantly without explicit knowledge of major requirements and direct academic support.

**Student-Centered Learning Environments and Cognitive Apprenticeship**

The third theme, student experience, focuses on creating a supportive and inclusive learning environment that meets the unique needs of historically excluded Trio SSS students. This includes fostering a sense of belonging, providing culturally responsive support services, and promoting student engagement and involvement. The equity-minded pathway will aim to enhance student support programs, such as mentoring, counseling, and student organizations, to create a holistic support system that addresses the academic, social, and emotional needs of students. By prioritizing a student-centered learning environment, student experience their voice will be centered and incorporated into the creation of a pathway that seeks to improve retention rates, enhance student satisfaction, and promote equity in educational experiences.

Student-Centered Learning Environments (SCLE’s) are designed to support individual efforts to negotiate meaning while engaging in authentic activities (Land & Jonassen, 2012). This is a promising approach to supporting African American and Hispanic Trio SSS students at MAU. Cognitive apprenticeship is a framework used within SCLE’s to provide context to material that is being taught. Cognitive apprenticeship engages students in authentic activities and practices in the domain (Thompson, Pastorino, Lee & Lipton, 2016, p. 84), because “knowledge acquired in
decontextualized contexts tends to be inert and of little practical utility. For instance, “learning to solve classical textbook mathematical equations independently of their authentic context tends to promote isolated, naïve, and oversimplified understanding” (Land & Jonassen, 2012, p. 10). Cognitive apprenticeship “emphasizes the process of making expert thinking visible to students and fostering cognitive and metacognitive processes required for expertise” (Lyons, McLaughlin, Khanova & Roth, 2017, p. 723). It is a “learning-through-guided experience on cognitive and metacognitive, rather than, physical skills and processes” (Thompson, Pastorino, Lee & Lipton, 2016, p. 84). The cognitive apprenticeship process includes modeling how an expert would approach the material; coaching in the form of feedback and advice; scaffolding which engages students in productive struggle; articulation where students are asked to verbalize their learning process; and reflection on what they have learned” (Thompson, Pastorino, Lee & Lipton, 2016, p. 84). The cognitive apprenticeship component of the project will help students practice and master learning strategies needed for academic success, making immediate application of study skills with paired algebraic and scientific content (University of Minnesota, MAEOPP Best Practice, 2014). The researcher believes that cognitive apprenticeship, as a pedagogical strategy and the modeling of a specific set of metacognitive strategies, can help minoritized students build their individual and collective learning capacity. Cognitive apprenticeship is a transformative approach to teaching within higher education, considering that the traditional pedagogical delivery has been a lecture style approach. Research indicates that as students actively engage in cognitive apprenticeship, the learning process becomes purposeful and they begin to
interpret new knowledge through a lens of prior experiences, develop connected knowledge – not just a collection of facts (Kitsantas, 2013).

**Limitations**

The researcher acknowledges four limitations that impact the study's findings and conclusions. The limitations are the lack of centering student voice in this study, the challenges related to acquiring data on students with disabilities due to privacy and confidentiality concerns, the limited timeframe that was evaluated in this study, and lack of institutional data transparency and accessibility.

The first limitation is that the data sources used to conduct this study provide valuable insights, but the absence of direct input from students limits the researcher’s understanding of their experiences. In reflecting on the Carnegie Foundation’s first principle of improvement’s to “make the work user-centered” I would argue that you can’t get more user-centered than centering the voice of those who must navigate the experience firsthand. Future research should prioritize incorporating student perspectives through interviews, surveys, and focus groups to gain a more holistic understanding of the challenges and potential solutions.

The second limitation of the study concerned the ability to acquire data on students with disabilities, a population served by Trio programs. Privacy and confidentiality regulations protect sensitive student information, which hindered my access to this information. These regulations safeguard student privacy and comply with ethical standards. Future research should prioritize working with the Office of Assessment and Institutional Planning to identify a way to access this data in a way that does not compromise the privacy of students but allows the institution to analyze the educational
outcomes for students with disabilities and to specifically understand the unique needs of students with disabilities.

