EXPLORATION OF IPASS REFORM AT A PUBLIC, COMPREHENSIVE FOUR-YEAR UNIVERSITY: AN INTRINSIC CASE STUDY

Maria Domingo
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FOUR-YEAR UNIVERSITY: AN INTRINSIC CASE STUDY

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A Dissertation
Presented to the
Faculty of
California State University, San Bernardino

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In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

in
Educational Leadership

__________________________

by
Maria Theresa Domingo

June 2020
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Maria Theresa Domingo
June 2020
Approved by:

Dr. Edna Martinez, Committee Chair, Education

Dr. Nancy Acevedo-Gil, Committee Member

Dr. Craig Seal, Committee Member
ABSTRACT

Students enroll in universities to earn degrees as a way to improve social and economic competitiveness. However, many large, comprehensive universities are having difficulty in supporting students to ensure timely graduation and are seeing a large number of students stop out before a degree is earned. Academic advising is seen as an effective strategy to help improve retention and completion rates in universities. However, large comprehensive universities often lack the resources to ensure students receive the support needed to ensure completion. We know four-year graduation rates are rare, and there are numerous factors contributing to this issue. Thus, universities and colleges are relying on iPASS reform, which combines advising technologies and advising redesign to create a seamless and holistic advising experience for students. The purpose of this research study was to understand ongoing iPASS reform efforts at a public, comprehensive four-year institution. Data were obtained from open-ended, semi-structured interviews, document analysis, and participant observations. Qualitative data were transcribed, coded, categorized, and organized into five thematic findings: a) Commitment to Student Learning and Student Success through Academic Advising, b) Restructuring Academic Advising and Related Cultural Shifts, c) Advising Approaches to Promote Student Success of the Whole Student, d) Adopting and Implementing New Advising Technologies, and e) Leadership Matters at All Levels. Mountainside University’s leaders and practitioners may see these findings immediately helpful in their
efforts to fully implement iPASS reform. In addition, findings help identify barriers to implementation and facilitate efficient practices of implementation and provide insights into how academic advisors are affected. These insights are critical because the working conditions of academic advisors directly translate into students’ learning conditions. Recommendations for policy, practice, and future research are discussed.
ACKNOWLEDGEMENTS

I want to thank my chair, Dr. Edna Martinez for her support and encouragement. There are so many times in this journey that I wanted to give up, but she was always there pushing me to keep moving forward. Thank you for checking up on me, providing support, giving me deadlines, and also understanding when I couldn’t meet those deadlines. Thank you for your support especially during the end of this journey. You continued to push and motivate me even when I felt I had nothing else to give. You have pushed me to become better in so many ways, a better writer, editor, and researcher. Most of all, thank you for believing in me. I will never look at track changes the same way.

I want to also thank my committee members Dr. Nancy Acevedo-Gil and Dr. Craig Seal. Thank you for your guidance throughout this journey and for your expertise. Dr. Acevedo-Gil, your courses opened my eyes to different views of social justice and racism. I will forever be grateful for what I learned in your courses. Your teachings and challenges to look at social justice and racism from different perspectives has made me a better advisor. I also want to thank Dr. Craig Seal for pushing me to pursue a doctorate degree. I never thought I would pursue a doctorate degree. Thank you for encouraging me and explaining why I needed to do it. Thank you for being a mentor and advocate for academic advising.

I would also like to thank my husband Hui Chieng. We have been through so much, haven’t we? Thank you for always supporting me while I pursued my
master's degree and now through my doctoral journey. I know it has not been easy having to take care of the kids and house while I completed coursework assignments or when I was writing my dissertation. I know I missed a lot of family bike rides and outings. Thank you for always supporting me and giving me pep talks when I was doubting myself. Please know that I appreciate everything you have done and sacrificed for me. I know these last few years have not been the easiest for you, but you came out stronger than ever. You make me want to be better and I promise this will be the last degree.

I would like to thank my parents and sister for always believing in me and supporting me when I felt like giving up. Thank you for listening to me vent when I needed to and for watching the kids when I needed time to write. Mom and Dad, thank you for your love and support and for being great parents. To my sis, thanks for always being there for me, and for the laughs.

Spencer and Cheryl, thank you for reading my drafts. I appreciate your feedback especially when my writing no longer made sense to me. Your wisdom and expertise in business IT really helped me during this process.

Omar, thanks for all your help. I appreciate the late night texts asking if I was awake and to encourage me to keep writing. I would not be here without you. Now, it’s your turn. Can’t wait to see what your dissertation is about.

To Jessica, Kim, Kori, Claire, Diana, and Brittany. It is a joy working with you ladies. Thank you for supporting me through this journey and understanding
when I needed to take days off to finish this dissertation. Thank you for taking on the extra workload during my absence. I am forever grateful.

Cohort 10- Thank you for being a great group of individuals. I have learned so many things from each one of you. Thank you all for being supportive and for your constant encouragement. Together, we will make positive change for our students!

Most importantly, I want to thank God. I would not be where I am today without his blessings and guidance.
DEDICATION

I dedicate this to my grandparents Esperanza, Librado, Matilde, and Justo. I would not be who or where I am today without their love, support, and encouragement when I was a child. They instilled several values upon me such as respect, honesty, and patience. From their actions I observed resilience, empathy, and kindness. They all had to work hard and build a new life in the United States. They were kind and always made me feel like I can achieve anything I wanted in life as long as I was willing to put in the effort for it. They were also empathetic and displayed how important it was for a person to try to understand where another person is coming from. They were the best grandparents a girl could ask for. I miss you all.

I also dedicate this to my children Genevieve and Christopher. I hope that you both understand that life is what you make of it. Reach for the stars, and work hard, but don’t forget to have a life filled with love, laughter, and friendship. Do not fear the unknown, rather have faith in God, and embrace challenges and obstacles that allow you to grow. Pursue your dreams and don’t let anyone stop you. I love you both.
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CHAPTER ONE
INTRODUCTION

Introduction
In this chapter, I introduce the problem this study sought to address. Following, I discuss the theoretical underpinnings of the study and share my assumptions as a researcher. I also describe the significance of the study and research questions. Finally, I present the limitations and delimitations of this study and provide an outline of the remaining chapters.

Problem Statement
Obtaining a college degree is seen as a strategy to help improve social mobility and economic competitiveness (Lane, 2015; Witteveen & Attewell, 2020). Many students believe that earning a college degree is the best way to achieve a prosperous career to be able to take care of one’s family (Lane, 2015). However, many comprehensive universities, which educate the majority of students attempting to earn a four-year degree, are struggling to meet the demands of the students enrolling in their universities (Schneider & Deane, 2015). While many comprehensive universities admit more students from historically underrepresented minoritized groups as well as PELL grant recipients, there is still an equity gap (Whistle & Hiler, 2018). Disparities in educational outcomes persist (Whistle & Hiler, 2018).
According to Whistle and Hiler (2018), after six years only 49% of first-time, full-time Pell grant recipients earned a bachelor’s degree. While expanding access to the bachelor’s degree has been a key focus among higher education leaders and policymakers over the last few years, simply expanding access or providing students the opportunity to enroll is not enough (Martinez, 2018). Completion and time to degree are central. According to the National Center for Education Statistics (NCES) the 6-year graduation rate for full time, first time, undergraduate students seeking a bachelor’s degree around the nation is only 59% (Kot, 2014; NCES, 2017). In addition, the cost of college also continues to increase for both the institution and students, some as much as 25% in the last ten years (Hess, 2019). Costs almost doubled within the past thirty years, due to a decrease in government financial support and an increase in performance-based funding instead of the traditional enrollment numbers (Lane, 2015; Schneider & Deane, 2015; U.S. Department of Education, 2015). Instead of receiving funds based on the number of students attending, many colleges and universities are now operating under performance-based funding models, which rely on metrics such as course completion, unit attainments, and degree completion (Lane, 2015; Schneider & Deane, 2015). As of December 2017, there were 35 states that had some form of performance-based funding (Fain, 2017). However, existing research on performance-based funding is mixed and can lead to unintended outcomes such as an increase in short-term certificate programs.
Ultimately, colleges and universities are being expected to do more to increase both graduation and retention rates (Schneider & Deane, 2015).

Prior research indicates academic advising promotes student engagement, retention, and improved learning outcomes (Austin et al., 1987; Backhus, 1989; Crockett, 2006; Gonzalez 1997; Habley, 1982; Hatch & Garcia, 2017; Hester, 2008; King, 1993; Pace, 2001; Pascarella & Terenzini, 2005; Propp & Rhodes, 2006; Schlosser, et al., 2003; Ting, 1997). Academic advising is also one of the vehicles that promote the development of relationships between students and university members outside of the classroom experience (Lanlan & Fosnacht, 2019; King, 1993). When students feel they have received quality advising, they tend to believe in their abilities and are satisfied with the institution. Therefore, they are more likely to persist and graduate (Hatch & Garcia, 2017; King, 1993). Advising during certain periods of a student’s career in higher education can potentially make a difference in a student stopping out or persisting (Hatch & Garcia, 2017).

Although advising is seen as a strategy to improve retention and graduation rates, universities are having difficulty supporting their students to degree completion. Some large-scale universities can enroll up to 40,000 students (Schneider & Deane, 2015; Karp & Kalamkarian, 2017); therefore, an advisor may have a very large caseload and unable to support all their students in a term (Karp & Kalamkarian, 2017). Also, the existing advising structures employed within universities may not be conducive to student support and
success, especially contexts in which offices operate in silos and the student is left to navigate the college experience (Kuh, 2008). These conditions can be particularly difficult for first generation college students (Kuh, 2008). To address these problems, colleges and universities have aimed to reform their advising practices and models. Nevertheless, these reforms have not been examined critically at the organizational nor individual level (Kalamkarian & Karp, 2017). One way in which colleges and universities can be more successful is by adopting iPASS reform, which consists of moving away from the traditional “clerical registration tasks of advising” to the holistic Sustained Strategic Integrative Proactive Personalized advising model (Karp, Kalamkarian, Klempin, & Fletcher, 2016, p. 7). Technology mediated advising tools are used to ensure the SSIPP model is successful (Karp et al., 2016).

**Purpose Statement**

The purpose of this study was to explore the ongoing implementation of iPASS reform at a public, comprehensive four-year institution. iPASS reform is an “institutional reform in which colleges use technology to fundamentally redesign their advising and student support services” (Karp, Kalamkarian, Klempin & Fletcher, 2016, p. 1) and adopt the holistic Sustained Strategic Integrative Proactive Personalized (SSIPP) advising model. The SSIPP advising model uses technology-mediated advising tools to “promote, support, and sustain long-term, intrusive advising relationships” (Fletcher, Grant, Ramos, & Karp,
2016, p. 1). iPASS reform has been identified as a strategy to improve low graduation and retention rates that are due to high advisor caseloads (Karp et al., 2017). iPASS was developed to help advisors focus on a student’s entire college experience, and it is considered to be a transformative change. Instead of advisors waiting for students to come to them, iPASS has advisors proactively reaching out to students (Community College Research Center & Tyton Partners, 2017). iPASS’s goal is to ensure advisors meet with all students throughout their time at an institution, and that advisors are proactive in the way they reach out to students. Thus, iPASS is often synonymous with SSIPP advising.

SSIPP advising is a holistic approach to academic advising where advisors plan to meet with students more than once and throughout their educational experience. Advising under the SSIPP model is “ongoing and multifaceted” (Kalamkarian, Boynton & Lopez, 2018, p. 6). Thus, universities and colleges are using technology mediated advising tools to move closer to the SSIPP model of advising. Under this model, students receive personalized advising that also promotes a sense of belongingness (Kalamkarian et al., 2017).

As previously mentioned, technology-mediated advising tools are designed to help promote student success. There are three major types of technology-mediated advising tools:

1. Education planning systems
2. Counseling and coaching systems
3. Risk targeting and intervention systems (Kalamkarian et al., 2017).
Education planning systems are tools that help students and advisors plan courses and track students’ progress towards a degree. Counseling and coaching systems help connect students to support services, and risk targeting, and intervention systems help students stay on track by using early alerts and monitoring systems (Kalamkarian, Karp, & Ganga, 2017).

Research Questions

As a reminder, the purpose of this study was to explore ongoing iPAss reform efforts at Mountainside University. As a reminder, iPASS stands for Integrated Planning and Advising for Student Success (Klempin, Kalamkarian, Pellegrino, & Bartnett, 2019). iPASS was created to help colleges and universities with academic advising by incorporating technology to assist academic advisors. According to Klempin et al., (2019) “under iPASS, institutions select new technologies and learn how to use them, collect new data, help faculty and advisors integrate the data and technologies into practice, and ultimately change the way they interact with students” (p. 1). It is important to note, that implementing technology alone is not enough to increase graduation rates or student outcomes. Reform in academic advising process, structure, and communication needs to also take place (Klempin et al., 2019).

To support the purpose of this study, I examined the following research questions.

1. What have iPASS reform efforts at Mountainside University entailed?
2. What are the challenges to iPASS reform at Mountainside University?

3. How have these challenges affected professional advisors?

Significance of the Study

Universities are increasingly being held accountable for student outcomes (Hearn, 2015; Lane, 2015). To help students stay on track and decrease the number of students stopping out, several universities are considering technology-mediated advising tools to help advisors connect with their students to promote retention and timely graduation (Kalamkarian & Karp, 2017). Nonetheless, several universities are starting to use technology mediated advising tools and creating changes in advising structures without completely understanding the impacts and what changes are required in advising structures and processes for successful implementation (Kalamkarian & Karp, 2017). Mountainside University’s leaders and practitioners may see these findings immediately helpful in their efforts to fully implement iPASS reform. Also, the findings from this study provide a framework for higher education leaders regarding what steps might be necessary when implementing iPass reform. In addition, findings help identify barriers to implementation and facilitate efficient practices of implementation. Findings from this study also contribute to the literature of technology-mediated advising tools and iPASS reform. It also provides insights into how academic advisors are affected. These insights are critical because the working conditions of academic advisors directly translate into students’ learning conditions.
Theoretical Underpinnings

This study was grounded in the interpretivist paradigm (Sipe & Constable, 1996). Interpretivists seek to “… describe and understand the world from the point of view of someone else” (Sipe & Constable, p. 158). In this study, I sought to understand the different point of views and perspectives from those experiencing iPASS reform at Mountainside University and how it was affecting them as well as academic advising structures, models, and processes.

Assumptions

Given my own personal and professional experiences in academic advising, I view academic advising as more than just providing students a schedule of classes each term. Effective academic advising is when students feel supported and collaborate with the academic advisor in creating schedules per term, but also developing academic and career goals. Academic advising should be conducted throughout the time a student is attending the university, not just during registration periods (Klempin et al., 2019). I have experienced both positive academic advising where I felt I was working on a common goal with my advisor, and negative experiences where I was treated as a number and box my advisor checked off.

I believe that iPASS reform is helpful especially for colleges and universities that have large advisor to student caseloads. iPASS can help break down silos and promote communication between institutional offices and departments, making it easier for advisors and staff to promote student success.
iPASS also requires colleges and universities to review their advising models (Karp & Fletcher, 2014; Klempin et al., 2019). This includes who is conducting academic advising and how they do it. Transactional advising will not work with iPASS reform, as it requires a more holistic and proactive way of advising. The problem is that many colleges and universities try to implement technology mediated advising tools to improve graduation and retention rates, not knowing that iPASS reform is necessary for the technology mediated advising tools to be effective (Karp & Fletcher, 2014; Klempin et al., 2019). University-wide advising models need to be evaluated and revised so that technology mediated advising tools can be helpful and work in the way the developers intended it to work. Organizational structures within the university advising plan may need to change to accommodate technology mediated advising tools. Change efforts must consider the individuals within the organization, the role they play in implementation, and how such changes impact them on a personal and professional level (Kezar, 2011; Kezar, 2014).

Limitations

For this study I focused on professional academic advisors in general. I did not take into account advisor status or differentiated based on their area of work, such as college advisor versus a special program advisor. Depending on advisor status or their area of work, different views or perspectives may not have been captured in this study. Another limitation was the number of participants.
While case studies do not have a required number of participants, the study could be strengthened if there was a larger number of participants.

Delimitations

All participants of this study were professional academic advisors. Faculty advisors and administrators did not participate. As a result, it can be reasonably assumed that information gaps regarding iPASS reform exist.

Summary

While many students are enrolling in higher education in hopes of attaining of a degree to improve social mobility and economic competitiveness, many universities are finding themselves having difficulty providing effective academic advising to help them meet those goals. Previous research indicates that academic advising can potentially help colleges and universities improve retention and graduation rates. However, some advisors have very large caseloads making it impossible for them to meet with every student on their caseload and have meaningful interactions. Many universities are looking into iPASS reform where technology and changes in advising structures and processes are adopted to help manage student caseloads.

In this first chapter, I provided an introduction to my study and explained the problem, purpose, significance of the study, and the research questions that will help guide this study. In the second chapter, I provide a review of the
literature and highlight the history of academic advising, how it has changed throughout the years since its inception, and the introduction of iPASS reform and technology mediated advising. In Chapter Three, I will discuss the study design.
CHAPTER TWO
LITERATURE REVIEW

Introduction

Academic Advising has been a part of U.S. higher education since its inception. The earliest forms of academic advising can be traced to Harvard College in 1636 (Cook, 2009). To date, academic advising continues to be one of the most commonly employed student retention and graduation strategies used in colleges and universities (Cook, 2009; Kot, 2014; Drake, 2011). In this chapter, I define academic advising and highlight the numerous benefits it provides for student retention, timely graduation and persistence. I also examine past research that has addressed the different types of advising approaches and methods typically used in higher education, how and why technology-mediated advising strategies are being used in universities, and how academic advising has had to adapt and develop over time to support changes in student demographics and policies at the state and federal levels. In addition, I present the conceptual framework guiding this study.

Background

Students need assistance in navigating through the vast array of college courses and in making decisions about their future (White, 2015). They must take required courses such as general education and major requirements. However,
embedded in these requirements are prerequisites, course sequences, and electives. Students may not know how to navigate these types of information and may not be equipped to make decisions on what courses to select for their elective requirements. Not only are there several courses to choose from, but each student brings different backgrounds, information, and goals that can make selecting elective courses difficult (Iatrellis, Kameas & Fitsilis, 2017). Also, academic advisors underutilize university resources and must have to answer the same questions from different students repeatedly (Marquez, Ding & Hu, 2001).

According to Cohen and Kisker (2010) enrollment in higher education has increased by more than 500% from 1945 to 1975. Enrollment continues to increase despite the recession, which occurred in 2008 (Pargett, 2011). While enrollment is increasing, many students are stopping out. Society has recognized that higher levels of education can promote social mobility and economic competitiveness (Lane, 2015). However, students who are enrolled in college/university and do not graduate is problematic and becoming common across the nation (Lane, 2015). According to the National Center for Education Statistics (NCES) the 6-year graduation rate of full time, first time, undergraduate students seeking a bachelor’s degree around the nation is only 59% (NCES, 2017; Kot, 2014). The cost of college also continues to increase, almost doubled within the past 30 thirty years, due to a decrease in government financial support and an increase in performance-based funding instead of the traditional enrollment numbers (U.S. Department of Education, 2015). This trend impacts
timely degree completion. Many universities are using the time to degree and graduation rates to determine institutional funding (DesJardins, Ahlburg, & McCAll, 2002). According to a study conducted by DesJardins, Ahlburg, & McCAll (2002) in the University of Minnesota – Twin Cities, students who stopped out at least once increased their chance of not completing a degree. Outcomes were far worse for students who stopped out twice or more; they had the highest percentage of not graduating at all (Desjardins, Ahlburg, & McCAll, 2002). Also, students who stop out from college experience higher rates of unemployment and are more likely to default on their student loans (Klempin & Karp, 2018). Therefore, colleges and universities are reviewing their strategies and redesigning their approach of helping students not only be successful but to promote timely completion as well. According to Kuh et al., (2005), academic advising is the point where campus resources and student behavior meet. Therefore, academic advising is said to be one university strategy that can help students overcome barriers to success and promote graduation rates (Kot, 2014; Seidman, 1991; Pascarella & Terenzini, 2005).

What is Academic Advising?

There are several definitions for academic advising, especially based on the type of advising models used, which I will elaborate in later sections. When using developmental advising, Crookston (1972) defined advising as a teaching function. Both student and advisor are learning from each other and working
together to help the student make their own decisions. O’Banion (1972) defined academic advising as a team approach where advisors should help students explore their options. Students, however, are expected to make their own decisions based on the guidance and materials provided by the advisor. For purposes of this study, I will employ the definition used by the National Academic Advising Association (NACADA), now the Global Community for Academic Advising. According to NACADA, academic advising is when:

…an institutional representative gives insight or direction to a college student about an academic, social, or personal matter. The nature of this direction might be to inform, suggest, counsel, discipline, coach, mentor, or even to teach. Academic advising should be a series of meaningful meetings between a student and advisor where topics consisting of curriculum, pedagogy and learning outcomes are discussed or explained. (“Definition of Academic Advising,” n.d., para.4).

Therefore, “academic advising is a holistic and developmental process that requires collaborative approaches to facilitate and support students as they enter and move through an institution toward achieving their education, career, and life goals” (Campbell, 2008, p. 232).

**Advising versus Counseling**

Academic advising should not be confused with counseling. According to the American Counseling Association, professional counseling is a “relationship
that empowers diverse individuals, families, and groups to accomplish mental health, wellness, education, and career goals” (“What is Professional Counseling,” para. 2). On the other hand, NACADA states that academic advising’s goal is to help fulfill the teaching and learning mission of higher education. Academic advising should help students critically think about their place and responsibilities in the university and become members of a global society. Advising should also help students see different worldviews and ideas (“NACADA: The Global Community,” para. 8).

Benefits of Academic Advising

Prior research indicates advising promotes student engagement, retention and improved learning outcomes (Austin, et al,1987; Backhus, 1989; Crockett, 2006; Gonzalez 1997; Habley, 1982; Hester, 2008; King, 1993; Pace, 2001; Pascarella & Terenzini, 2005; Propp & Rhodes, 2006; Schlosser, et al., 2003; Ting, 1997). It is also one of the vehicles that promote the development of relationships between students and university members outside of the classroom experience (King, 1993). When students feel they received quality advising, they tend to believe in their abilities and have satisfaction with the institution. They are more likely to have a better chance of persisting and graduating (King, 1993). Advising during certain periods of a student’s career in higher education can potentially make a difference in a student stopping out or persisting.
Students, especially in the community college are seen to have affective, nonacademic factors that may promote a student to stop out. According to Pascarella and Terenizini (2005), students are more likely to stop out of college during the summer between their freshman and sophomore year. According to Attaran, Stark, and Stotler (2018), Indiana University conducted a study which was supported by grants from the Lumina Foundation. Using outcomes from 2009 to 2012, they found that 53% of students at Indiana University were taking 6 years to complete their degrees. Important results from this study indicate that academic preparation is not the main reason why students are not completing degrees. In another study that analyzed 55 colleges in the United States, 45% of students never completed a degree. More than 40% of the students who left their institutions had a grade point average of at least 3.0. Also many students who did not return after their first year had a “B” average. Seventy-five percent of students that stopped out had at least a 2.0 grade point average (Attaran et al., 2018). Universities were shocked to see these statistics because they did not consider students who had a 3.0 grade point average and above to be at risk of not completing degrees. The idea that students who stopped out are bad students who were failing their courses was a myth. Many students who needed help from advisors were not seen because they were not considered to be in danger of stopping out. It is vital for advisors to discuss nonacademic issues when advising students especially since research shows other factors that affect
timely completion. The most expensive degree is one that is not completed and according to Attaran et al., (2018), this is becoming more common.

Similarly, in 1991, Seidman conducted a study to determine how student satisfaction was impacted when students participated in an integrated admissions program, which included advising. There were 278 students who participated in the quasi-experimental study. The students met with advisors before they began the admissions process and again after orientation sessions once accepted to the university. One of the goals of this study was to determine if students who participated in the program would feel comfortable enough with the institution to be able to use campus resources. There were 12 advisors who participated in the study. During the preadmission meeting, advisors met with the students and gave them information about the school and the programs available. After the meeting, the advisor gave them a survey and invited them to apply. If the student applied and was accepted, they scheduled an appointment with the same advisor they met with during the preadmission stage. While the student was enrolling in courses, the advisor helped the student with social integration techniques to help them become comfortable with the college and its resources. Social integration techniques ranged from having conversations about the importance of being involved in extracurricular activities on campus to explaining how participating in clubs and organizations with fellow students can help them academically (Seidman, 1991). The control group consisted of the students who took part in regular admissions processes without additional
advising. Seidman (1991) found that students in the experimental group persisted 20% more in the third semester than those in the control group who did not receive any academic advising. According to Young-Jones, Burt, Dixon, and Hawthorne (2011) many universities or colleges do not have structured advising programs to assist students in applying to college. Seidman’s (1991) study above reflects the importance academic advising can have on student retention. Similarly, Drake (2011) discussed the power advising could have on student success and persistence. According to Drake (2011), “we have long since left in the dust the notion that simply opening our doors to students is enough, that, once here, they can negotiate their own way through our often byzantine, labyrinth curriculum, processes, and hallowed halls” (Drake, 2011, p. 9). Advisors can help promote student success by building relationships, connecting students to other faculty and staff on campus, and emphasizing the interactions that take place out of the classroom (Drake, 2011; Light, 2001).

According to Pascarella and Terenzini (2005), students’ positive perceptions of academic advising can increase retention because students feel a connection with the institution. Relatedly, Suvedi, Ghimire, and Millenbah (2015) conducted a study to assess students’ perceptions of academic advising to help improve the advising processes at Michigan State University. They also wanted to determine students’ perspectives of academic advising based on their demographics. Data from online surveys collected from 2005 to 2013 was used for the study. Surveys consisted of 10 statements in a Likert scale rating
regarding the availability of advisors, advisor knowledge about policies and procedures, helpfulness, and providing information for timely completion. The study consisted of 4,874 undergraduate students within the College of Agriculture and Natural Resources in all academic levels: 15% freshmen, 24% sophomores, 42% juniors, and 19% seniors. Out of the total population, 35% were female, and 65% were males. Suvedi et al., (2015) discovered that females felt more positive about academic advising than males. They also found that freshmen and sophomore students tend to see academic advisors more positively than do juniors and seniors. They also discovered that White students saw academic advising more positively than non-White students. Overall, based on qualitative comments from the students, Suvedi et al., (2015) found that students who have positive perceptions of their advisors tend to be more connected with other individuals on campus such as faculty members and staff from different offices. Students who indicated they had a positive perception of their advisors were also more likely to participate in research and secure jobs after graduation (Suvedi, Ghimire, & Millenbah (2015). Academic advising is one activity that universities can leverage to connect with all students regardless of their major (White, 2015). This is the case because students are more likely to complete their degree in a timely manner and persist to the next class level if they have “… clear goals, understand college processes and engage with staff or other students on campus” (Kalamkarian & Karp, 2017, para. 7).
Faculty-Led Prescriptive Academic Advising

In the early years of advising, Harvard College and Johns Hopkins University were the two institutions that played an integral role in the development of advising in higher education. In addition to assisting with a student’s academic responsibilities, the president and faculty at Harvard were acting “in loco parentis” where the professor was responsible for guidance in the absence of students’ parents (Cook, 2009, p. 18). In addition to teaching their male students about the classical curriculum, faculty members were responsible for advising students in their moral life and extracurricular activities. John Hopkins is credited for being the first university to have faculty with an advising caseload (Cook, 2009). During this time, universities were moving away from the traditional liberal arts education for the elite and towards an elective system (Key, 1996).

From 1869 to 1899, faculty-led academic advising was continuing to grow and became an essential part of colleges and universities across the nation. Women were now enrolling in universities and were considered one of the first special populations in higher education (Cook, 2009). In 1869, Harvard University implemented the elective system which allowed students to select which courses to take. Faculty advisors helped students identify their skills, and plan out their goals, both personally and professionally (Cook, 2009). As the first research university in the United States, in 1876 Johns Hopkins University, created a system of faculty advisors to help students navigate the extended elective
courses of the university. The traditional prescriptive advising approach was the general practice during this time and students were assigned faculty advisors (Cook, 2009). In the early 1900’s Columbia University implemented a faculty advising system where faculty supervised the courses that students should take to increase the relations between faculty and students. During the 1930s the University of Chicago created a holistic advising approach. Important factors for determining their advising approach was concern for the whole student, understanding that transition to the university can impact a student, factors that were not academic can affect a student’s ability, relationships with faculty is necessary for success, some faculty advisors were naturally better at advising than others, faculty members were the preferred members on campus to be advisors for career guidance, and that counselors should be consistent, rather than often changing (Cook, 2009).

According to Dillon and Fisher (2000), faculty advising is imperative to student success in higher education. The faculty is primarily the individuals in universities that provide academic advising as they are experts in their field of discipline (Jaffe & Huba, 1990). Since faculty already have a “student/teacher” professional relationship in the classroom, advising helps strengthen that relationship” (Jaffe & Huba, 1990, p. 38). The more a student has positive interactions with faculty advisors, the chances of graduation, retention, and satisfaction increase. Even though there are several positive effects of faculty advising, there are also some negative perceptions. Dillon & Fisher (2000) state
that the quality of faculty advising can be an issue on campus. One of the biggest complaints of faculty advising is the lack of interest. As one of their job duties and responsibilities, faculty may not receive adequate training to advise students properly. Therefore, they may tend to advise students the same as when they were in college, which could be outdated (Dillon & Fisher, 2000). Faculty may not always be knowledgeable of campus policies and procedures and any changes to the curriculum. Dillon and Fisher (2000) mention that faculty may not put much effort into academic advising because it does not help them obtain promotions or tenure. Selingo (2014) mentioned that faculty tends to advise students during their junior and senior year when the student is focusing on their major and career requirements. However, most students who stop out of the university do so during their first or second years of school. Dillon and Fisher’s (2000) study investigated how faculty members felt about advising. They were asked what they thought students expected during an advising session and in an advising relationship. A survey was conducted at a medium-sized university in the United States that used both faculty and professional advisors. The survey, which asked about the advising of undergraduate students, consisted of eight questions in a Likert scale format and was sent to 90 faculty members in six departments of an academic college. The survey was coded, to help researchers identify participants in a focus group that followed the survey. Out of the 90 people that received the survey, only 50 completed it. The average age of the participants was 45. Out of the 50 participants, 23 were males. Majority of the participants
were white (45 faculty members), and one was Latino. The remaining four faculty members chose not to disclose their race (Dillon & Fisher, 2000). Two focus groups were contacted about four weeks after the survey was administered to obtain the qualitative data. Dillon and Fisher (2000) found that several factors can make the advising experience with students positive. These include being prepared by knowing the questions or topic in advance and being a team member with different campus resources and the students. When students are willing to work and be knowledgeable about the advising process, the student has a great chance of being successful. Advisors also noted improvements that can be done, such as only assigning advising to those faculty who want to advise and having advising count for promotion and tenure positions. According to Drake (2007), faculty should see advising as a continuation of teaching. Since faculty advisors have a large workload and multiple responsibilities, professional advisors can be the individuals that can help faculty with advising.

Due to changes that began during the 1900s, advising began to evolve and adapt to new student populations. Faculty roles and expectations were also changing. According to Hemwall (2008) not only were faculty members required to produce scholarly research and submit their work to journals, but they were also expected to teach larger classrooms and different types of subjects. They were also expected to take on more administrative projects and assignments. With all of these changes to their responsibilities, this changed the way faculty was able to connect with students. It is also important to note that while faculty
advising was the norm in universities across the nation, professional advisors as a profession began to grow to accommodate the changing demographics of students and their needs, as well as fill in the gaps where the faculty was lacking.

Professional Advisors

World War II made a significant impact on the profession of academic advising. After World War II ended in 1945, and with the development of the GI Bill of Rights (Servicemen’s Readjustment Act of 1944), many veterans sought college degrees. Veterans were deemed different from the typical kinds of students attending the college because of their war experience. Therefore special services were required to help these students adjust back to college life. According to Cook (2009), while faculty members were considered the primary academic advisors, the number of student personnel staff increased because the expectations of faculty were changing. Faculty members were having to contend with larger groups of students, different expectations in workload from the administration and differences in the students they were advising (Cook, 2009).

Professional advisors are a relatively new career in higher education (Hunter & White, 2004). The number of professional advisors in the United States is also increasing. According to Self (2008), the number of professional advisors during February 2007 was 5,207 which was an increase from February 2001 when there were only 2,236 professional advisors. There is also a lack of research that deals with professional advisors. With the increased scrutiny and
focus on retention, graduation rates, timely completion, assessment in higher education, and the need to expand or improve academic advising, many colleges have resorted to hiring professional advisors to help keep students on track to graduation (Kot, 2014). Advising using professional advisors is the second most used process in universities (Jaffe & Huba, 1990).

In a national survey of academic advising conducted by NACADA in 2011, 22% of institutions around the nation are employing professional advisors (Selingo, 2014). The survey also indicated that 65% of the professional advisors had master's degrees. Selingo (2014) states that professional academic advisor's role is to push students towards graduation. Proactive advising practices have recently become popular in higher education to ensure students are enrolled in the correct courses to promote timely graduation. Faculty advisors are usually busy with teaching and other university requirements. Professional advisors were hired to help launch proactive advising strategies. According to Self (2008), professional advisors are hired to spend most of their day teaching students the skills and knowledge needed to graduate and achieve their personal goals.

Faculty versus Professional Advising

Academic advising has a difficult role in higher education. About 50% of students who enter college are undecided or unsure of what program to major in (Tinto, 2012). Since undeclared students are not attached to a college, they are
not assigned a faculty advisor. Therefore, many colleges and universities use professional advisors to advise undeclared students. Professional advisors must be able to advise a large number of students who have very different interests, personalities, characteristics, and goals. Professional advisors must be knowledgeable on several topics to ensure student success. Some skills include knowledge of advising approaches, career advising, knowledge of degree audits, and university policies and procedures. Unfortunately, faculty advisors may not be knowledgeable about all majors or be able to review a degree audit to assist a student who is interested in switching to a different major (Tinto, 2012).

According to Tinto (2012), professional advisors must be able to advise students from diverse backgrounds who have different goals and aspirations.

According to Selingo (2014), since professional advisors do not have to split their time with teaching, they can concentrate only on advising. Being readily available for students at all times was a strong advantage of why students preferred professional advisors. Professional advisors were also able to master the university policies and guidelines needed to navigate their way through the system and quickly adapt to any changes. Disadvantages to professional advisors were it potentially lessened the contact between faculty and students, it was expensive, and most importantly, professional advisors lacked the experience and knowledge of the discipline to provide professional and career advising (Jaffé & Huba, 1990). Overall, the results of the following studies indicated that there are mixed reviews of who students prefer: faculty or
professional advisors. Using a survey distributed by faculty in an engineering program from Iowa State University, the role of the advisor was investigated from the perception of the student. It also compared the satisfaction of students of those who had faculty advisors and from those who had professional advisors. Satisfaction with advising was based on several advising needs such as the adding and dropping of classes, college rules and procedures assistance, curriculum, and career guidance. The survey was distributed to 528 graduating seniors, and 404 students responded to the survey. Of the 404 participants, 258 were assigned a faculty advisor, and the remaining 146 students were assigned to one professional advisor. The average advising load for faculty who participated in the study was 30 students. Out of the 404 participants, 351 students were male, and 36 students were female. Jaffe and Huba (1990) found that students who were assigned to faculty advisors had higher rates of satisfaction than those who were assigned to professional advisors. There was no significant difference between males and females, which is important with such a high number of males in the sample. Jaffe & Huba (1990) found that students who had faculty advisors were more inclined to speak to them specifically for career guidance and advice (Jaffe & Huba, 1990). It is important to note the specific discipline. Engineering is a specialized career, and faculty who have expertise can provide guidance on what is needed to be successful in the discipline. Career guidance is what students are seeking. The number of males versus females in this study must be considered. While there is a large
proportion of males in this study were engineering students there are more females in higher education than males (about 56%) in 2015 (NCES, 2018). Besides, one must consider the caseload. The faculty advisors each had a caseload of 30 students, while the professional advisor had a caseload of 146 students. It is much easier for a faculty advisor to have meaningful conversations and academic relationships with 30 students than the professional advisor who must manage 146 students.