The third limitation of the study is that the researcher only reviewed the data for one academic year. This limited the scope and accuracy of the study’s findings. Future research should prioritize conducting a more comprehensive study that evaluates the graduation outcomes over a 3-5-year period in order to gain a more comprehensive understanding of results and trends being produced by MAU’s institutional system.

The fourth limitation of this study is the complexity of systems and protocols required to access data. At MAU there are multiple systems with which to access data all requiring differing levels of institutional approval. The processes in place often create barriers and delays in acquiring the necessary data, potentially limiting the scope or timeliness of the study. Future research should prioritize working with the planning office to create a custom template that can pull the required information into one document that can be easily accessible by student success professionals.

Conclusion

In conclusion, the primary purpose of this study was to define the problem and to understand the system that has been leading to unacceptably low graduation outcomes for historically excluded Trio Student Support Services students at MAU. To achieve the primary purpose the researcher examined extant data relating to system processes and institutional conditions that create obstacles and perpetuate disparities in graduation outcomes particularly for historically excluded racial groups that exist at the intersection of first-generation status and/or low socioeconomic status. The researcher identified potential change ideas that might improve graduation rates for Trio Student Support
Services students at MAU, introduced an improvement agenda that can (1) contribute to improved outcomes for Trio SSS students at MAU, (2) instigate new data-based continuous improvement practices and (3) build capacity for systemic problem identification and design-based implementation research (Anderson & Shattuck, 2012; Fishman, Penuel, Allen, Cheng & Sabelli, 2013; Gutierrez & Penuel, 2014; Hinnant-Crawford, 2020).

As mentioned in chapter 4, this study began to answer questions posited by Fishman, Penuel, Allen, Cheng & Sabelli (2013), “What works when, for whom, and under what conditions?”, “How can we make this innovation work under a wide range of conditions?”, and “How do we understand the conditions under which designs can improve learning”. The quantitative data answered the first research question and found that the current conditions of the MAU’s campus system are working best for non-Trio SSS students particularly international students, with Asian students coming in second and White students coming third. Students who were of unknown race/ethnicity within MAU’s Trio SSS program are faring the worst in this system with Hispanic and African American students not far behind. The qualitative data yielded themes that answered the second and third research questions: existence of a hidden curriculum that first-generation college students are not privy to, a lack of system alignment both interdepartmentally at the university level and between secondary and postsecondary education systems, unclear academic pathways, prevalence of faculty members acting as gatekeepers and not advocates, infrastructure challenges due to budgetary constraints, and inadequate centering of student voice in decision making and learning experiences. The improvement agenda recommended by the researcher focuses on training equity-minded
practitioners and creating equity-minded pathways that center anti-racist language in policy and intervention design. The researcher used this data along with insights gleaned from campus staff to inform the creation of the fishbone and driver diagrams.

This study sought to disrupt the status quo, and was driven by Bryk, Gomez, Grunow and LeMahieu’s (2015) statement that, if educational [institutions] continue to do what they have always done, education [will] continue to get more of the same – great variability in outcomes that often further disadvantages the most disadvantaged in society. The Trio SSS program, as an institutional agent of MAU, can make a more decisive impact on graduation outcomes and affect system change for historically excluded Trio SSS students. The researcher acknowledges that while services provided through the Trio SSS program have been impactful to many students, more work needs to be done as graduation outcomes are not meeting expectations.

Looking forward, the researcher believes that institutions should regularly reflect on educational inequities and should routinely use extant data to inform decision making and improvement efforts. The researcher recognizes that these efforts are less impactful if they are not institutionalized. The improvement agenda presented in this study gives a template on how to begin to institutionalize equity-centered evaluations. Trio Student Support Services at MAU led this evaluation effort and hopes to become an exemplar for how to institutionalize equity-minded evaluations that improve the system and create explicit academic and career pathways that result in increased graduation rates for historically excluded students. Trio Student Support Services is an agent of educational equity, is focused on student success, and is an extension of the institution that can make a decisive impact on graduation outcomes and affect system change for the most
vulnerable students. In closing, like Engstrom & Tinto (2008), MAU Trio SSS believes that “institutions have to believe that all students, not just some, have the ability to succeed under the right set of conditions – and that it is their responsibility to construct those conditions.”
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Stanton-Salazar, R. D., & Quintanar, I. (2013). The Empowerment of Immigrant Students in School: Using social capital research and theory to guide the design, implementation, and evaluation of a comprehensive school restructuring initiative.