According to Allard and Parashar (2013), the reviews of whether faculty or professional advising is better is out for debate. For faculty advising, students shared that they had the faculty advisor that was very motivated and readily available. However, some had the opposite where the faculty was committed to other responsibilities in the university. Allard and Parashar (2012) found that students believed the university was purposely trying to set students back to gain monetary profit and were not providing adequate training to faculty and professional advisors. In a study that Allard and Parashar (2012) conducted, students were essentially disappointed with the split faculty and professional advising structure because they did not know who to speak to and were receiving incorrect or conflicting information. Faculty members were not knowledgeable enough in general education or lower division requirements to provide effective advising. Students also stated that while professional advisors were helpful and provided correct information, their experiences were rushed and they felt like a number instead of a person (Allard & Parashar, 2013).
Professional advisors are sometimes pitted against faculty advisors. However, because of the push for many initiatives that academic advisors are responsible for meeting, the position is becoming more specialized. In addition to higher degrees in counseling, collaboration with faculty is imperative for students at a university to be successful. Advisors must often have a holistic approach (academic, personal and career) to bridge the gap between students and faculty. The faculty has the field expertise in the subject matter that professional advisors may be lacking. Working together is at the students' best interest. Often, advisors are not invited to attend meetings regarding curriculum or other important issues. However, Darling (2015) mentioned that professional advisors should be invited to attend these meetings so that they can be a part of the discussion and learn more about why faculty recommends certain courses and when. Darling (2015), recommends a holistic approach where advisors and faculty are working together to ensure the students are receiving the support; they need to be successful.

Faculty and professional advisors should collaborate in advising and in developing an advising syllabus. NACADA has created web blogs that discuss different components of advising. In a web blog called “Professional Advisors and Faculty Advisors: A Shared Goal of Student Success,” information on how faculty and professional advisors can work together to ensure student success was disseminated. One way this can happen is through an advising syllabus. The advising syllabus should detail faculty and professional advisors’ expectations for students and responsibilities (Krush & Winn, 2010). Faculty and professional
advisors should work together regularly to ensure that changes in policies and procedures are expressed. Faculty and professional advisors who teach courses such as freshman seminars can introduce faculty and or advisors to their students to show a collaborative effort (Krush & Winn, 2010).

Prescriptive and Developmental Advising

As mentioned previously, the seventies brought upon several changes for academic advising in higher education. Not only are faculty advisors primarily working with students, but professional advisors in higher education are becoming more common. Also, student populations are changing. While prescriptive advising was the model primarily used, developmental and proactive advising were starting to emerge (Boylan & Fowler, 2010; Haisserer & Parette, 2002). In 1972, Crookston (1972) created the terms prescriptive and developmental advising in higher education.

Prescriptive advising was the foundation of all academic advising (Drake, Jordan & Miller, 2013). Prescriptive advising has its roots from the idea of “in loco parentis” where the faculty was acting in place of students’ parents. The faculty guided and instructed students of what to do in their academics and social life. Students working with an advisor using the prescriptive advising model sees the advisor as an authoritative figure because they are merely giving them instructions of what to do. Advisors would provide prescriptive advising techniques such as informing the student of which courses to take for the next
term, similar to a physician prescribing medicine. Students are not taking the time to figure things out on their own or learn problem-solving skills. There are some issues with prescriptive advising. Crookston (1972) describes prescriptive advising as advice giving and the advisor having authority and power over a student. The advisor also holds control in the advising process. According to Herndon, Kasier, and Creamer (1996), this type of academic advising is the easiest type of advising to perform because it is the student’s responsibility to seek guidance from the advisor. In a typical session, the advisor would provide students with a listing of things the student needed to do; what courses to take, and when to take them. Crookston (1972) states that students enjoy this advising because the advisor gives them the information and they feel comforted that they are receiving the correct information from an authoritative figure on campus. Lowenstein (2005) states that a computer programming system can do prescriptive advising. Prescriptive advising is similar to Pablo Freire’s banking concept of education where students are empty canisters, and the advisors are filling them up with information (Freire, 1993).

In developmental advising, academic advisors assist students in making a connection between college and career as well as personal goals after the degree is earned. Instead of advisors telling students what to do and what courses to take, advisors help students academically, personally, and professionally. They assist students in problem-solving and making rational decisions about their life. The advisor and the student work together to create an
educational plan, and the relationship is where one is learning from the other (Crookston, 1972). Developmental advising is helpful because it encourages students to become aware that what they do in college will help them in their future and that they need to be able to set realistic goals. Smith and Allen (2006) state that developmental advising is a process that is centered on the student and their learning and growth. According to Kalamkarian and Karp (2017), “developmental advising supports student persistence by helping students develop the capacity to evaluate and make academic and vocational choices” (para. 8). The information and learning in a developmental advising relationship flow both ways and focuses on student potential and success. Control of the advising relationship is negotiated, and the advisor tries to encourage a nurturing and collaborative working relationship. In developmental advising, a community of learning is promoted and encouraged so that students can strive for personal growth. A holistic approach is used in developmental advising (Frank, 2000). Winston, Ender, and Miller (1982) indicated that developmental advising should be a process. Students should be seeing the advisor more than one time to ensure the “whole” student is being advised. In addition to academics, developmental advisors should be assisting students with their academic, professional and personal growth through a caring relationship. Advising should be collaborative, and the advisors should act as mentors and role models. In addition to academics, career goals and life plans are discussed and incorporated into advising sessions. For students to be successful in their
academics, they must be successful in their personal lives as well. Advisors understand they have a responsibility to assist their students and negotiate what activities need to be completed to promote success (Crookston, 1994). Students are also encouraged to explore options (Bland, 2004).

Faculty versus Professional Advisors: The Debate Continues

In the same year that Crookston (1972) presented developmental and prescriptive advising, O'Banion also used student development theory as a foundation for academic advising. In O'Banion’s (1972) seminal article about academic advising, he also described academic advising as a holistic advising approach. He also states that there is an unclear answer as to who should be responsible for advising college students (O'Banion, 1972). He specifically questions whose responsibility academic advising should be, professional advisors or faculty. However, fifty years later, this discussion is still happening in universities and college campuses around the nation.

Faculty advising has predominantly been the structure used at most institutions of higher education around the nation. O'Banion argued that faculty who volunteered and had an interest in advising could be helpful partners in advising. However, faculty that did not have any training, and was forced to have an advising caseload could do more harm than good (O'Banion, 1972).

O'Banion developed a five-stage process on how to advise students:

1. Exploration of life goals
2. Exploration of vocational goals
3. Program choice

4. Course choice


O'Banion stated that most advising programs connect with students during stage three (program choice) of the five-stage process. However, this causes problems because students may be unsure or unclear about what their program choice entails. Colleges assume that students have already explored the different careers available to them. Students who do not explore different options will not be able to use their skills to select a career (O'Banion, 1972). Most importantly, it is stressed that academic advising should not be primarily building schedules for students. Students should be able to make their own choices as to what courses they register for (O'Banion, 1972).

O'Banion also gave pros and cons to using professional advisors versus faculty advisors. Since professional advisors do not have a teaching course load, they are more readily available especially for nontraditional students such as commuters, or those who must work. Professional advisors are also available during the summer where faculty advisors are not normally available (O'Banion, 1972). They are also readily available to participate in regular training, be knowledgeable about the changes in university or college policies and procedures.

There are several problems with having professional advisors in an advising program. Professional advisors usually pursue a career in advising for
the therapeutic process to assist individual students in achieving their goals.
However, the clerical work of processing paperwork and signing forms can cause
advisors to lose their interest. In addition, depending on the advising structure of
the university, advisors can be seen as those who should create the schedules
for students, a prescriptive advising strategy rather than a developmental
strategy (O'Banion, 1972). This is important, as many of the advising job
descriptions of advisors in higher education are starting to require master's
degrees. The field of advising in higher education is becoming a specialized field
with this new requirement.

Some may argue that faculty advisors are the best individuals to be
advisors. Since they see students in the classroom, they tend to know and be
more comfortable with the students because they have an opportunity to learn
students' interests, needs, and problems in the classroom (O'Banion, 1972).
Faculty tends to be more knowledgeable of curriculum and instruction, thus being
able to integrate advising with the curriculum (O'Banion, 1972). However, there
are several potential problems when using a faculty-only academic advising plan
such as faculty may not have the time to be trained in university policies,
procedures and guidelines, and faculty may not be comfortable to explore
opportunities and listen to students' problems (O'Banion, 1972). O'Banion did
recommend that the best type of advising structure in an institution is the team
approach where both faculty and professional advisors are working together to
help students succeed.
Burton and Wellington (1998) reviewed O'Banion’s 1972 model and stated that the 5-point process developed in 1972 requires some adjustments to account for the changes that have happened in higher education since the 70s. For example, during the 70s, higher education’s student population consisted of what is known as the traditional college student: White, mostly male, who lived in the resident halls and did not have to work (Burton & Wellington, 1998). However, this has changed dramatically. Colleges and universities consist mostly of women now. Many are first-generation college students of color who commute because they must work to be able to afford college tuition. In addition, colleges also serve students with disabilities, LGBTQ students, and adult learners. With changes in modern technology, some students prefer to take courses strictly online to accommodate their schedules. All these different types of students have different needs and requirements. Therefore, advising must adapt and change to accommodate and serve all students (Burton & Wellington, 1998). According to Kuh (2008) today’s college students have eight risk factors that threaten retention and timely completion: “being academically unprepared for college, not entering college directly after high school, attending college part-time, being a single parent, being financially independent, caring for children at home, working more than thirty hours per week, and being a first-generation college student” (p. 690).

Burton and Wellington (1998) also criticized O'Banion’s model as being too linear. Students change their majors and goals often; therefore advising must be able to be “dynamic, fluid, and interweaving” throughout the five different
stages (p.14). Burton and Wellington (1998) modified O’Banion’s five-step model and called it the Integrative Advising Model which advisors introduce different parts of the 5-step approach during the initial advising sessions rather than focusing on goal exploration for the first couple sessions. Burton and Wellington (1998) demonstrate how the Integrative Advising Model is different from O’Banion’s original process. Basically, the student comes to the advisor with different issues and circumstances. While the original questions and techniques are used, all five stages of the model are used throughout the advising session and not dragged out during several meetings. Burton and Wellington (1998) found that this model was flexible and able to adapt to the changing demographics of students and their changing needs. This is also very helpful because advisors may only have one chance to meet with a student in an academic year due to their caseload.

It is important for institutions to be flexible in what type of advising model they will use to ensure students are getting the support they need. Due to several changes in initiatives, such as Graduation Initiative 2025 to increase the graduation rates, developed by the CSU Chancellor, prescriptive advising is making a return in higher education. To ensure students are taking courses for timely graduation, advisors are creating 2 and 4-year educational plans as the basis for meeting with students.
Multidimensional Advising Approach

Boylan and Fowler (2010) recommended using a multidimensional advising approach to help prevent students from leaving the university. These approaches include clear student guidelines, mandatory orientation or first-year experiences, a combination of prescriptive, developmental and intrusive advising, and finally developmental education coursework. Boylan and Fowler (2010) found that multidimensional approaches, which utilized different strategies focused on improving student retention also increased cumulative GPAs. Interestingly, limiting the number of courses a student can choose from during the first year and purposefully adding breaks between courses increased the GPA of students participating in the study (Boylan & Fowler, 2010).

In addition to a multidimensional approach, academic advising needs to be better structured and developed. Garing (1993) mentions that there are “critical times” when proactive advising should be conducted. Students should be advised within the first weeks of the academic term to see how students are adjusting to their new courses and if they are experiencing any difficulties. The second critical period is after midterms. This is an important time to meet with students to determine if students need assistance with reaching out to professors and in developing successful strategies and game plans to pass courses. The last critical period is during advising week for planning the schedule for next term (Garing, 1993). However, Garing (1993) indicated that many advisors have large caseloads preventing them from having frequent and intentional meetings during
critical times. Garing’s theory of reaching out to students during critical times works well with Boylan & Fowler’s (2010) theory of using proactive advising to ensure students are getting help when they need it most. Unfortunately, students are not taking advantage of the available resources or are unaware that they exist. Additionally, universities may not have the resources or the advising capacity to follow Garing’s (1993) theory of advising during critical times.

Academic advising is more than just transactional encounters such as scheduling courses for the following term. Students must often make quick decisions regarding majors, minors, programs, and courses without really having the knowledge or understanding to make an informed decision. In addition, students find themselves in situations where dropping out is a possibility, some need to change a major, and some may need to switch to a different institution. Academic advisors should be present and ready to assist students and give them the tools and information so that they can make educated and well thought out decisions regarding their education and future. “Academic advisors work with students to enable them to be confident and assertive in their own abilities to learn, generate, and apply new knowledge and to empower them to embrace their own knowing, learning, thinking, and decision making” (White, 2015, p. 272). In fact, White, mentions that academic advising should not be looked upon as a service because it may send the wrong message or set unrealistic expectations. Advising should be a collaborative relationship between advisor
and student in their learning process and a part of an institution’s educational mission.

White (2015) states that advising is important and has the capability of affecting all students on campus by creating a “culture of learning” if coordinated and planned correctly (p. 272). Advising does not always need to be one-to-one. Group advising sessions, phone appointments, emails, and technological advances such as Skype, and social media can be used to reach out to all students regardless of their location. Advising will only be successful if there is buy-in from upper administration and a commitment to ensure that students have the advising necessary to help them be successful.

Types of Academic Advising Structures

In 1978 advising was divided into two groups: pre-major and major advising. The faculty was responsible for advising in the major, and professional advisors assisted students in their pre-major requirements (Cook, 2009). In 1981, Habley was conducting research on academic advising and retention. His advisement-retention model states that there is a “direct and critical relationship between academic advising and retention” (Cook, 2009, p. 23). Habley also insists that advising must be student-centered. In the 1990s higher education continued to provide support for special populations such as those with special needs.
In 1983, Habley introduced the different types of academic advising structures present at institutions. The purpose of this study was to explain the seven organizational structures of academic advising already in use at institutions, identify the possible issues or concerns when developing an advising program and finally, to continue the research regarding organizational structures as it was limited during this time (1983). The seven different types of structures are as follows: faculty – only model, supplementary advising model, split advising model, dual advising model, total intake model, satellite model, and the self-contained model (Habley, 1983). Knowledge of the different structures in academic advising is important to determine the best way to develop academic advising programs in an institution. Before this time, the organizational structure was often ignored. However, Habley (1983) identified four important factors to consider when developing an advising program:

- Organizational context
- People
- Policies and procedures
- Organizational structure

The organizational context is the climate of the university or college. It consists of the norms, missions, values and the different programs that are offered at the institution. The organizational context is what makes the institution unique. The organizational context influences the development of the organizational structure (Habley, 1983). The people of the institution are also very important in
developing an advising program. Considering the people of the institution, who will be the advisor? Will the advisors be strictly faculty? Is it a combination of faculty and full-time professional advisors? The third factor is the policies and procedures of the institution. Are many of the programs sequential in nature or are students free to choose among course requirements? Is there a central advising office? This also applies to the type of advising given to the advisee. If the curriculum is open to where the advisor and the advisee can work together to develop a schedule or if it highly sequenced that the advisor must prescribe when courses should be taken (Habley, 1983). Habley mentions a fourth consideration, which is an organizational structure. It is important that organizational structure fits and is compatible with the three considerations above, as this will determine whether an advising program is successful and effective. Below are the descriptions of the seven structures.

**Faculty – only Model**

In the faculty – only model, the organizational structure prescribes students with one faculty advisor in their major or subject of interest. If the student is undeclared, they are assigned to a faculty member from the Liberal Arts Department. Supervision of advising programs are decentralized and the responsibility of individual departments (Habley, 1983). While this has originally been the most popular model, it has declined. It is now used at only 15% of public four-year institutions (Tuttle, 2000).
**Supplementary Advising Model**

In the supplementary advising model, the faculty is still the primary advisors for students. However, there is an advising office whose role is to support faculty advisors by creating and maintaining advisor handbooks, training, and resources. The advising office handles certain situations or student concerns that a faculty advisor may not be qualified to handle. Usually, there is one individual who oversees the advising office, with limited staff members. They do not normally advise students or have a caseload. The supplementary advising model is the supervision of the faculty. It is also decentralized and the responsibility of individual departments (Habley, 1983). This type of model tends to be more popular among private institutions (Tuttle, 2000).

**Split Advising Model**

In the split advising model, students see both faculty advisors and staff from an advising center. Habley states that there are two versions of this model. The first type has the advising office responsible for all undeclared students, and faculty members see all major declared students. The second type is where students are assigned to an advising office if they have developmental or remedial requirements to complete. Once the student completes the developmental requirements, the student is assigned a faculty advisor. There is usually one person in charge of all advising staff to supervise advising activities such as creating an advisor handbook, training and providing support to faculty
members should it be needed (Habley, 1983). According to Tuttle (2000), the split model is used in almost half of 4-year public institutions.

The Dual Advising Model

In this model, advising responsibilities are shared between the advising office and faculty members. The advising office provides support in regard to general education requirements or other university policies and procedures. The advising office is usually also responsible for providing advising for undeclared students. Faculty members are responsible for providing major requirement advising (Habley, 1983).

Total Intake Model

All initial advising is handled by the advising office until a certain action or time period has passed. This model is usually in effect in institutions where students are entering without a declared major or when the institution decides to advise all students during their freshmen year regardless of declaring a major or not. Once the student declares a major or reaches a certain point in their academic careers, they are then transferred to the faculty advisor (Habley, 1983). According to Tuttle (2000), this type of model is used most often at community colleges.

Satellite Model

In the satellite model, academic advising is housed within different departments or colleges. Advising offices are responsible for advising within the
major for all students regardless if they are declared or not. Eventually, advising transfers to faculty at a later time (Habley, 1983).

**Self-Contained Model**

In the self-contained model, all academic advising occurs in one centralized office from when a student first enrolls in classes to graduation. This centralized office is often supervised by a dean or director of academic advising who oversees all advising related activities in the institution. Knowledge of the different types of advising structures is important especially when a university must adapt to the different changes to student demographics, policies, leadership and implementation of new strategic goals. Having an understanding of the different structures will help processing change much easier. According to a study that Habley (1997) conducted, using survey results from 754 colleges/universities across the nation, he discovered that many universities and colleges were not evaluating their advising programs. Only 51% of institutions said they review and revise their advising structures. The following year, Habley and Morales (1998) reviewed the survey results based on two levels: Advising program goals and advising program effectiveness as well as the type of advising structure used. Program goals included what students should be getting from advising interactions, such as: understanding that they are in charge of their academic journey, holistic advising of the student personally, academically, and professionally. Program effectiveness entailed how often academic advisors were available to meet with students, did advisors feel they had enough
professional development to keep abreast of the information, etc. Based on the study, Habley and Morales (1998) found that the dual advising model where students had two advisors assigned; a staff member to assist with policies and general education requirements and a faculty member to advise students on their career and professional goals had the highest scores in the goal achievement portion. The advising structure that came in second was the self-contained advising model where students are assigned one advisor from the time they are admitted to the time they graduate from the institution. This makes sense because students who were advised in the dual advising model were being advised holistically. They had someone to help with general education requirements and navigating the university experience through policies and procedures, but they also had faculty to help them with the career piece from someone who has experience in the field. In the self-contained model, students had one person that they were able to foster a relationship with and that advisor was responsible for that student until they graduated (Habley & Morales 1997; Habley & Morales, 1998).

Pardee (2004) states that while Habley’s seven advising models are helpful in understanding and planning an advising program, because of our current populations, funding models, and educational initiatives, creating our own advising structure is necessary. Pardee (2004) states that most advising problems exist because the advising structure does not align with the needs, mission and goals of the advising program. Therefore a review and possible
advising restructure is necessary to ensure the effectiveness of the advising program. Universities cannot advise the same way it did twenty years ago, when our students and issues advising is facing is different. Advising has to change often to ensure the students are being served.

Multiple Approach to Academic Advising

There are several approaches to academic advising. Many people think they should only use one approach when advising students. However, this is not the case. Just like each person is different, one approach will not be effective with all students. According to Hagen and Jordan (2008), multiple approaches can and should be used when working with students. Advisors should have several approaches they can use to make sure each student is advised correctly and that each student’s needs are met. I will discuss a few approaches that can be used with the developmental normative approach of academic advising.

In 1973, Glennen introduced intrusive advising, which is now known as proactive advising. He described how useful this approach was in retaining students in a university (Cook, 2009). Instead of waiting for students to seek advising, advisors actively intervened if a student needed assistance. Advisors take on a much more active role and contact students if they are missing requirements or if there is an academic issue (Boylan & Fowler, 2010; Haisserer & Parette, 2002).
Appreciative advising is another approach that has made its way in higher education. Developed by Bloom (2008), appreciative advising is used to advise students in college holistically. It is a “framework for delivering high-quality education on both the individual and organizational level” by using a positive and intentional advising approach (Bloom, 2008, p. 5). When working with a student, advisors focus on the individual’s strengths and potential, and they collaborate on developing the student’s goals. When using this approach, the advisor must use encouraging language and support the student by highlighting the achievements they already completed in the past (Truschel, 2008). It is an approach that has six phases: disarm, discover, dream, design, deliver, and don’t settle. In the disarm stage, advisors strive to develop a rapport with the student. Advisors should have a welcoming and safe space for the student to feel comfortable to discuss goals and potential issues. In the discover stage, open-ended questions are used to help the advisor learn more about the student, their goals, and strengths. The dream stage is where advisors explore students’ dreams and what they hope to be or do in the future. The design stage is where advisors and students work together and collaborate on a plan on how to make their dreams a reality. During the deliver stage, the student is working on making their dreams a reality. Advisors are present to ensure students are encouraged to keep moving forward in achieving their goals. Finally, for the last stage, both advisors and students must always strive for their best and not settle for anything less (Bloom, 2008).
In a study conducted by Truschel (2008), students who had less than a 2.0 grade point average were surveyed to see how they viewed appreciative advising after four advising sessions. The study consisted of 112 college students at a comprehensive public regional university who had less than a 2.0 grade point average and earned less than 30 college credits. Students were invited to participate in the study by a letter and were told that participation was completely voluntary. Those who participated were told they could discontinue their participation at any time. The survey consisted of 15 items which used an ordinal scale that measured four subscales: self-efficacy, self-esteem, motivation, and commitment. The scales were from 1, meaning strongly disagree to 5 for strongly agree (Truschel, 2008). Students were seen three times during the first five weeks of the semester. During these meetings, an alliance was created between the advisor and the student. In the second meeting, advisors had students develop their dreams and design a plan on how to achieve their dreams by utilizing their strengths and abilities. The last two meetings are where students were on the destiny stage of the approach. This is where the students developed a plan and continued to keep working on the plan.

Results indicate that appreciative advising is a positive way to work with students. Students comments were very positive, and they felt encouraged after seeing advisors who used the appreciative advising approach. Their comments displayed their intentions to do well in the future and how they were going to achieve their goals. The only drawback to this study was that developing a
comfortable relationship took a bit of time and may not be conducive for colleges or universities where advisors have a large student caseload (Truschel, 2008).

Advising as Teaching

Another approach that stems from developmental advising is the “Advising as Teaching” approach. In this approach, the advisor should facilitate learning, problem-solving and decision-making skills in the advising process (Ryan, 1992). Ryan (1992) encouraged advisors to mirror their relationship with students; the same way a professor or faculty member would create a relationship with the students in their courses. According to Karp et al. (2016) “effective advising entail not only disseminating information but also cultivating students’ higher order reasoning skills” (p.4). Therefore, advisors, regardless if they are faculty or professional advisors must have clear objectives, and a standard of performance, meaning the student needs to know what is expected of them. Advisors as teachers need to implement teaching strategies such as checking for understanding, providing an exercise or activity, so the student has practical experience, and most importantly, make the subject matter relevant to the student and their lives (Drake, 2013). Advisors need to understand that just like teachers, the advising process should be a learning experience for a student. Therefore, the advisor should use techniques similar to what an effective teacher would use to teach their students in a classroom (Drake, 2013). With this approach, students should be able to use the advising materials and resources
instead of just being a recipient of information and learn the skills to be able to navigate their way towards earning their degree.

Challenges for Academic Advising

Academic advising currently faces several challenges. The first challenge is that academic advising in colleges and universities are mostly decentralized, where each department has a different advising program, style, and structure. Navigating policies and procedures and from major to major can be difficult for students (Bryant, Claise, & Roopchand, “Driving Toward a Degree”, 2015). In addition, while developmental advising is the preferred way of advising, due to advisor caseload, prescriptive advising is what typically occurs. Some advisors have a caseload ranging from 800 to 1200 students, making developmental advising strategies difficult to do with each student (Jaggar & Karp, 2016). Also, as mentioned above, student demographics are changing. The current students that advisors are assisting have other issues that need to be addressed, such as financial aid and outside obligations such as family and career (Kalamkarian & Karp, 2017).

Due to time constraints and how the advising office is structured, a student’s experience in academic advising can vary from each department. This can lead to a poorly developed advisor-student relationship. Kalamkarian and Karp (2017) also stressed that when an advisor has a large caseload, the responsibility of the interaction falls on the student. If the student does not take
the initiative to come in for advising, then it is possible that the student may miss out on the advising experience altogether. In addition, Kalamkarian and Karp (2017) state that advisors who are under this stress tend to be “registration clerks” instead of helping the student holistically, or in other words, personally, academically and professionally (para. 9). The problem of registration clerks is also due to when advising happens. Often, advising occurs during a short period right before registration for the next term begins. This leads to the “registration clerk” premise because advisors are not able to make regularly scheduled appointments with students due to their caseloads (Kalamkarian & Karp, 2017). Universities also split advising functions. There are advisors for career, financial aid, academic, and personal counseling that students must have the initiative to seek out if needed. Advisors may have a caseload of students, but they may not have assigned students. Meaning there are 4500 students in a department, but there are two professional advisors who students can meet with. Students may have to meet with different advisors each time they come in for help (Kalamkarian & Karp, 2017). Not being able to meet with the same advisor for each meeting may make it difficult to create an advising relationship built on trust. Students may not ever reach the point where they are comfortable to share their issues or collaborate to achieve their goals (Kalamkarian & Karp, 2017).
Academic Advising is Changing - Again

While administrators understand that several aspects of higher education are changing, advising structures within the institutions are starting to change as well. NACADA has even developed a three-pronged technique to assist universities in changing the advising culture in their respective campuses, which includes marketing and outreach, relationship building, and development of student-centered programs (Plante & Bata, n.d.) Transformative changes in academic advising are currently occurring at colleges and universities to help students be successful (“Advising Redesign,” 2017). As was previously mentioned above, academic advising has been steadily changing since it started in the 1800s. With advances in technology such as the internet, course bulletins and program information can now be found online. Students can find information about majors on their own and meet with advisors to discuss information such as academic and professional goals. With inventions such as the iPhone and other handheld devices, students can check their degree requirements anytime and from anywhere. In addition, students can video chat with advisors instead of coming in person for appointments. This helps students who are attending courses remotely since universities and colleges are offering more online and hybrid courses to accommodate students and their personal needs. According to Leonard (2008), technology in advising is appropriate if it enhances the advisor and student collaboration process. It should also make advising more efficient by making information more readily available and accessible. Universities and
colleges have been using degree audits that help students and advisors understand what a student needs to graduate. For example, requirements that are still needed to be satisfied will have a red “x,” and those that are completed will have a green check mark. All these technological advances have contributed to helping advisors work with the whole student rather than the administrative registration process that so many universities and colleges still do. Instead of having to determine the requirements needed for graduation, the advisor can spend more time on how the student can achieve their goals and deal with outside obligations and responsibilities while enrolled in school.

The concept of the traditional student no longer exists. In order for transformative change to happen at a college or university, the change needs to happen in three areas: structural, process, and attitudinal. The structure relates to changes in the organization or structure of how things are conducted. The change in process deals with “changes in individual engagement, behaviors, and interactions with systems and business practices” (“Advising Redesign,” 2017; Klempin & Karp, 2018). Finally, attitudinal changes deal with the underlying attitudes, values, and beliefs of the institution (“Advising Redesign,” 2017; Klempin & Karp, 2018). Anft (2018) states that academic advising is “undergoing a sea of changes” (para. 9). Not only are advisors helping students on what courses to pick for next quarter, but they must also do more to keep a student on track such as understand financial aid, academic probation and dismissals, extracurricular activities, mental health issues, and food and home insecurities.
Anft (2018) states that universities are looking to advisors to provide these services and more. Advisors are being called upon to assist in retention, graduation and timely completion efforts. Lindsey Miars, a director of strategic research from EAB Student Success Collaborative, a consulting group for analytics in education, states that universities and colleges need to structure advising programs and train advisors so that students have a chance at success in their campuses (Anft, 2018).

With the added responsibilities of advisors, the position is becoming more professional. Even though the average salary is low, positions for advisors now require higher levels of education such as masters and doctorates to handle what is needed for student success. Knowledge on how to interpret reports and dashboards as well as leadership skills to help garner buy-in from colleagues and upper management is needed to help initiatives for student success a reality. As previously mentioned above, hiring for academic advisors in colleges and universities are also increasing (Anft, 2018). One reason for this is because several colleges and universities are starting to stray away from the faculty advising model and focus on professional advising at the undergraduate level. According to Anft (2018), NACADA conducted a study and found that between the years of 2013 and 2016, colleges and universities have increased spending for professional advising staff by 36% and increased spending for advising technology by 43%. Colleges are looking to strengthen their advising process by including “technology-mediated advising programs” (“Advising Redesign,” 2017).
Technology-mediated advising programs support advising personnel at an institution by allowing them to engage in long-term and intensive relationships with students.

Other universities are requesting advisors to have more intensive first-year advising programs with students to create that one on one relationship. Other universities such as public colleges in Georgia have a program where advisors are connected with students who may not do well in an introductory course in their first year. However, the structure of advising is the problem. While advising seems to be progressing, it is nowhere near where it should be to help students succeed. College leaders are stating that advising issues are due to structural problems in the advising programs at the university (Anft, 2018). Colleges are starting to change advising programs to be more centralized. The University of California campuses are creating administration positions that deal specifically with advising who report directly to the provosts or undergraduate deans. Universities are now creating retention and graduation teams to assist students who may be in danger of stopping out. They also determine reasons for leaving which is often unknown as to why a student may depart. Anft (2018) states that while technology-mediated advising is helpful, the one to one relationship is still the most important way to reach out to students.
Technology Making its Way into Higher Education

Marquez, Ding, and Hsu (2001) believe that web-based advising tools can assist advisors when working with students. While academic advisors are hired in the university to help students make decisions about their educational careers, sometimes there is a disconnect. Some students find that their experiences with academic advisors are negative due to a high student to counselor ratios, lack of training and resources, as well as the length of time advisors must spend with their students (Iatrellis, Kameas & Fitsillis, 2017). Iatrellis et al., (2017) conducted a study to explore the basic research directions of academic advising systems and what guidelines do researchers use to achieve these goals. They wanted to determine what empirical evidence was out there to impact students’ learning processes and interpret the different types of results. Iatrellis et al., (2017) separated the research they found into three research objectives: choosing programs/majors, selecting courses, and long-term academic planning. While they were able to find articles about web-based advising tools, much of the information was lacking. Iatrellis et al., (2017) found that while implementation of academic advising systems is well addressed, a model on how to implement at the university would be helpful. These web-based advising tools should assist advisors in helping students, and not replace them. Unfortunately, there is not a model on how universities can implement the web-based advising tools to ensure advisors are working with the programs to ensure student success.
Marquez, Ding, and Hu (2001) identified that academic advising systems could help eliminate inconsistencies in advising practices amongst different advisors. They created an academic advising system program to help advisors in the computer science and engineering department to help supplement and assist academic advisors. The goals and objectives of Marquez, Ding, and Hu’s (2001) work is to minimize the repetitive tasks associated with advising, to extend the availability of advising-related information to students who are not on campus or are connecting remotely, provide academic advising in a consistent way, provide one place to keep academic advising related information, and most importantly, to encourage student to have a “proactive attitude towards advising related issues” (p. S3C-8). Promoting students to take responsibility for their educational plan and to be a part of the decision-making process is the most important part of academic advising. This means the student is learning how to evaluate their options and make their own decisions about their academics.

Fowkes and McWhirter (2007), use the term computer-assisted guidance systems in their study. These have the potential to be efficient and helpful regardless of what type of advising strategy is used. While the earliest documented computer-assisted guidance system was created in the 1960s to provide self-assessment and career exploration, it is starting to be a resource for academic advisors in higher education. Guidance systems that are computer-aided help advisors make connections between majors and help students see connections between the courses and the majors. These programs allow
students to explore and complete self-assessments to get different options on what the best major or career for them would be (Gati & Asher, 2001). Gati and Asher (2001), posited that computer guidance systems would impact how advisors conduct academic and career advising especially in the future. As technology advances, the systems can become sensitive to be able to analyze additional factors (2001).

Technology-Mediated Advising Systems

The 21st century brought declining resources for higher education. Universities and colleges are having to accommodate more students with decreased resources. According to Cook (2009) “the challenge is to advise more students with no additional staff while maintaining high-quality services” (p. 26). Technology’s rapid advancement required institutions in higher education to adapt to new technology and support students who are technologically advanced. Implementation of online courses and resources are being developed, and new programs entirely online where students do not have to come on campus were being created (Cook, 2009). According to Kalamkarian and Karp (2017) technology mediated-advising systems which are also known as Integrated Planning and Advising for Student Success (iPASS). “… seeks to improve degree or certificate attainment by facilitating both intra-institutional coordination of student supports and data-driven academic decision-making for advisors and students” (para. 13). Funded through the Bill and Melinda Gates
Foundation, iPASS was created to help reform student success strategies (Fisher, Grant, Ramos, & Karp, 2016). Services or products that fall into technology-mediated advising are the following:

- automated communication within the institution, an institution-wide platform for identifying academically at-risk students,
- interactive multi-semester course planning modules for each student,
- shared staff access to notes from advising sessions,
- and integration of existing technologies, including data and course management systems. (Kalamkarian & Karp, 2017, para. 14).

Technology-mediated advising systems are finding itself in more universities and colleges across the nation. According to Fisher et al. (2016) there have been 42 colleges awarded funds to implement technology-mediated advising systems through the iPASS grants. There is also an increase in the number of companies offering technology-mediated advising tools. According to Fisher et al., (2016), there are over 120 companies that offer iPASS related services for universities and colleges.

While technology-mediated advising programs are helpful, there are several challenges (Fisher et al., 2016). Universities have their own way of using and implementing technology-mediated advising systems. Therefore, how and what is implemented can vary based on the students, the advising structure and vision of the campus (Fisher et al., 2016). In addition, just because universities are using technology-mediated advising tools, does not mean a meaningful intervention is taking place. Universities must be using the tools to ensure that
students are receiving personalized support to ensure success (Fisher et al., 2016). The tools must be used to ensure that the advisor is connecting with the student. The problem is that some universities and colleges that are implementing technology-mediated advising systems are using the tools to increase the number of students “check-ins” for advising or taking notes on a student. However, the advisors are not using the technology-mediated advising systems to enhance the relationship. Steele (2016) indicated that a major issue with technology-mediated advising systems is that it is missing the teaching and student learning outcomes in advising and the student being assessed. Instead of advisors ensuring that students are learning how to read their degree audits or that they can schedule their own courses, technology-mediated advising systems are forcing advisors to make sure they note who they met with, send email campaigns to make sure each student has been connected with (Steele, 2016).

According to Kalamkarian and Karp (2017), technology-mediated advising systems will allow colleges and universities to coordinate with all student success stakeholders campus-wide to ensure students are persisting and completing a degree in a timely manner. Technology-mediated advising tools have the ability to break down silos and encourage stakeholders across the university to collaborate and ensure students are achieving their goals (Fisher et al., 2016). Kalamkarian and Karp (2017) indicate that research regarding technology-mediated advising systems is lacking. Most of the information about these programs are descriptive and share implementation evaluations from universities
and colleges. However, the information is incomplete and does not provide the full picture regarding the implementation, outcomes, and process.

There are three major functions of advising technologies: educational planning systems, counseling and coaching systems, and risk targeting and early alert intervention systems (“What we Know,” 2017; Fisher et al., 2016). The educational planning systems are tools that help map out or plan a student’s schedule. This allows the advisor and student to keep track of graduation requirements and map out a plan of action for the student. The counseling and coaching systems are tools to help improve students’ connections to support services. These tend to be applications or programs that help students get connected to information or resources. Finally, risk targeting and interventions systems, or predictive analytics, are tools that provide a way for an advisor to identify and assist students that may be in danger of struggling or stopping out (“What we Know,” 2017). By using technology-mediated advising tools for the three functions mentioned above, colleges and universities can provide Sustained, Strategic, Integrative, Proactive and Personalized (SSIPP) advising (Fisher et al. 2016; “Advising Redesign,” 2017).