https://www2.ed.gov/programs/triostudsupp/index.html

https://www2.ed.gov/programs/triostudsupp/funding.html


Appendix A

Below is the legislation for Trio SSS programming – Higher Education Act of 1965

20 USC CHAPTER 28, SUBCHAPTER IV, Part A: federal early outreach and student services programs Text contains those laws in effect on January 7, 2011

From Title 20—EDUCATION

CHAPTER 28—HIGHER EDUCATION RESOURCES AND STUDENT ASSISTANCE

SUBCHAPTER IV—STUDENT ASSISTANCE

Division 1—Federal TRIO Programs

§1070a–14. Student support services

(a) Program authority

The Secretary shall carry out a program to be known as student support services which shall be designed—

(1) to increase college retention and graduation rates for eligible students;

(2) to increase the transfer rates of eligible students from 2-year to 4-year institutions;

(3) to foster an institutional climate supportive of the success of students who are limited English proficient, students from groups that are traditionally underrepresented in postsecondary education, students with disabilities, students who are homeless children and youths (as such term is defined in section 11434a of title 42), students who are in foster care or are aging out of the foster care system, or other disconnected students; and
(4) to improve the financial literacy and economic literacy of students, including—

(A) basic personal income, household money management, and financial planning skills; and

(B) basic economic decision-making skills.

(b) Required services

A project assisted under this section shall provide—

(1) academic tutoring, directly or through other services provided by the institution, to enable students to complete postsecondary courses, which may include instruction in reading, writing, study skills, mathematics, science, and other subjects;

(2) advice and assistance in postsecondary course selection;

(3)(A) information on both the full range of Federal student financial aid programs and benefits (including Federal Pell Grant awards and loan forgiveness) and resources for locating public and private scholarships; and

(B) assistance in completing financial aid applications, including the Free Application for Federal Student Aid described in section 1090(a) of this title;

(4) education or counseling services designed to improve the financial literacy and economic literacy of students, including financial planning for postsecondary education;

(5) activities designed to assist students participating in the project in applying for admission to, and obtaining financial assistance for enrollment in, graduate and professional programs; and
(6) activities designed to assist students enrolled in two-year institutions of higher education in applying for admission to, and obtaining financial assistance for enrollment in, a four-year program of postsecondary education.

(c) Permissible services

A project assisted under this section may provide services such as—

(1) individualized counseling for personal, career, and academic matters provided by assigned counselors;

(2) information, activities, and instruction designed to acquaint students participating in the project with the range of career options available to the students;

(3) exposure to cultural events and academic programs not usually available to disadvantaged students;

(4) mentoring programs involving faculty or upper class students, or a combination thereof;

(5) securing temporary housing during breaks in the academic year for—

(A) students who are homeless children and youths (as such term is defined in section 11434a of title 42) or were formerly homeless children and youths; and

(B) students who are in foster care or are aging out of the foster care system; and

(6) programs and activities as described in subsection (b) or paragraphs (1) through (4) of this subsection that are specially designed for students who are limited English proficient, students from groups that are traditionally
underrepresented in postsecondary education, students with disabilities, students who are homeless children and youths (as such term is defined in section 11434a of title 42), students who are in foster care or are aging out of the foster care system, or other disconnected students.
Appendix B

Discussion with Analytic Hub

Script: Thank you for taking the time to come this afternoon and participate in this strategic planning meeting discussion. The purpose of today’s discussion is threefold:

1. To get your perspective on the current educational outcomes for Trio SSS students:
2. To examine the dynamics that either reinforce systemic inequity or create more equitable outcomes at the campus level
3. Using this information to identify equity-centered change ideas that can improve educational outcomes for students.

The guiding perspective for this discussion is that "Institutions have to believe that all students, not just some, have the ability to succeed under the right set of conditions – **AND THAT IT IS THE INSTITUTIONS RESPONSIBILITY TO CONSTRUCT THOSE CONDITIONS**" (Engstrom & Tinto, 2008). The first thing we will briefly review is some of the quantitative data that will highlight the current educational outcomes of Trio SSS students compared to the highest achieving student group on campus. After that we will begin going through a series of questions.