Sustained, Strategic, Integrative, Proactive and Personalized Advising

When implementing technology-mediated advising at an institution, one must stop using the approach that is often used in many colleges and universities across the nation, which is advising as registration clerks. Using SSIPP changes
the way advising is done at the university. This means advisors may have caseloads where they are in charge of a group of students from when the student starts to when they graduate. This one advisor is who will ensure the student completes their degree but also ensures they connect students to whatever resources or programs are necessary for success. Advisors must reach out to students regularly, take notes on the student regarding their advising sessions and have engaging conversations (“Advising Redesign,” 2017). According Karp et al. (2016) using the SSIPP approach is helpful in advising all students: those that think they do not need assistance but really do, those that are scared or do not want to seek help, and those that need campus resources but do not seek them. SSIPP advising was developed from the premise that one interaction with an advisor loses its importance over time. However, proactive interactions that are sustained, or happen over time and are done strategically will have a larger impact on students (Karp et al., 2016). SSIPP advising also breaks down advising silos especially in very decentralized advising programs in universities and colleges. Currently, there is not much research available on the SSIPP model of academic advising. However, Fisher et al., (2016) states that technology-mediated advising systems help promote SSIPP advising because it forces all stakeholders in student success to collaborate and consider new innovative approaches and or ideas to help students succeed.

According to Klempin and Karp (2018), for technology-mediated advising systems to be successful at helping students achieve timely graduation, colleges
and universities need to adopt technology-mediated advising systems in ways that changes the way advising takes place in the institution from the transactional approach such as clerical registration to the holistic case management support approach (Klempin & Karp, 2018). Klempin and Karp (2018), state that in order for technology-mediated advising to be successful, "transformative change at three levels of organizational functioning – structural, process, and attitudinal" is required (p. 83). Structural change deals with changing the process of how advising is conducted and how it is designed. Process change is changing the way individual advisors meet with students. Attitudinal change involves changes to underlying values, beliefs, and attitudes. For example, Klempin and Karp (2018) give the following example of what kind of transformational change is needed for universities to change to a holistic case-management support system.

An example of a structural change is changing from a model where advising is a first come, first served drop-in model to a mandated advising caseload. Process changes in advising are when an advisor may help students map out the entire degree but ensuring students understand not only why they need certain courses, but how to develop a schedule that promotes their success taking into their strengths, challenges and affective responsibilities. The attitudinal change consists of advisors changing their beliefs. Instead of seeing themselves as someone who schedules courses for students, they see themselves as a support system to help students not just academically, but professionally and personally as well, like a case manager (Klempin & Karp, 2018). It is important to note that if
a change occurs in one area but not the others, then institutional functioning may not improve. It requires changes in all three areas to see improvement and positive change. Klempin and Karp (2018) state that “a multidimensional definition of transformative change aligns closely with definitions of organizational change” (p. 84). Klempin and Karp (2018) conducted a contrasted case study which involves the implementation of technology-mediated advising at six colleges/universities. The six institutions received grants for implementing iPASS technologies, and they had to have an institution-wide commitment to implement the program. This means, the institutions’ advising, administration, institutional, and information technology departments, as well as faculty and student services needed to be on board as well (Klempin & Karp, 2018). Colleges and universities were selected for the study using the RTA framework where they were asked to respond to questions concerning their institution’s readiness to implement the program. Questions consisted of information regarding technology, culture and general information about the institution. Institutions with different scores on the RTA were chosen to ensure findings were not due to preexisting conditions. However, institutions chosen served the same types of students to ensure that findings were not due to student characteristics (Klempin & Karp, 2018). Klempin and Karp (2018) conducted semi-structured interviews with 52 administrators and key iPASS stakeholders as well as 49 iPASS end users which consisted of advisors, faculty and support staff. The interviews consisted of motivation for the implementation, leadership, and decision making within the current college
culture. End users were asked about their plans for using iPASS, especially regarding advising. A follow-up interview was conducted two years later in 2015, and 66 out of the original group completed a second interview. The interviews were transcribed and coded using Atlas.ti. The researchers saw a correlation between the colleges’ leadership styles and early signs of transformative change. Klempin and Karp (2018) found that the colleges that had project leaders who shared a clear vision and goal of adaptive change were also the ones making changes to the university structures, attitudes, and processes. For example, one institution that had a divided leadership style failed to make the implementation of the iPASS system successful. However, colleges that had leaders who viewed the iPASS implementation as a complex process that would support end users in students' success found the most positive change (Klempin & Karp, 2018). Colleges with leaders who supported, listened, and understood end users made the biggest strides in implementing iPASS. Klempin and Karp (2018) also discussed one institution that had a leader whose vision for iPASS was not well supported by fellow institutional leaders. The project leader had to know who would support her, gain buy-in from end users, demonstrate early success, understand the iPASS technology and manage the implementation with a hands-on approach. Klempin and Karp (2018) found that technology-mediated advising is a helpful strategy in helping student success only if the implementation is done with the “adaptive challenge requiring structural, process, and attitudinal changes” which is required for a transformational change to take place (p. 99).
While this study is very helpful and gives an introduction to effective strategies necessary for a successful implementation of technology-mediated advising, it is important to note that this study only reviewed six different colleges/universities. Leadership is also very complex and plays a large role in adaptive changes in universities and is a variable in the success of implementation.

According to the article “What we Know” (2017), many advisors on campus are currently operating as advisors as registration clerks in regard to the three dimensions of transformational change mentioned above: structural, process and attitudinal. This means to handle a large caseload of about 1000 students to one advisor per term, structurally, advisors are only offering drop-in advising. There are no assigned advisors to students and advising is focused on peak periods such as advising week or registration periods. Advisors must rely on the students’ ability to report issues and problems. Advisors act as registration clerks in the process dimension by having advising sessions focus on the following quarter or semester. Advisors advise exactly the same way to different students and on the same timeframe as other students. For example, advisors work with a targeted group of students annually the same way each year. Also, advising tends to be planning of schedules instead of goal and career planning. Lastly, attitudes of advisors are similar to registration clerks as they are only visited to complete a function such as removing an academic advising hold. The interaction is less personal and distant (“What we Know,” 2017).
Predictive Analytics: The Selling Point for Technology

Predictive analytics is increasingly having a major role in higher education and is the driving force in SSIPP advising (Klempin, Grant & Ramos, 2018). Coming from the evolution of big data in business intelligence, it is a strategy that can help institutions with few resources connect with students who may require assistance in persisting and graduating (Burke, Parnell, Wesaw, and Kruger, 2017; Attaran, Stark & Stotler, 2018). Big data consists of high volume, high-velocity, and high variety data which are usually too large to be handled. Since the cost of attending college is increasing, colleges are being scrutinized and must show evidence of how students are being retained and graduated in a timely manner (Burke et al., 2017). Focusing on the several issues advisors must face such as large caseloads, predictive analytics are being used to create target advising structures and campaigns to help increase student persistence, retention and graduation rates (Klempin et al., 2018). According to Attaran et al., (2018), the amount of data will increase by 800% in volume within the next five years which can assist in the college market. Students are increasingly using technologies such as smartphones and tablets which utilize the web-based advising tools that specialize in big data. According to Klempin et al., (2018) there are several vendors specializing in predictive analytics for higher education who are developing or adapting software for college campuses. Attaran et al. (2018) state that predictive analytics uses business intelligence as a set of technologies and tools that use data to predict how individuals can fare in the
educational system. By using the data such as demographics, grade point averages, self-survey data, and other measurements of performance, predictive analytics can potentially provide information that makes advisors aware of students who may need additional resources and support, that normally may fall through the cracks (Klempin et al., 2018).

There are three popular categories of predictive analytics: descriptive, predictive, and prescriptive (Attaran et al., 2018). As the simplest of three mentioned above, descriptive analytics is used to summarize information from the past and condense information to smaller bits of information. It is used to uncover patterns and help collect and store data by using “…data modeling, reporting, visualization, and regression (Attaran et al., 2019, p. 171). By analyzing both historical and current data, predictive analytics can provide educators with insight on what can potentially happen to their students and project potential future situations with “…an acceptable level of reliability” (Attaran, et. a., 2018, p.171). Prescriptive analytics takes it one step further than descriptive and predictive models by providing a likely outcome of each decision (Attaran et al., 2018). Prescriptive analytics uses decision modeling, simulation and optimization to evaluate the possible futures and adjust in decisions before they are made (Attaran et al., 2018). This is said to be the most valuable category of analytics as it can impact the future of a student. Analytics can be used to transform college activities such as enrollment, alumni engagement, financial aid in the different stages of a student.
There are three stages for students regarding analytics. The first stage is pre-student or when the student is applying to the college or university. Analytics can determine whether or not a student is more likely to be an on-campus resident versus a commuter based on their residence. It can determine whether a student is likely to participate in college activities based on the high school they attended. It can also predict what type of resources such as tutoring, supplemental instruction or writing centers a student may need based on their SATs, grades, and grade point average in high school. The second stage is the student stage. This is where the student is actively enrolled in courses. Data in the student stage includes their test scores, classroom participation, attendance, and even discussion board entries. Attaran et al. (2018), states that all of the data above can be stored and analyzed, and this is where analytics can be a stakeholder in student success. If a student does not complete their online writing assignments, and they received a mediocre grade on a writing-based course, analytics can be used to send a message to the student's advisor and the university writing center to make sure the student receives the support they need to be successful. The third stage is the post-student stage. This includes donor information for the college, information of previous donors, community affiliations, residence, income, and ethnicity. A university can use analytics to determine which neighborhoods donate and focus on creating relationships with that group.

While predictive analytics is seen as a tool that can revolutionize advising in higher education, there are several drawbacks. Since the program uses
historical data such as demographics which includes race and ethnicity, it can potentially predict outcomes for students based on their background and their groups. This can lead to a form of “automated stereotyping” which does not consider different circumstances the student may have (Attaran et. a., 2018, p. 176). For example, a student may have done poorly in a course because of an illness. If this course is listed as a predictive indicator for success in future courses, it can incorrectly categorize a student. Advisors and individuals that work with the program may not be properly trained, thus negatively impacting the student by giving incorrect information. It can predetermine what and how much a student is capable of and categorize students in risk levels based on predictors that may not be valid (Klempin et al., 2018). Another way it can be potentially negative is by using the predictive function to determine which students may be at risk of not completing and encouraging them to stop out before it impacts the colleges’ retention numbers, which was the case for some universities in the past. Typically, predictive analytics systems will analyze data in the following five categories: pre-enrollment data such as high school information, grade point averages, and demographics, academic data which demonstrates how the student has performed in specific college courses, noncognitive data collected through student surveys, data on service use such as tutoring and lastly, engagement data such as attendance at campus events and activities. The predictive analytics system compares the student’s information with a large amount of historical data and predicts how successful the student may be by
placing them into different categories. Some have a color scale, where red is considered high risk, yellow is an intermediate risk, and green is a low risk of not graduating. Other vendors have models that have several variables to rank students’ ability to persist. In an Educause study conducted in 2015, it was found that one of the challenges in implementing analytics in education was the “organizational behavior issues such as resistance to change and a lack of vision” (Attaran et al., 2018, p. 176). One of the most important ways to receive buyback from those in the educational system that will use this type of web-based advising tool is having a “fundamental shift in thinking,” analytics needs to be “repositioned in the mindset of professionals working in education” (Attaran, et. al., 2018, p. 173). Another concern with analytics is the safeguarding of information. Determining who gets access and how much access to be able to efficiently help a student is important especially during the implementation stage. The university or college must ensure they protect students from potential invasions of privacy. Determining which roles get access and how much information they can see is imperative. Does a peer advisor get access to see another student’s record? Alternatively, is it limited only to professional and faculty advisors? Do administrators need full access? Establishing the safeguards and ethics of analytics is so important during this process. Attaran et al., (2018) question whether data should be collected in the first place and whether the collection of data outweigh the costs.
Attaran et al., (2018) provide seven ways to ensure a successful implementation of analytics in a college or university. There must be a vision and plan, scalability, user-friendly interfaces, the system is up-to-date, there is real-time collaboration, installation is quick, and the program is reliable and secure. What is important is finding the right analytics for your own specific college or university. There are several technology-mediated advising tools and analytics that universities and colleges can use to create a program to help student success initiatives on their campus. Analytics is helpful, but it is not enough. Colleges and universities need to determine the best way of incorporating analytics, with individual advising strategies, and the universities need to determine the best structure to serve their students (Anft, 2018) best. In addition, universities need to train advisors on how to use analytics with their preferred approach of advising.

In a qualitative study conducted by Klempin et al., (2018), perceptions of predictive analytics from administrators, core members who helped develop the program at the campus and end users such as advisors and staff who use the program were coded and analyzed. There were 58 participants that came from a mixture of different 2 year and 4-year institutions. The study took place from March 2016 to February 2017. These institutions were either considering whether they will purchase and adopt the program in their university; in the planning stage where the predictive analytics tools have been purchased, and there were a group of people who were currently developing the product in the campus. The
third group of participants was in institutions who have already been using the predictive analytics program (Klempin et al., 2018). The participant sample was also broken up into three different groups: administrators, core team members that were directly involved in the reform, and end users such as advisors who use the product (Klempin et al., 2018). Overall findings from the study indicate that there were 23 participants who mentioned both positive and negative factors with predictive analytics. Fourteen participants indicated only positive factors with predictive analytics and 21 participants mentioned only negative criticism. Findings from the study indicate that validity was an issue. Twenty-six of the 58 participants found that validity was a concern. Participants indicated that they would have a student that they worked with that was doing well, had a high grade point average and was on the right track, but based on the predictive analytics, the student would have a high-risk indicator on their file. In addition, based on the algorithm used for predictive analytics, different variables or criteria may be weighted more heavily than others.

Participants also indicated that interpretation was a problem. Fifteen participants did not feel they had adequate training on how to apply the information from the predictive analytics program to students. One participant said they did not have enough training to translate information from a risk factor to an intervention to help the student. Participants also wanted information on how the algorithm works. They wanted to understand why a student was receiving a high-risk level while similar students were categorized with low risk.
They felt that if they understood how the algorithm worked, they could better advise students and recommend resources.

Participants also expressed concerns regarding ethics (Klempin et al., 2018). Predictive analytics can potentially create a negative relationship between advisor and student. Some end user participants felt that predictive analytics was “taking away their autonomy” when working with students (Klempin et al., 2018, p. 17). By using the program, advisors may have an opinion created based on predictive analytics before even meeting the student. Rather than a natural relationship forming, the advisor can create ideas and opinions of a student before even meeting them. In addition, while historical data regarding ethnicity and demographics is used, algorithms can predetermine a specific group for failure. If an advisor is knowledgeable, they will be able to investigate further and help the student. However, if the advisor is improperly trained and does not know to take the information from predictive analytics like a grain of salt, it can create unrepairable damage to a student and or student group (Klempin et al., 2018).

One of the most important findings that Klempin et al., (2018) found was that the more people used the predictive analytics feature, the more critical they were of it. This is important to understand because administrators are usually the ones that make the decision to implement predictive analytics in their institutions but are not the ones that have to use the system on a daily basis. Therefore, the positive impacts of predictive analytics are what support their decisions to implement. However, this study indicates that the more people use predictive
analytics, which are the end users such as advisors and staff members, the more critical they were of the software. They are able to experience the shortcomings and possible ways it can negatively impact student success and relationships. When administrators are implementing these programs, this information is imperative to help conduct change in an advising structure and program.

Benefits and Disadvantages of Technology-Mediated Advising Tools

The benefits of technology-mediated advising tools include students having the opportunity to review their academic and career choices anytime and from anywhere. Students will have the ability to access resources to help them in planning their academic and career paths. Immediate feedback is also a benefit as students will be able to access information prior to making an appointment and physically seeing their advisor. Oliver and Whiston (2005) list user error as a disadvantage to technology-mediated advising tools. Students can easily access the information, but they may not seek the assistance of academic advisors if they do not understand the information or requirements. This can lead to problems where students take incorrect sequencing of classes, fail to enroll in prerequisite courses or take classes that are not degree requirements. In addition, confidentiality and internet security become an important concern (2000). While technology-mediated advising programs appear to be very beneficial, its role is to manage course and major requirements so that advisors can build trusting relationships with their students (Sampson et al., 1992).
Conceptual Framework

According to Berman (2013), a conceptual framework is important in a study because it “establishes theoretical coherence, organizes research design and implementation, and helps frame conceptual conclusions” (p.9). In addition, a conceptual framework helps the researcher formulate the research questions used in a study (Berman, 2013). Given the need to understand, lead and enact change in higher education, particularly in relation to academic advising, I will employ various schools of thought related to change including, scientific management, evolutionary, social cognition, cultural, political, and institutional. I elaborate on each school of thought below, with particular attention to the cultural and social cognition school of thought. First, however, I highlight the complexity of the change process and discuss first and second-order changes.

As mentioned above, there are several changes impacting institutions of higher education, such as changing student populations and levels of college readiness, overcrowding, and new initiatives. Change is inevitable, and there are external forces and pressures that can add stress to institutions: technology, community and or collaborative learning, multiculturalism, changing demographics, and an increase in enrollment of international students (Kezar, 2001). In addition, higher education, which historically has been seen as a social institution is morphing into an industry (Gumport, 2000). Higher education is becoming more and more like a business, with an increasing product (student enrollment), and increasing the workforce and research (Gumport, 2000).
However, even after all these changes, institutions of higher education have worked to uphold traditional educational policies and procedures. As student demographics change, colleges and universities are slow to adapt and continue to force students to fit the traditional college student mold. Academic advising can be the key universities use to reach goals in increasing student retention and graduation rates (Kot, 2014; Ensign, 2010). However, for this to really happen, changes in advising must occur in order to serve all types of students. Because of advising’s current state and position within a typically decentralized and loosely coupled system, a lasting change can be very difficult to achieve. Many leaders are trying to solve today’s problems by using strategies that have worked historically, which may not be what is in the best interests of students. Institutions of higher education must be flexible and ready for changes, but also be able to recognize when deciding not to change is the best option (Kezar, 2014).

According to Peters (2013), only about 30% of change initiatives are successful in higher education, which stresses the need for having an effective change management plan. Before describing change theory, one must also understand why some change initiatives do not succeed or become permanent. According to Senge (1999), for change to be sustained, a fundamental shift in thinking needs to happen. Senge states that there are three challenges of sustaining change: 1) anxiety and fear; 2) concern with performance measurement (means different things to different stakeholders), and 3) change that occurs in one area is isolated from the rest of the organization.
For change to be sustained, change agents must be mindful of these challenges when implementing their change management procedures. According to Quatranne and Hopper (2001), change occurs when organizations want to revamp their structure/systems or implement new programs. While universities can be seen as an organization, they are different because they have unique cultures compared to other institutions, such as subcultures regarding college rituals and traditions, as well as faculty and student subcultures (Kezar, 2001). Some of these unique features include multiple power and authority structures, loosely coupled systems, shared governance, tenureship, goal ambiguity, tradition vs. nostalgia, and culture.

First and Second-Order Changes

In order to determine how to conduct changes, one must understand the degree for change to be lasting. There are two types of changes: first and second-order changes. According to Ertmer (1999), first-order changes are small, surface level, changes that adjust the way things are done to increase productivity and efficiency. First-order changes are easier to accomplish then second-order changes (Kezar, 2014). When implementing first-order change, culture and beliefs are not affected or changed. It is usually changing in procedures or structure (Ertmer, 1999).

Second-order changes can be challenging, and they affect the way people think and feel about the changes in process (Ertmer, 1999; Kezar, 2014).
Second-order changes are deeper because it transforms the “…operating systems, underlying values, and culture of an organization or system” (Kezar, 2014, p. 62). Second-order change is often tied to the culture of an organization because, in order for a true change to take form, the culture needs to be essentially changed or modified to understand why the change is needed. There are two ways to determine whether second-order changes take place at an institution of higher education. The first sign is how people interact with each other. If new conversations are taking place among all stakeholders and connections are being created or strengthened then second-order changes are taking place (Kezar, 2014). Another sign of second-order changes in higher education is when changes in the way things are historically or traditionally done occur. For example, advising in higher education is currently experiencing a second order change. Academic advising has traditionally been conducted by faculty advisors, as they have the professional experience to be able to mentor students in the field of study (Dillon & Fisher, 2000). However, universities and faculty members are starting to see how beneficial professional advisors are in helping students achieve timely graduation and retention (Alldar & Pasaharak, 2013). Conversations of how faculty and professional advisors can collaborate are taking place, and partnerships in projects are being developed to ensure students are graduating. Universities are starting to restructure the way students are advised which is different than what traditionally has been done in the past (Kot, 2014). This is an example of second-order change because it is not just the
structure of how advising is taking place in universities that changed, but the beliefs and values regarding advising are changing to support the collaboration of faculty and professional advisors.

According to Kezar (2014), “the defining feature of second-order change is the attitudinal change that is simultaneously manifested in an organization’s structures” (p. 63). The types of change (first order or second order) can be better understood when considering the different schools of thought related to change.

Six Schools of Thought Related to Change

Kezar (2001) reminds those who are enacting change to consider colleges’ and universities’ unique culture which she defines as “the deeply embedded patterns of organizational behavior and the shared values, assumptions, beliefs or ideologies that members have about their organization or its work” (Kezar, 2001, p. 440). As noted above, there are six main schools of thought related to change: Scientific management; Evolutionary; Social cognition; Cultural; Political; and Institutional (Kezar, 2014). Having knowledge of incorporation of each school of thought promotes the ability to carefully analyze the change at hand and select the best strategies and approach to implement lasting change and achieve goals (Kezar, 2014).

The scientific school of thought deals with planned change. Change happens because those responsible for change believe it is necessary to the
overall success of the organization. Therefore, change comes from within the organization and is purposeful. The change agent or leader bringing upon change has an important role in the scientific management school of thought. They are responsible for analyzing and determining how to restructure the organization and often use rewards and incentives to promote change. Change agents are also responsible for being the example or role model of change. In addition, they are expected to set expectations and evaluate the change occurring. First-order changes are usually the types of changes that take place in the scientific school of thought (Kezar, 2014). An example of scientific management is when leaders want to change the structures or processes to become more efficient and or make the processes more student-friendly.

In the evolutionary school of thought, change comes from the external environment. Since change comes from external sources, change is usually unplanned, and those in the organization are slow to change and adapt. The type of change that takes place tends to be first order changes as the organization is adapting to outside pressure and forces and tend to be an act of survival rather than from human agency (Corbo, et. Al., 2016). An example of evolutionary change is the California State University Chancellor’s Graduation Initiative 2025. Universities have external pressure (the Chancellors office) to change the way advising is taking place to meet the requirements of the initiative. Without this push from external sources, new advisors may not have been hired to help lower current advising caseloads.
The social cognition perspective emphasizes the thought processes of individuals within the institution by helping individuals present their unconscious thoughts and ideas out in the open, allowing the organization to adapt to changes. Change management falls under the social cognition school of thought. One of the first models of change was developed by Kurt Lewin, often called the “father” of group dynamics and social change theories (Connely, 2016). People decide to make changes because of cognitive dissonance, or when information contradicts with what they believe. “Social cognition theories are focused on changes occurring within the minds of individual people—their thought processes—rather than organizationally or throughout the system” (Kezar, 2014, p. 30). In order for people to understand the changes, they must see it in a different way that makes sense to them (sensemaking), which leads to second-order changes. The social cognition school of thought posits individual managers play a larger role in ensuring changes are rational. Therefore, managers play an instrumental role in change (Kezar, 2014).

The cultural school of thought takes into consideration the values, ideas, and myths of an organization, rather than the structural processes. In the cultural perspective, change occurs because of the human environment and because cultures can change over time. Change tends to be slower but lasting and associated with second-order change. The reason why culture is so difficult to change is that it is deeply embedded and can influence how others see change (Whelan, 2016). In addition, it is difficult to approach culture in an organization
because of how culture is interpreted. According to Whelan (2016), some see culture as what an “organization has,” but others can see it as what an “organization is” (p. 585). According to Whelan (2016), there are several factors that shape the strength of culture: history, people who are part of the group, and the experiences shared among them. These factors, over time, help create the values, ideas, beliefs, and opinions that people in the group share which can then impact how they react to change (Whelan, 2016). When change takes place, a new culture is usually produced, but it can be difficult to see how and if a cultural change has occurred (Whelan, 2016). One must be aware of the historical changes that have taken place in the past, as these changes are what create the culture of an organization.

The political school of thought posits changes naturally occur because of human interactions. When change does occur, a new “organizational ideology” takes shape (Kezar, 2014, p. 24). The political school of thought focuses on how “bottom-up leaders” or “grass root” leaders can create change (Kezar, 2014, p. 114). Strategies that they use often include building coalitions and alliances and the negotiation of interest. When people continue to have different ideas or interests, obstacles will emerge and prevent the change process (Kezar, 2014). While these strategies can help promote change, they also present obstacles that prevent change because they can lead to promoting different agendas, different leaders promoting different types of changes within the group and creating an environment of resistance. Bottom-up leaders who use political
change can use their relationships with students and people on the ground level to help make a change.

Finally, “institutional theory examines how higher education as a social institution might change in different ways from other types of organizations” and why change may be difficult (Kezar, 2014, p. 36). Institutional theory is its own school of thought; however, it combines evolutionary (external sources causing change) and social cognition school of thought (cognitive dissonance and internal schemas and norms). Institutional theory suggests that higher education is an institution; therefore, change is usually slow because changes are related to its missions and values. It can be difficult to see when change is happening. Change takes place by an adaptation of schemas and norms until new schemas and norms are formed (Kezar, 2014). Institutional change is usually unplanned and tied to external sources.

It is important to note that change is not secluded into one school of thought, but rather all six of the schools of thought form different layers of the change process at the institutions. Therefore, it is important to understand how these types of changes look like at the institution to ensure changes are lasting.

Chapter Summary

In this chapter, I provided an overview of academic advising in higher education. From this chapter, it is clear, that academic advising has evolved due to the many changes that affect institutions of higher education. I described the
different approaches to academic advising and discussed the different academic advising structures that may appear in colleges and university. I also discussed how academic advising is changing due to technological advances and how academic advisors can leverage technology-mediated advising to help ease their caseloads and reach key groups to ensure timely graduation. Finally, I presented my conceptual framework, which includes various change theories to understand the change process and serve as a foundation for my research questions.
CHAPTER THREE
RESEARCH DESIGN AND METHODOLOGY

In this chapter, I describe the purpose of the study, share my research questions, and describe my case study design, along with data collection and data analysis methods. I also explain why this study is important for academic advising and the field of higher education at large. Finally, I share my positionality statement, which provides a view of my beliefs and roles related to academic advising, which in turn, have helped inform this study.

Purpose Statement

The purpose of this study was to explore the ongoing implementation of iPASS reform at a public, comprehensive, four-year institution. iPASS reform is an “institutional reform in which colleges use technology to fundamentally redesign their advising and student support services” (Karp, Kalamkarian, Klempin & Fletcher, 2016, p. 1) and adopt the holistic Sustained Strategic Integrative Proactive Personalized (SSIPP) advising model. The SSIPP advising model uses technology-mediated advising tools to “promote, support, and sustain long-term, intrusive advising relationships (Fletcher, Grant, Ramos, & Karp, 2016, p. 1). iPASS reform has been identified as a strategy to improve low graduation and retention rates that are due to high advisor caseloads (Karp et al, 2017). iPASS was developed to help advisors focus on a student’s entire college
experience, and it is considered to be a transformative change. Instead of advisors waiting for students to come to them, iPASS has advisors proactively reach out to students (Community College Research Center & Tyton Partners, 2017). iPASS’ goal is to ensure advisors meet with all students throughout their time at an institution, and that advisors are proactive in the way they reach out to students. Thus, iPASS is often synonymous with SSIPP advising.

SSIPP advising is a holistic approach to academic advising where advisors plan to meet with students more than once and throughout their educational experience. Advising under the SSIPP model is “ongoing and multifaceted” (Kalamkarian, Boynton & Lopez, 2018, p. 6). It is difficult for large universities to advise using the SSIPP advising model, especially when advisor caseloads are very large (Kalamkarian et al, 2017). Thus, universities and colleges are using technology mediated advising tools to move closer to the SSIPP model of advising. Under this model, students receive personalized advising that also promotes a sense of belongingness (Kalamkarian et al, 2017).

As a reminder, technology-mediated advising tools are designed to help promote student success. There are three major types of technology-mediated advising tools:

1. Education planning systems
2. Counseling and coaching systems
3. Risk targeting and intervention systems (Kalamkarian et al., 2017).
Education planning systems are tools that help students and advisors plan courses and track students’ progress towards a degree. Counseling and coaching systems help connect students to support services, and risk targeting, and intervention systems help students stay on track by using early alerts and monitoring systems (Kalamkarian, Karp, & Ganga, 2017). I will consider all three types in this study.

Research Questions

To support the purpose of this study, I examined the following research questions.

1. What have iPASS reform efforts at Mountainside University entailed?
2. What are the challenges to iPASS reform at Mountainside University?
3. How have these challenges affected professional advisors?

In Chapter Two, I introduced my conceptual framework. Specifically, my work is guided by organizational change theories in higher education (Kezar, 2011; 2013). Theories of organizational change in higher education guide my inquiry into the case study of the implementation of iPASS reform at Mountainside University (MU; a pseudonym). Kezar (2011) stated that those who are making changes must take into account the culture that currently exists within the organization. The culture can include the assumptions, beliefs, ideologies, and values members of the organization have about their organization (Kezar, 2011, 2014). As indicated earlier, while there are six schools of thought that help
explain and understand changes in higher education, I will rely primarily on social
cognition, evolutionary, and cultural theories to guide my inquiry.

Setting

The study took place at Mountainside University (MU; a pseudonym). MU is a four-year, public, comprehensive university located in the Southwestern United States. It serves approximately 20,000 students, where majority of the students are first generation and are eligible for PELL grants (Mountainside University, 2019).

Definitions

For purposes of this study, I provide definitions of the important terms and acronyms below.

- **Traditional Transactional Advising** is an advising style where advisors wait for students to seek advising. Instead of developing plans and long-term goals, advisors provide a transaction of providing students with courses they should register for the following term (Kalamkarian & Karp, 2017).

- **iPASS** reform stands for Integrated Planning and Advising for Student Success (iPASS) and it is an initiative that was developed to help support colleges and universities who wanted to implement technology and data into their advising strategies. iPASS uses technology “to promote, support, and sustain long-term intrusive and holistic advising (Karp et al. 2017, p.7). iPASS was developed to help advisors focus on a student’s entire
college experience by implementing both the holistic SSIPP advising model and technology mediated advising tools.

- **SSIPP** stands for Sustained, Strategic, Integrated, Proactive and Personalized (SSIPP) advising. SSIPP advising is a new holistic advising approach developed from the iPASS grant which is said to complement the use of technology-mediated advising tools. SSIPP holistic advising approach is supposed to change the way advisors think about advising and the way they conduct advising in their institutions by making sure students experience a personalized experience and receive assistance when needed.

- **Professional Advisor** – Staff members hired by university or college at full time status to ensure students are supported academically.

- **Faculty Advisor** – Faculty members are professors who also advise students in courses and or career.

- **Technology Mediated Advising Tools** – There are three types of technology mediated advising tools: education planning systems, counseling and coaching systems, and risk targeting and interventions systems. Education planning systems are tools that help students and advisors plan courses and track students’ progress towards a degree. Counseling and coaching systems help connect students to support services, and risk targeting, and intervention systems help student stay on
track by using early alerts and monitoring systems (Kalamkarian, Karp & Ganga, 2017).

**Research Design**

A qualitative research design was conducted to explore the research questions. Creswell (2014) stated that a qualitative study is useful when “exploring and understanding the meaning individuals or groups ascribe to a social or human problem” (p.4). This approach allowed for a thorough exploration of the implementation of iPASS reform (Stake, 1995). Further, it allowed exploration into what organizational changes are required for this implementation to be successful (Creswell, 2014).

This study was grounded in an interpretivist paradigm (Sipe & Constable, 1996) Interpretivists seek to “… describe and understand the world from the point of view of someone else” (Sipe & Constable, p. 158). This study explored different points of views and perspectives from those experiencing iPASS reform at MU. It also explored how it is affected academic advising structures, models, and processes.

**Methodology**

Case studies delve deeper into the phenomenon under study (Creswell, 2013). The selection of the case is most important in a case study (Elman, Gerring, & Mahoney, 2016). Case studies are conducted when the “particularity and complexity” of a case is examined for understanding (Stake, 1995, p. xi). It is important to note that I was specifically interested in understanding what iPASS
reform looks like at Mountainside University. Therefore, I conducted an intrinsic case study (Stake, 1995, 2000). An intrinsic case study is when the researcher is not only interested in the case, “but there is a need to learn about that particular case” (Stake, 1995, p. 3). I was interested in this particular case because MU embarked on iPASS without the aid of any funds or resources related to the iPASS initiatives. The 2012 and 2015 iPASS initiatives provided support to 45 colleges and universities to conduct iPASS reform efforts (Klempin et al., 2019). There is very little research regarding iPASS reform efforts. The limited research that does exists consist of universities that participated in the IPASS initiative where universities received funds to conduct iPASS reform.

Data Collection Methods

Data were collected via interviews, organizational documents, and observations. I elaborate on each method below.

Interviews

I conducted 13 semi-structured interviews with professional advisors employed at Mountainside University (McIntosh & Morse, 2015), which “…ascertain participants’ perspectives regarding an experience pertaining to the research topic” (p 1). All interviews were conducted using the video conferencing tool, Zoom. All interviews were conducted via zoom due to the COVID-19 pandemic, government lockdowns, and changing working conditions. Using semi-structured interviews allowed me to ask different questions during the
interview for clarification and to explore something the participant said (Glesne, 2016). Zoom interviews lasted 30 minutes to an hour. The whole interview was audio recorded and transcribed by a transcription service so that I could analyze data as well as conduct member checks in the future. Please see APPENDIX A for a complete interview protocol. During my interviews, I used a recording device to tape the conversation with the participants’ consent and took notes.

Document Analysis

According to Bowen (2009) document analysis is when a researcher reviews and studies documents that can be either printed or computerized. It also assists in providing historical insight and context (Glesne, 2011). Ultimately, document analysis helps “elicit meaning, gain understanding, and develop empirical knowledge” (Glesne, 2011, p. 27). For this study, I reviewed minutes of university-wide advising meetings, campus wide strategic plan documents, and academic college strategic plans. All of these documents were publicly available at MU’s website. I reviewed meeting minutes for the university-wide advising meeting minutes from December 2013 to February 2019. I reviewed all meeting minutes that were posted and made available on the Mountainside University website. There were no meeting minutes uploads after February 2019. I reviewed Mountainside University’s campus-wide strategic planning documents from 2014-2020. Academic colleges’ strategic planning documents were also reviewed from 2014-2020.
These documents helped me understand the process of change that occurred in advising and how iPASS reform took place at MU. Combining document analysis along with interviews and observations helped in triangulation (Bowen, 2009). Table 1 below provides information about some of the different types of documents I analyzed, why it was important to review these documents, and how they helped inform my study.

Table 1. Document Analysis and Rationale

<table>
<thead>
<tr>
<th>Documents</th>
<th>Objective /Rationale</th>
<th>Guiding Analytical Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>University-wide Strategic Plan Documents</td>
<td>Insight into how Mountainside University has changed through the years and to examine if any changes to organizational structure are discussed</td>
<td>Why is MU’s goals for the next 5 years? Is there a focus on academic advising? What are the initiatives that are important to MU and for student success?</td>
</tr>
<tr>
<td>University-Wide Meeting Minutes</td>
<td>Changes in advising structure, procedures, and leadership. Explore changes in advising models and structures. Explore the discourse surrounding iPASS and if there are any concerns.</td>
<td>What are the changes that have been occurring? What is driving these changes? Any changes in leadership? Changes in advising models? Are there any changes in who is advising? Are any of these changes also affecting the culture or the mindset of those affected? How are those experiencing the changes feeling about their situation?</td>
</tr>
<tr>
<td>Academic College</td>
<td>Are colleges making any</td>
<td>How does the current</td>
</tr>
<tr>
<td>Strategic Plan Documents</td>
<td>changes to academic advising?</td>
<td>model differ from the where they want to go? Are there any new advising initiatives at the college level?</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------------------------</td>
<td>---------------------------------------------------------------</td>
</tr>
</tbody>
</table>

**Participant Observation**

According to Creswell (2013) observations “is one of the key tools for collecting data in qualitative research” and are based on the research questions and purpose of the study (p. 166). I engaged in participant observations because observations ensure understanding of the research setting, the study participants, and why they behave a certain way (Glesne, 2005). Therefore, participant observations took place at a university wide strategic planning town hall meeting. Observations allowed me to examine the current climate. Climate considers current feelings and attitudes toward academic advising. I also conducted informal observations on campus at different advising centers and offices. During these informal observations, I noticed that advising centers operated differently. Some centers and offices operated in a drop-in advising format, while others had appointments. Majority of the advising centers and offices had a lot of traffic with students in waiting rooms waiting to meet with an advisor. During my observations, I took detailed fieldnotes. I was an observer on the participant-observation continuum since I had “little to no interaction with those being studied” (Glesne, 2016, p. 65).
Field notes. Field notes were documented in a field notebook where only I had access to the information written. Field notes included descriptions, reflections, information, and details of what was observed. Participant reactions, questions, and statements were observed to see how they reacted to changes in advising. Notes were descriptive, accurate, and avoided judgement (Glesne, 2016).