Again, I appreciate your time and did anyone have any questions before we start?

Outline of Questions

1. In your opinion, why do these equity gaps exist at MAU?
2. What is it about the MAU system that allows or is causing these equity gaps to exist?
3. How are institutional conditions (policies and practices) contributing to the disparity in experiences and outcomes between Trio SSS students and the highest achieving students on campus?
4. In your opinion, what specific institutional conditions (policies and practices) are contributing to the disparity in experiences and outcomes between Trio SSS students and the highest achieving student group?
5. What institutional conditions (policies and practices and programming) are improving experiences and creating more equitable outcomes for Trio SSS students?
6. What is your understanding of student needs and their experience here, especially for students from underserved and marginalized racial groups?
a. Break it down into 2 parts – first look at student needs (academic, financial, personal) and then their experience (do you think they feel they belong, do you think they feel their voice is valued, do you think they have a positive or negative view of the campus)

7. What are the most important things that our campus can do to help new Trio SSS students get started on the right foot?
   a. Is the campus currently doing any of these things?

8. Thinking about your own role, what would you say are the most important things you can do to help Trio SSS students get started on the right foot?

9. Do you feel knowledgeable about high-impact practices, resources, and other opportunities available to students on campus?

10. If you do feel knowledgeable, what high-impact educational practices are being offered through the university and how are we making sure that students, particularly those who are from historically excluded groups, have equitable access to these opportunities?

11. From your perspective, what key initiatives/resources/supports are having the greatest impact on student persistence, learning and ultimate success?

12. Why do you think these things are successful?

13. How can we create equity-minded pathways for students (1) to have knowledge of and (2) have access to high-impact practices and services/supports that lead to graduation?

14. What is the greatest challenge that you face in meeting students’ varying needs and expectations?

15. In the ideal situation, what resources would you need to better support underserved and marginalized students?
Appendix C

Equity Practitioner Training Program
Student-Led Student Success Taskforce
Discussion with Student Workers

**Discussion Purpose:** Gather student perspectives in defining student success and examining the dynamics that either reinforce systemic inequity or create more equitable outcomes at the campus level. The ultimate goal is to use this information to construct conditions that improve service to students and produce more equitable outcomes.

**Guiding Perspective:** "Institutions have to believe that all students, not just some, have the ability to succeed under the right set of conditions – AND THAT IT IS THE INSTITUTIONS RESPONSIBILITY TO CONSTRUCT THOSE CONDITIONS." Engstrom & Tinto, 2008

**Goal Clarity**

1. What made you decide to pursue a college education and what motivates you to graduate from college?

2. Why did you choose Greater Allegheny?

3. How do you define personal success?

4. How do you define college success?

5. How often do you feel successful going through your college experience?

6. What are your strengths as it relates to accomplishing your academic and career goals?

7. How could your strengths and weaknesses impact your ability to reach your academic and career goals?

8. When do you feel inspired?

**Academic Integration**

1. How well do you think your high school education and experience prepared you to succeed in college?

2. What resources would you have liked your high school to provide to better prepare you and your peers for college?
3. What are the most important things that Penn State Greater Allegheny has done to get you started on the right foot? What does PSUGA need to do better?

4. What strengths do you bring to the classroom and to the university?

**College Expectations & Experiences**

1. What expectations did you have about college? Have those expectations been met?

2. What does a college education mean for you?
   a. In what ways does it matter to your future?
   b. Do you feel that you can succeed in college?

3. From your perspective, what key initiatives/resources/supports have had the greatest impact on your persistence, learning and ultimate success?

4. What are the characteristics of a great faculty member that you have experienced here at Greater Allegheny?

5. What are the characteristics of a faculty member that resulted in a poor classroom experience?
   a. Have you been told anything in the classroom that makes you feel defeated?