Table 2. Data Collection Methods

<table>
<thead>
<tr>
<th>Type of Data</th>
<th>Details</th>
<th>Period of Time</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviews</td>
<td>13 participants</td>
<td>March 17-May 29, 2020</td>
<td>Professional advisors with employed at MU for at least one year</td>
</tr>
<tr>
<td>Document Analysis</td>
<td>-MU campus wide strategic planning documents</td>
<td>Data ranges from 2014-2020</td>
<td>All documents were publicly available on MU’s website</td>
</tr>
<tr>
<td></td>
<td>-MU academic colleges strategic planning documents</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Graduation Success Committee Meeting Minutes</td>
<td>August 2013 – February 2019</td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>MU Strategic Planning Town Hall Meeting</td>
<td>April 2020</td>
<td>Virtual</td>
</tr>
</tbody>
</table>
Participant Selection

Participants of a case study are those who provide information or data through interviews (Yin, 2018). To align with my research questions, which were centered on the implementation of iPASS reform, participants included professional advisors.

Professional Advisors

Professional advisors were asked to participate in this study because they are often the front line in academic advising and are hired full time to provide advising services to students Krush & Winn, 2010). The inclusion criterion for professional advisors was being employed at MU for at least one year to be sure I included all professional advisors that has experienced iPASS reform at MU.

Currently, there are about 50-60 advisors currently employed at MU. I obtained a list of academic advisors for each department from a publicly available MU website and sent them an invitation email and informed consent. Contact information was retrieved using MU’s online directory, which is available to the public. I sent an invitation email to all advisors at MU. The email listed the inclusion criteria, how to reach me if they would like to participate, and a note that the Institutional Review Board (IRB) had approved the study. I sent a reminder email asking for participation 3-5 days after the first email.

Sampling

I used multiple methods of participant sampling. Purposeful sampling was used to find professional advisors(Palinkas, 2015). As described above, all
potential participants were identified using the list of academic advisors that was publicly available on MU’s website. I then searched for the academic advisors on the campus directory to find employee titles/positions. In addition, I employed snowball sampling. In other words, initial participants were able to connect me with other professional advisors experiencing iPASS reform at Mountainside University. As noted by Glesne (2006) snowball sampling is when additional participants of a study are obtained through the recommendation of those who participated before them (Glesne, 2016). As a reminder, 13 professional advisors participated in the study. After the initial email invitation was sent out to professional advisors, there were about 18 possible participants. From that first batch of interested individuals, 5 immediately submitted their consent forms. However, due to the COVID-19 pandemic, changes in working conditions occurred. The additional 8 participants were from snowball sampling or from a second email invitation reminder.

Protecting confidentiality was very important to me and was one of my top priorities in this study. The importance of confidentiality was heavily expressed since participants shared their experiences with iPASS reform. As such, I used pseudonyms and attempted to disguise any identifiable information such as office/department and titles. Given that the advising community is relatively small at Mountainside University, information such as exact length of time at the institution was left out and demographic information was withheld since that information can potentially make participants identifiable. Table 3 provides a
summary of study participants and range of years at MU. There were 5 participants that were employed at least 1-2 years. There were 4 participants each for employment of 3-5 years and 6 or more years. All participants had served as professional advisors at MU for at least a year.

Table 3. Years of Employment at Mountainside University

<table>
<thead>
<tr>
<th>Name of Participant</th>
<th>Range of Years at MU in years</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>5</td>
</tr>
<tr>
<td>3-5</td>
<td>4</td>
</tr>
<tr>
<td>6+</td>
<td>4</td>
</tr>
</tbody>
</table>

**Recording Information and Data Storage**

All data collected was stored to protect confidentiality of all participants according to specifications approved by the Institutional Review Board. Any fieldnotes, transcripts, and information derived from this study was saved on password-protected computer and locked in a desk with a key at my personal home office. Interviews were deleted from recording devices once uploaded to password-protected computer.
Data Analysis

Data were analyzed using an inductive and deductive approach. Deductive codes were developed or pre-established from the research questions and the conceptual framework of organizational change (Saldaña, 2016). I manually completed the coding from the collected data. Examples of deductive pre-codes included: “challenges,” “structure,” “approaches,” “attitudes,” “culture,” and “leadership.”

The first cycle of coding conducted consisted of initial coding and process coding. Initial coding is useful when trying to break down the data into smaller parts and reviewing for similarities and differences in the data (Saldaña, 2016). I used Initial coding because it is one of the coding processes that is quick to do. It is also noted as being easy to do because it is making the researcher familiar with the data. (Saldaña, 2016). This allowed me to determine if my pre-codes were correct. Based on the initial codes, some of my pre-codes were adjusted.

Process coding was also conducted in the first cycle of coding because it is helpful when reviewing data for actions, interactions, and emotions in response to a problem, situation or in reaching a goal (Saldaña, 2016). For example, the data showed that implementation of Phoenix had been an issue because there was a lack of communication. Some of the codes I listed down in my fieldnotes were “adapting,” “complaining,” and “venting.” I also noted how I reviewed the data in my field notes, which helped me keep track of the
questions I asked and how I analyzed the data. Each review of data I would look at it from a different perspective each time. Second cycle coding consisted of pattern coding where I reorganize the codes from the first cycle of coding into categories and ultimately themes (Saldaña, 2016). For example, all information about Phoenix was placed into a theme regarding adopting new advising technologies. All information about leadership was put into themes about Leadership at all levels. Since the themes were interrelated, I relied heavily on the sub themes to place them into larger themes.

Saturation

Saturation in qualitative studies helps build the quality of the research (Fusch & Ness, 2015). It is important to note that the number of participants does not determine saturation but rather whether there is “enough information to replicate the study, when the ability to obtain additional new information has been attained, and when further coding is no longer feasible” (Fusch & Ness, 2015, p. 1408). At MU, due to the COVID-19 pandemic, it was difficult to obtain a large number of participants. Participants who had originally agreed to participate, fell through due to unforeseen circumstances that were related to government lockdown orders and changing reporting methods for telecommuting. Even so, thematic saturation was achieved (Saunders, Sim, Kingstone, Baker, Waterfield, Bartlam, Burroughs, & Jinks, 2018). There are several academic advisors at MU that are newer or employed for only a few years since MU had several cycles of
There is a very small cohort of advisors that have been at MU for six or more years. Evidently, the number of years played a role in terms of which questions participants were able to speak to fully, even though thematic saturation was achieved. Table 4 discusses questions from the interview protocol in relation to length of employment. I share this information to support future research regarding ongoing iPass reform efforts at MU.

Table 4. Interview Questions and Length of Employment

<table>
<thead>
<tr>
<th>Data Collection Method</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interview Protocol</td>
<td></td>
</tr>
<tr>
<td>Please tell me about your advising role on campus.</td>
<td>While all participants were academic advisors, duties and responsibilities varied.</td>
</tr>
<tr>
<td>What does academic advising mean to you?</td>
<td>All participants expressed some form of developmental and holistic academic advising approaches and prescriptive educational plans.</td>
</tr>
<tr>
<td>How would you describe advising at Mountainside University?</td>
<td>AA at MU is transition and changing according to all participants.</td>
</tr>
<tr>
<td>How would you describe the advising structure currently on campus?</td>
<td>All participants mentioned decentralized structure that is transitioning to centralized. All participants mentioned transitioning in AA.</td>
</tr>
<tr>
<td>Has this been the structure since you started working here?</td>
<td>The answers to this sub question was dependent on the number of years that the advisor was employed at MU.</td>
</tr>
<tr>
<td>How would you describe any changes taking place? If any?</td>
<td>Several participants answered the same regarding changes. Caseloads were mentioned in regard to freshmen and sophomores now being general</td>
</tr>
<tr>
<td>Question</td>
<td>Response</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>How do you feel about the changes taking place, if any?</td>
<td>For advisors who have been employed for only 1-3 years, they felt fine with changes and readily accepted them. For advisors who have been employed at MU for 4-5 and 6+ years, advisors were wearier of change.</td>
</tr>
<tr>
<td>Where do you think the changes have been originating from?</td>
<td>All participants stated that changes were coming from senior leadership and external sources such as government or accreditation agencies.</td>
</tr>
<tr>
<td>How do you think the changes are affecting academic advising for you as an advisor?</td>
<td>Depending on how long the advisor was employed affected how advisors felt about the changes. Those that were employed for 1-3 years, advisors did not seem to have much pushback. For those that have been at MU for a longer period of time expressed frustration with the changes especially those that were top-down, or garbage can decision making.</td>
</tr>
<tr>
<td>How do the changes affect your department?</td>
<td>Again, depending on advisor level and number of years affected the answer to this question.</td>
</tr>
<tr>
<td>What does iPASS reform mean to you?</td>
<td>None of the participants knew what iPASS reform language was. A description was required.</td>
</tr>
<tr>
<td>How do you feel about technology mediated advising tools?</td>
<td>For those that have been at MU for 1-3 years, advisors expressed they were fine with technology as it was required when they were hired. For those that were employed at MU for longer than 3 years, advisors expressed frustration.</td>
</tr>
<tr>
<td>What are your experiences related to iPASS reform?</td>
<td>Depending on number of years employed. It is important that there are far more newer advisors than advisors who have been employed longer than 3 years.</td>
</tr>
<tr>
<td>What were you</td>
<td>Most participants mention changes and advising's responsibility, and the use of technology. In addition, several advisors mentioned advising numbers and pressure to see a certain number of students.</td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>experiences with advising restructure or redesign?</td>
<td>lack of conversations with all end-users and stakeholders.</td>
</tr>
<tr>
<td>What are you experiences with implementation of technology in advising?</td>
<td>Those that were new to MU came in with Phoenix already in place.</td>
</tr>
<tr>
<td>How do you feel about using technology mediated advising tools?</td>
<td>Participants’ answered depended on the number of years the advisor was employed at MU. Newer advisors were fine with Phoenix, advisors hired for a longer period of time shared frustration with inaccurate data and information.</td>
</tr>
<tr>
<td>If you could offer any recommendations to other campuses implementing iPASS, what would you offer?</td>
<td>All participants mentioned more information from senior leadership and more opportunities to be invited to share experiences and voice before decisions are made.</td>
</tr>
</tbody>
</table>

**Document Analysis**

| MU Strategic planning documents and plan | All documents that were available to the public were reviewed. |
| MU academic college’s strategic plan   | All documents for academic colleges’ strategic plan were reviewed. |
| Graduation Success Committee meeting minutes | All meeting minutes that were available on MU’s website and that were available to the public were reviewed. The time frame was from August 2013- February 2019 |

**Participant Observations**

| MU Strategic Plan Town Hall Meeting | Observations took place in April 2020. |
All data collected was obtained from MU's website and available to the public. The data was collected according to processes listed in the Institutional review board approval process. Therefore, additional information or documents may have been available, however it was not made available to me by participants.

**Trustworthiness**

Trustworthiness deals with the quality and rigor of a study (Glesne, 2016). According to Glesne (2016), the following are different ways to promote trustworthiness: prolonged engagement and persistent observations, triangulation, negative case analysis, member checking, clarification of researcher bias and subjectivity, peer review and debriefing, and finally an audit trail. As mentioned previously, Yin (2018) and Saldaña (2016) stated having multiple sources of data collection methods promotes triangulation. Using different and multiple sources of data provided support for the themes I constructed. In this study, data from interviews, documents and participant observations were collected to promote triangulation (Yin, 2018; Glesne, 2016). Data from these multiple sources converged on the same findings. In addition, conducted member checking to share interview transcriptions and my analytical thoughts and findings with the participants to obtain final feedback. I allowed participants to provide feedback on my interpretations to ensure I understood correctly. I also provided rich, thick descriptions of observations and interview transcriptions which allow the readers to understand why I am interpreting the data a certain way. I kept an audit trail to stay organized and kept a record of
what has been done in the past. I also ensured that my biases and subjectivities were monitored. I was upfront about the intent of my research and explained my researcher subjectivities (Glesne, 2016). I engaged in reflexivity. Reflexivity is the proactive process of reflecting and being aware of what biases, prejudices, and beliefs the researcher is contributing to the study. In the following section, I explain my positionality and share my biases and experiences that shaped my study.

Researcher Positionality

As an academic advisor, I have general information of how academic advising takes place in higher education. I am aware of the top down structure of how decisions are made and understand why some initiatives are supported and why others are not. Therefore, my lens and how I conduct research will be different from someone who does not work in higher education. Due to my experiences as an academic advisor, I understand the feelings of receiving directives from upper management/administrators without any input from us. As an employee of a university, I also understand how priorities can change without any prior notice. Given these experiences, it is important to understand and be aware of my subjectivity, as it is present during the whole research process (Peshkin, 1998). According to Peshkin (1998) researchers must be aware of their subjectivity while the study is being conducted and data is collected, not after the fact. My subjective I’s would consist of 1) having the opinion that iPASS reform
is a positive change in higher education, 2) transactional advising is not an effective approach to academic advising, 3) I am a supporter of academic advising.

I have to be honest, that when I was first introduced to iPASS reform and technology-mediated advising tools, I was not a fan. I thought it was another way to track students by using predictive analytics and place students in categories based on things they cannot control such as demographics, location of high school, and past academic achievements. Change is hard, especially when the leadership spearheading the change is not effective. However, when an administrator that I believe in took the reins, they were able to show how these changes can help us as advisors. However, after working with the tools for some time, I have found that they are useful, I just have to be careful to take the predictive analytics with a grain of salt and understand that I as the advisor know the student better than the predictive analytics making the categorizations.

Based on my education, experiences as a student, and experiences as an academic advisor working in higher education, I believe that iPASS is good and that the SSIPP advising approach can help improve not only how students feel about advising, but really help all students not just those that are motivated to seek help. I have experienced advising strategies where students are given academic advising holds so that we can make sure they are moving forward in their degree. However, this often angers students because they are not aware of the hold and are prohibited from registering for classes. They then come to us to
have the hold removed but they are so irritated that they are not interested in discussing anything but the information to remove the hold. From my experience using the SSIPP advising approach, students are more positive when they meet with me. Instead of forcing them to meet with me, I send out a personalized invitation inviting them to discuss their educational goals. Students are more likely to feel like they received personalized service and want to discuss more than just their schedule. In addition, this allows me to work with all students. In the traditional, transaction approach to advising, we wait for students to come visit us. However, in the SSIPP approach and using technology, I try to find different groups of students to connect with. Now, I am able to meet with all students, not just those who are on probation, or who are in danger of stopping out, or who are experiencing a crisis. I am excited to see how advisors at Mountainside University feel about iPASS and the SSIPP approach.

Some colleges and departments have different opinions of what academic advising is. I believe that transactional advising, or solely schedule planning is a disservice for students in higher education. However many people still believe that schedule planning is what encompasses academic advising. I had great advisors and some that were lacking. The ones that were lacking treated me like a number and gave me what classes I should take next term and ended the conversation. On the other side, I had advisors where the important thing was to build a relationship for me feel comfortable to return if I had a question. We were able to discuss not just my academic schedule, but my goals, but academically
and professional. According to NACADA, academic advising is most efficient when the advisor and student are participating in developmental advising or creating a working relationship where the student and advisor meet often (2013). In some advising offices across the nation, advisors are providing prescriptive advising and only providing course registration information. Offices place advising holds on students only to provide one way information to “check the box” of seeing the student. Placing holds on a student may be seen as adding an institutional barrier to success. Lastly, the availability of advisors has always been an issue, especially in large scale institutions (Gordon, Habley, Grites, and Associates, 2008).

I have to remember that not everyone, even those who are advisors think advising is important and needed for success in higher education. I relied heavily on academic advising for support and experienced the benefits it had to offer. I am aware that each meeting with a student can affect our future advising relationship, while other advisors can view advising as just providing information and answering questions.

I must be careful since it is natural to have assumptions based on prior knowledge. I know that I chose my career as an academic advisor because I wanted to help students through their journey in higher education, regardless of their path, or where they start from. However, I believe that policies/procedures and decisions are not necessarily developed with student success in mind. In addition, because I am an academic advisor, I share some of the frustration that
happens when new initiatives are developed and disappear due to lack of funding or change in management.

My career as an academic advisor may cause me to have preconceived notions or beliefs of what participants may say in an interview. It is important that I am aware of preconceived notions and biases so that I do not lead people to answer a certain way by the way I phrase or ask my interview questions. I must be mindful of any biases or prior knowledge that may force me to unintentionally phrase questions in a certain way to prove a preconceived notion rather than seeing what the results truly show. I must be careful not to ask questions that can lead a participant to answer in a way that I think they should answer.

I must also be mindful and cautious of the politics in the university. To get buy-in from the participants I want to study, I must be aware of the climate for the advisors in the university. If the climate is negative then advisors may not want to participate in the study. Since I plan to investigate the implementation of iPASS reform, I need to be sensitive to my participants and be mindful of what they might not want to share depending on who their supervisor is. I need to take the appropriate steps to protect my participants’ confidentiality. Each component of the study must be evaluated to make sure I am being professional and that I monitor my biases, given my profession and as a researcher in the field.
Limitations

For this study I focused on professional academic advisors in general. I did not take into account advisor status or differentiated based on their area of work, such as college advisor versus a special program advisor. Depending on advisor status or their area of work, different views or perspectives may not have been captured in this study. Another limitation was the number of participants. While case studies do not have a required number of participants, the study could be strengthened if there was a larger number of participants. Circumstances with the COVID-10 pandemic made finding participants difficult due to changing work conditions.

Delimitations

All participants of this study were professional academic advisors. Faculty advisors and administrators did not participate. As a result, it can be reasonably assumed that information gaps regarding iPASS reform exist.

Chapter Summary

In this chapter, I presented my research questions and research design of my study. In addition, I shared how data was collected, and how I analyzed the data. I also presented how I ensured trustworthiness in this study. I included information about the research site by providing the setting and the reason why I selected the research site for the case selection.
CHAPTER FOUR
RESULTS

Introduction

In this chapter, I present the findings of the study. The purpose of this study was to understand ongoing iPASS implementation efforts at Mountainside University (MU). As a reminder, iPASS stands for Integrated Planning and Advising for Student Success (Klempin, Kalamkarian, Pellegrino, & Bartnett, 2019). iPASS was created to help colleges and universities with academic advising by incorporating technology to assist academic advisors. According to Klempin et al., (2019) “under iPASS, institutions select new technologies and learn how to use them, collect new data, help faculty and advisors integrate the data and technologies into practice, and ultimately change the way they interact with students” (p. 1). It is important to note, that implementing technology alone is not enough to increase graduation rates or student outcomes. Reform in academic advising process, structure, and communication needs to also take place (Klempin et al., 2019). The research questions were the following: a) What do iPASS reform efforts at Mountainside University entail? b) What are the challenges to iPASS reform at Mountainside University? c) How do these challenges affect professional advisors? Themes were constructed based on the data and the findings are presented as such. The interrelated themes help shed light on iPASS reform efforts at Mountainside University, the challenges MU encountered, and how these challenges affected professional advisors. In the
final chapter of this dissertation I outline how current leaders and practitioners might find these findings immediately helpful in their efforts to fully implement iPASS. The five themes are a) Commitment to Student Learning and Student Success through Academic Advising, b) Restructuring Academic Advising and Related Cultural Shifts, c) Advising Approaches to Promote Success of the Whole Student, d) Adopting and Implementing New Advising Technologies e) Leadership Matters at All Levels. Subthemes were also identified. All stated names of people, departments/offices, and or meetings in this study are pseudonyms.