6. What are the characteristics of a great advisor that you have experienced here at Greater Allegheny?

7. What are the characteristics of an advisor that resulted in a poor advising experience?

8. What are specific skills that you are learning in college that are important in the professional world?

9. What are specific skills that you are hoping to learn in college that are important in the professional world?

10. Thinking about your experiences as a student, how would you describe what it means to be engaged in your learning?
    a. How do you know you’re engaged in learning versus simply learning?
    b. In your college experience so far, have there been activities or situations that have allowed you to be more engaged in your learning? If yes, please
describe.

c. How would you describe the ways in which being involved in one or more of these activities had an impact on your learning?

d. How would you describe the ways in which you have been actively engaged in learning activities?

11. What would you say influences your decision to seek out and participate in specific types of engaged learning experiences – for example service learning, undergraduate research, study abroad, internships?

12. Have these experiences had any influence on your interests or goals?

13. What institutional conditions (policies and practices) are negatively impacting experiences and outcomes between the different student groups?

14. What institutional conditions (policies and practices and programming) are improving experiences and creating more equitable outcomes?

**Social Integration/Sense of Value**

1. Do you feel connected to PSUGA? And In what specific ways do you feel connected?

2. Do you feel like you belong?

3. Do you feel like your voice is valued (in the classroom and outside of the classroom)?
   a. When do you feel like your voice is being valued/respected?

4. Have you ever had a chance to be a leader here at Greater Allegheny – when do you get a chance?

5. Do you feel knowledgeable about campuses resources and opportunities available to students at Greater Allegheny?
   a. What resources do you utilize on campus?
   b. In the ideal situation, what resources/supports would you need to feel better supported?

6. How have you cultivated meaningful relationships with faculty, advisers and staff on campus?
a. Do you feel comfortable asking faculty for help?

b. Do you feel comfortable asking staff for help?

c. Do you feel comfortable asking peers for help?

d. Do you feel comfortable asking advisors for help?

7. Do you feel that there is safety in not knowing? Has space been created for that?

8. When do you feel like you are being heard and listened to?

9. When do you feel the most competent? How often have you felt this during your experience at Greater Allegheny?

Financial Support

1. Do you feel like Penn State Greater Allegheny is affordable?

2. Do you feel the cost of college was adequately explained when you were accepted to the university?

Support of Family and Friends

1. Do you feel supported on your collegiate journey?

2. Who is your support system on campus?

3. Who is your support system outside of campus?

4. How many things are you responsible for outside of your responsibilities as a student?
Appendix D

First Generation Equity Training Program Implementation Plan

1. Develop evidence teams comprised of leadership from departments across campus that will work together to evaluate campus data and practices.

2. Provide working sessions that train equity evaluators on how to develop an evaluation action plan based on the Equity Scorecard Process.

3. Train equity evaluators to develop equity indicators and benchmark goals that help increase access, participation in high-impact practices, retention, and graduation rates for historically underserved/minoritized student populations.

4. In conjunction with OPAIR, develop baseline data for all identified equity indicators. Once identified prioritize which equity gaps will be addressed first and how.

5. Train equity evaluators to examine disaggregated student cohort data to identify equity gaps and determine barriers to access, student participation in high-impact practices, retention, and graduation rates.

6. Routinely examine and report underserved student participation in high impact practices, honors programs, institutional scholarships, participation in undergraduate research, study abroad, internships, fields of study, graduation with honors etc.

7. Conceptualize and coordinate equity-centered interventions that address identified equity gaps.

8. Develop a plan to conduct regular improvement reviews that reexamine data and effectiveness of implemented interventions.
Appendix E

Equity Evaluation Training Program

Learning Outcomes

Participants who engage in this programming will develop the following skills, knowledge, and behaviors:

1. Identify systemic and structural barriers to equity and inclusion specific to the campus.

2. Develop and implement a campus evaluation plan informed by the Equity Scorecard Framework.

3. Analyze the influence of systems (historical, organizational, political, global) of power on the everyday experiences of individuals in our society.

4. Explain how educational equity and opportunity can be promoted or impeded by individuals, teams, and groups, and also by institutional, structural, and historical forces. Analyze the role of structural inequality, oppression, privilege, and power in education and the impact of oppression on educators and students.

5. Identify, analyze and apply strategies used by educators, across varied roles and contexts, to disrupt privilege and marginalization, promote educational equity, and increase educational access and opportunity at the campus level.

6. Assess their own roles in systems of oppression, privilege, and power and identify the various ways in which they have used or may use their role to create, perpetuate, or dismantle, equitable educational policies and practices.

7. Advocate for equity values in institutional mission, goals and programs.
8. Provide opportunities for inclusive and equity-based educational professional development.
Appendix F

Equity Evaluation Training Program

Data Request Template
Seeing the System
Data Date Range Fall 2017 – Spring 2022 (5 years)

**STUDENT PROFILE**
Guiding question – Who are the students that we serve?
Demographics – Race/ethnicity, gender, first-generation status, income status, Pell Eligibility Status.
**Trio SSS Eligibility** – Students enrolled that meet Trio SSS Eligibility Requirements – First Generation Only, Low-income Only, First-generation & Low-income.
**Educational Profile - Academic Data**
- High Schools Represented
- Top Majors Interested in based on
- Average SAT Scores
- Average Evaluation Index
- Average ALEKS scores
- High School GPA
- DUSC Student Admission Type – Conditional Admits versus Degree Seeking
  - Students in DUS Major
  - Major Preferences
  - Remedial Class Enrollment (Math 4, Math 296, Engl 001w)
    - Early Indicators of Academic Challenges
    - English composition EPRs
    - Math EPRs
    - Science EPRs

**Access Perspective Guiding Question** – To what extent do underserved students have access to programs and resources that significantly impact their ability to compete for economic and educational advancement?
- Enrollment in academic majors that align with high demand/high-wage occupations – STEM majors.
- Ability to Participate in Study Abroad Opportunities
- Representation of students who expressed interest in a STEM major when entering the university, students who completed Entrance to Major (ETM) requirements to enter STEM major, and students who completed degree program within a STEM major. *What other majors should be considered?*
- STEM Course Equity Data & other Course Equity Data (comparing A-C grades earned to D, F, LD, W grades earned for each course) - *What are the gatekeeper courses?*

**Retention Perspective Guiding Question** – What are the retention rates of underserved students across programs from year to year through graduation?
- 4-year & 6-year graduation rate who graduated from GA all majors
- 4-year & 6-year graduation rate who graduated from GA and UP with a STEM major
- Academic Standing Academic Warning - # of students in academic warning status, and number of students with GPA below 2.0.
- Persistence/Retention Rate from Year to Year
- Freshman Persistence rate
- Student not meeting Academic progress (meeting 67% criteria for financial aid purposes); Students not in good academic standing (less than 2.0 GPA)

**Excellence Perspective Guiding Question** – What is the level of access to exclusive educational experiences (high impact practices), advantages, resources, and elite programs?

- **Participation in High Impact Practices**: Undergraduate Research; First-year seminars & experiences, Professional Experiences; Study Abroad/Study Away; Self-Directed Student Engagement; Volunteerism; Community-based Learning; Courses with Out-of-Class Components; Creative Accomplishments; Peer Mentoring; and/or Organizational Experiences; Institutional Scholarships, Trio Student Support Services. *How do we define High Impact Practices at our campus?*
Appendix G

IRB Protocol Exemption Notification

Duquesne University IRB Protocol Exemption Notification

To: Erica Willis
From: David Delmonico, IRB Chair
Subject: Protocol #2023/05/8
Date: 06/26/2023

The protocol 2023/05/8. Understanding Unacceptable Graduation Outcomes for Historically Excluded Trio Student Support Services Students has been verified by the Institutional Review Board as Exempt according to 45CFR46.101(b)(4): (4) Secondary Research Uses of Data or Specimens on 06/26/2023.

If applicable, the consent form and/or recruitment flier have been stamped and are attached to this email or are accessible via Mentor. Please use these stamped versions to distribute or display.

Exempt status means there is no specific expiration date, and you are not required to file annual reviews or termination reports. However, any unanticipated problems, adverse effects on subjects, or protocol deviations must be immediately reported to the IRB Chair before proceeding with the study.

Further, any changes to your study requires the filing of an amendment and is subject to the approval of the IRB Chair. You must wait for approval before implementing any changes to the original protocol. Changes to your protocol may affect the exempt status of your research.

Please contact me if you have any questions regarding this study.

Best wishes in your research,

David Delmonico, Ph.D.
Institutional Review Board, Chair
irb@duq.edu