Commitment to Student Learning and Success through Academic Advising

As with most colleges and universities, the accountability movement in higher education placed external pressure and demands to increase graduation rates for both first-time freshmen and transfer students on Mountainside University. Mountainside University was also intrinsically motivated to increase graduation rates based on data from campus-wide strategic planning process, college-level strategic plans, and meeting minutes from the Graduation Success Committee (GSC). With academic advising being recognized as one of the most effective, long-standing college retention strategies (Austin et al., 1987; Hatch & Garcia, 2017; Hester, 2008; Lanlan & Fosnacht, 2019; Pascarella & Terenzini, 2005; Propp & Rhodes, 2006), Mountainside University (MU) turned its attention
and student success efforts to academic advising. Conversations surrounding changing academic advising – both structurally and culturally – began around 2013. These conversations were brought to life during MU’s strategic planning process at both the university and college levels.

**Early Conversations**

The role of conversations in producing intentional change in organizations is critical (Ford & Ford, 1995; Ford, 1999). Organizations consist of the network of conversations that take place (Ford, 1999). Early conversations or initiative conversations (Ford & Ford, 1995) about the role of academic advising in student learning and success and needed organizational changes began with MU’s Graduation Success Committee – a group of advisors and individuals from different departments who meet to share information about student success at Mountainside University. In 2013, the group was fairly small; however, after several additions of academic advisors and stakeholders in student success, the group is now large, about 60 participants. The earliest GSC meeting minutes documented were from August 2013. Meeting minutes in 2013 consisted mostly of different departments and offices sharing news and updates with about 15 people in attendance. However, a shift in topics took place starting December 2013. Based on documents such as meeting minutes and university and college strategic planning documents that were available regarding academic advising, MU began to revisit advising practices and processes in late 2013 and early 2014 (GSC Meeting Minutes, December 2013). The December 2013 meeting minutes
also stated that an “advising series (advising philosophies, models/tools, and assessment standards) would start in the [GSC] meetings in January 2014 meeting.” The meeting minutes from January 2014 discussed advising philosophies and how these philosophies could help with retention and graduation rates. Topics included information about NACADA resources and research, student learning outcomes, developmental educational plans, academic and social integration, advising is teaching, and core values of academic advising (GSC Meeting Minutes, January 2014). Review of additional meeting minutes showed that this group also discussed advising models such as organizational structures, delivery methods of academic advising, and the advising continuum (GSC Meeting Minutes, February 2014). Individuals from departments were also encouraged to create their mission and vision, as well as assessment plans. The GSC meeting minutes provided evidence that Mountainside University was shifting their advising culture towards a more holistic approach. The GSC meeting minutes from March 2014, documented a conversation regarding the advising continuum and how advisors needed to advise students on the developmental holistic side of the continuum, but recognizing that scheduling of courses may still be required at times. In addition, the GSC meeting minutes further documented a conversation about the “building blocks of academic advising, and what type of advising should be conducted, how it should it should be done and when”. As advisors were initiating the
conversations about changing advising structures and approaches, MU was also starting their strategic plan for the next five years.

University Strategic Planning

Strategic plans are developed to help colleges and universities examine and self-assess the institution for improvement, especially for funding and external accreditation purposes (Watson, 1995). Strategic plans also help strengthen the institution by allowing stakeholders to “provide an ongoing process of examination and evaluation of strengths, weaknesses, resource requirements, goals, and future prospects…” Watson, 1995, p. 8).

Mountainside’s strategic planning process, which included the collection of multiple data, further emphasized MU’s need to focus on improving academic advising. For example, in 2014-2015, Mountainside University began to draft its strategic plan for the next five years, from 2015 to 2020. Many of the strategic planning documents showed that increasing graduation rates was an important goal for the university. Students graduating in four years was an ideal future for Mountainside University. During this planning stage, a survey was sent out to several students, deans, and chairs. In the survey distributed to students, there were three questions:

1. What is good/great about Mountainside University?

2. What do you wish you could say about Mountainside University, but can’t because it isn’t true?

3. If you were the President of Mountainside University for one month, what
would you change.

For question number one, majority of the students responded with “diverse campus,” “inclusivity,” and “cheaper tuition.” Academic advising was not listed as something Mountainside University was good at (Strategic Plan Town Hall Survey Documents, 2014). However, in response to what you wish you could say about Mountainside University but can’t because it isn’t true, academic advising was discussed. For example, a student responded, “good academic advising.” In addition, several students answered, “graduate in four years.” When asked what they would change if they were president of Mountainside University, one student responded, “hire real counselors than professors” (Strategic Plan Documents, 2014).

The survey distributed to department chairs generated similar responses. One respondent discussed their views on academic advising: “Students need way more advising than we have to give them. For example, just to get transcripts for advising, we have to go through a lot of hoops to just gain access” (MU Strategic Plan Documents, 2014). After several town hall meetings and presentations, increasing the four-year graduation rate for freshmen and the two-year rate for transfers was part of the goals listed in the finalized strategic plan for 2015-2020. Early conversations about the need to revise academic advising, initial steps, and supporting evidence from the strategic planning process highlight MU’s commitment to redesigning academic advising. This commitment was heeded at the college level as well.
College Strategic Planning

While Mountainside University as a campus was creating their own strategic plan, each academic college also developed their own strategic plan for 2015-2020 for their specific college. All colleges noted that increasing the four-year graduation rate for first-time freshmen and the two-year graduation rate for transfer students must be increased. In alignment with the University's strategic plan, the colleges sought to achieve this goal through academic advising.

For example, one college indicated they would “provide students with strong, effective and intrusive academic and career advising for guiding students throughout their academic studies” (MU College Strategic Plan 2015-2020). In another college, one of the strategies to improve student success was to “strengthen undergraduate advising by providing ‘roadmaps’ to degree, requiring meetings with advisors, students, and alumni, etc.” (MU College Strategic Plan 2017). All colleges, except for one, included improving academic services for the college. The college that did not list improvement in academic advising already had an advising center in operation for several years prior, staffed by a professional advisor. (College Strategic Plan Documents, 2014).

Although the colleges were committed to providing academic advising, there were several challenges with the incorporation of professional advisors. Advising was new and many colleges did not have their own dedicated advising centers or advisors in place in 2015-2016. MU realized they needed to hire new professional advisors to be housed in each college, since the existing advisors
were general advisors housed in a centralized advising office. Once the advisors were hired and placed in academic colleges, the strategic plans did not indicate who would be responsible for academic advising, faculty or professional advisors. This leads to confusion and possible duplication of efforts. Not having a plan in place can also lead to confusion and frustration for students because they may not know who to go for advising, faculty or professional advisors. Also, despite these challenges Mountainside University took upon iPASS reform. Efforts to fully implement iPASS are ongoing.

**iPASS Reform**

As stated previously, iPASS stands for Integrated Planning and Advising for Student Success (Klempin, Kalamkarian, Pellegrino, & Bartnett, 2019). iPASS was created to help colleges and universities with academic advising by incorporating technology to assist academic advisors. According to Klempin et al., (2019) “under iPASS, institutions select new technologies and learn how to use them, collect new data, help faculty and advisors integrate the data and technologies into practice, and ultimately change the way they interact with students” (p. 1). It is important to note, that implementing technology alone is not enough to increase graduation rates or student outcomes. Reform in academic advising process, structure, and communication needs to also take place (Klempin et al., 2019).

Initial efforts to implement technology to assist academic advisors began with the introduction of *Phoenix*, a coordinated care, case management advising
technology that uses a predictive analytics algorithm to help predict student success, in March 2014 (GSC Meeting Minutes). At this time, Phoenix was merely being introduced to stakeholders, and not yet purchased by MU.

“Advising is a key focus” was mentioned when Phoenix was introduced. In addition, it was stated that Phoenix would have “key progress indicators: 1) programs specify the courses most critical to complete early, 2) system flags that indicate when students withdraw from courses or do not register, 3) advisors will be able to target when students are not making progress” (GSC Meeting Minutes, March 2014). Phoenix would also allow advisors to email students, set reminders, and “view student performance and spot at-risk students which include those with high attrition risk and those in the ‘murky middle’” (GSC Meeting Minutes, March 2014).

Questions raised by advisors and other stakeholders regarding the product included: “can both GPA and MU GPA both be shown? Will transfer (external courses) be shown? Can mass emails be sent to students? Can students view their profile?” were also included. Due to the questions brought up by stakeholders, which consisted of advisors from the general advising office and directors of department advising offices, it was noted that Phoenix discussions may continue in future GSC meetings. However, even though there were still pending discussions and questions regarding Phoenix amongst advisors, MU senior leadership purchased the product. By purchasing Phoenix, iPASS reform efforts had begun at Mountainside University, albeit partially.
iPASS reform efforts include more than implementation of technology. It also consists of university leaders having conversations with advisors regarding the advising processes and structure to determine whether the chosen technology is a good fit for the university as a whole (Karp & Fletcher, 2014). iPASS reform efforts include determining whether a university is ready to implement technology, such as: having a plan of implementation, do advisors understand how to use the technology and how it will be beneficial for them in their duties, is there a training program developed for those who will in turn train other campus individuals, is the IT department ready and available to assist with implementation and is Phoenix compatible with the existing technology platforms already in place at the university (Karp & Fletcher, 2014). Participants did not express there was a conversation between MU’s IT department and Phoenix prior to the product being purchased or during the first years of implementation. Jamie expressed that Phoenix vendors and consultants do not understand the work that advisors do and there was not much conversations in the past about it. However, currently, there are conversations taking place between MU and Phoenix to ensure platforms are student friendly and more accessible. Jamie shared:

Recently, MU’s IT department is doing amazing things and trying to leverage our websites to be more student friendly, working with our existing data platforms to connect with Phoenix to make it more accessible and intuitive for users and advisors. In addition, I know that there are committees
that are dedicated to try and understand how we can leverage technology to make the lives better for both advisors and students. So I think there’s just more stakeholders now in the game than ever before. It’s almost kind of frightening that there wasn’t as many hands on deck when you think the goal of graduation has always been the primary goal of an institution.

Jamie’s passage above indicates that there is more efforts of iPASS reform currently taking place at MU. There’s now conversations occurring amongst departments and with Phoenix to ensure efforts are streamlined and more student/advisor friendly. In the following sections, I will elaborate on both technology implementation and the restructuring of academic advising and related challenges at MU.

Advising and Related Cultural Shifts

The advising organizational structure of a university is very important and serves as the framework for how advising services are delivered to students (Pardee, 2014). Structure is an important factor of academic advising at a university or college and is often changing depending on several factors such as students, external pressures, enrollment, and leadership of academic advising (Pardee, 2004), all of which were at play at Mountainside University. The restructuring of academic advising entailed 1) a shift from a decentralized model to a more centralized model; and 2) faculty advisors processing cultural shifts in academic advising at MU. In this section I discuss these two subthemes below.
Decentralized versus Centralized

Although not explicitly articulated in organizational documents, several of the participants identified MU’s advising organizational structure as decentralized. A decentralized advising structure is when both professional and faculty advisors conduct advising within their own college, department, or program office (Pardee, 2004).

MU’s decentralized advising was conducted mostly by faculty advisors, and not consistent throughout the university. Advising was conducted differently based on department and by advisor. Review of GSC meeting minutes revealed there were not enough academic advisors to support all students, which is a common problem of broad-based colleges and universities (Klempin et al., 2019). New professional advisors were hired to be housed in the different colleges to offer consistency, but based on the strategic plans of the colleges, there was no clear plan on how professional advisors and faculty advisors were to collaborate with each other. College advisors reported to their respective deans, but they were expected to share advising policies and processes with the rest of the advising community.

MU had a decentralized advising structure but with the hiring of additional advisors that were specifically housed in the colleges, it started the initial step to moving toward a centralized model. College advisors were now collaborating with the general advising office and other centralized student service offices more and more, which was not the case in the past, when advising was done by faculty
members. Faculty advisors have been the primary advisors at MU. When professional advisors were hired and housed in the colleges, advising processes started to change to accommodate both faculty and professional advisors. These changes and related challenges affected not only implementation of Phoenix and iPASS reform efforts, but also affected advisors in their daily duties.

Robin shared that MU’s advising structure was primarily decentralized: “I would describe it as decentralized, where we have students within the colleges seeing college advisors and the faculty advisors in different areas on campus.” However according to some participants, it was slowly becoming more centralized as time went by. Joey shared their experience with advising structures at MU. Joey stated:

I would say the structure currently is decentralized. There’s the college advisors, and then there’s advisors overall on the student affairs side. It’s been decentralized since I started. My understanding was it was chosen to go with a decentralized model before. But it seems like as time goes on, which it hasn't been said, is that they’re trying to go towards a centralized model. It seems like that's where it's headed in our current situation.

Joey mentioned that the move towards a more centralized model had not been stated or announced by senior leadership. However, they saw changes in caseload assignments and lines of reporting that indicated there was a shift in that direction. Participants cited changes in advisor caseload. For example, colleges were responsible for advising all students in their college. However,
general advising would now see freshmen and sophomore students. Participants also shared changes to whom college advisors reported to. Sam also shared details about MU’s advising structure and how it was moving towards a centralized structure. Sam explained:

I would probably say it is a decentralized, centralized advising model. That we have advising centers in every academic college, but every college runs advising differently. I think we’ve worked very hard to streamline as much as we can to communicate with advising. But our goal is to assist students, help them know requirements, understand policies, procedures, and to help them graduate. To do that in as seamless a process as possible between all advising centers and specialized departments.

Sam indicated a shift to a more centralized structure. Similar to Joey and other participants, Sam felt changes were taking place, however, there had not been any formal communication from the University that the model was in fact shifting from one model to another or more importantly, why a shift was occurring.

Participants relied on their own professional knowledge and understanding of academic advising to make sense of the changes taking place.

Alex provided more information about MU’s advising structure. While they do not use the terms decentralized or centralized, they described the advising structure as evolving:

I think we’re in the midst of a lot of change, so that’s why I’m trying to think of how would I describe it now, because I feel like it's just going to change
as soon as we start advising for fall. So, I guess my word right now would be transition, I think right now we're in a transition. The biggest piece of that transition is that colleges now [taking] over freshmen and sophomore advising. That's the biggest reason we're in transition.

According to Alex, changes are happening often and quickly. There is not enough time for advisors to process changes before a new change happens again. According to participants, an example of a change that recently took place is the reporting. In the past, college advisors reported only to their dean or head of the college. Now college advisors be reporting to the Head of Students. Alex provided more information regarding the change of college advisors having to report to the Head of Students at MU.

There's a dotted line either from the college advisors to the [Head of Students], in terms of reporting. So, I guess we're becoming more centralized. I guess we're transitioning to being more centralized in our advising approach. They are still giving a lot of, like the colleges still having some autonomy in what that looks like with upperclassmen. So definitely in transition, but I think a lot more transition to happen.

Alex seemed to be processing the move from decentralized to centralized structure as the interview progressed. Participant interviews highlighted a lack of communication from senior leadership to the professional advisors. If advisors do not understand the direction of where senior leadership wants advising to go, then achieving goals and objectives will be difficult (Nutt, n.d.). Jamie also shared
that historically, advising was controlled by the colleges and that had both positive and negative outcomes, such as having inconsistent advising programs. For example, some colleges placed advising holds on students prior to registration to ensure students were being seen, while other colleges believed that was placing an institutional barrier on students. Jamie explained how the advising structure at MU had generally been:

I'm going to speak to how it is, how it's been historically, and then perhaps maybe how it's moving. Because currently I would say, I would describe it as influx. Historically, advising was done on a very defragmented model where colleges and even departments within colleges were allowed to work independently of one another, which has pros and cons, but primarily cons. Because then it was left to those entities to determine what were best practices, when to advise students, which students were worthy of being advised? There was a lot of free range with little checks and balances. And I believe that has contributed in large part, but not to be completely blamed, but has played a large role in why our graduation rates are where they have been historically. But I will say that I think our campus has been making great strides in the past two years towards solidifying some best practices to working more closely together as a community, identifying what that means and actually truly working together to serve our students in all disciplines.
Jamie noted that having a decentralized advising model had pros and cons. When advising was decentralized, colleges and departments were able to make quick changes to accommodate their population of students. Yet, having a decentralized model had many shortcomings. First, because all colleges and departments had the ability to create their own advising processes, advising efforts were inconsistent at the university. Some colleges and departments had mandatory advising, while others operated in a drop in format. Some colleges and departments monitored students while others did not.

While Jamie also shared that they believe the advising organizational structure is moving toward a centralized model especially with the central advising office taking over freshmen and sophomore advising, it is a different message from what the other participants mentioned above. Jaime was the first advisor to mention that the decentralized model may not be the best model for academic advising at MU. Jamie provided more information about the move to centralized advising at MU.

There has been a big push to unify advising. To centralize it and to create clear lines for advisors, meaning when are students seen? How we treat students and cohorts? And ultimately placing some accountability for graduation rates on the advisors but allowing there to be more advisors than ever before, as well as the support of technology to try and reach these students. But yeah, I would say probably the biggest thing is that we
are moving towards a centralized model, which we never had on campus before. At least with freshmen and transitioning sophomores.

Jamie is the only participant, that mentioned accountability of academic advisors and the use of technology in the advising structure, which is interesting. It brings a different view of advising at MU. While most participants shared that MU is moving toward a centralized advising model, they did not list the possible outcomes of a centralized model such as advisor accountability if graduation rates do not reach a certain percentage, which can lead to problems in the future especially since there seems to be a lack of communication. Charley said that the advising structure is becoming more uniformed across campus:

I don't think that the university has a solid advising structure, but I do think that it is changing with the different I guess programs that are being in place. I think that's starting to change to make it a little bit more uniformed across campus, but I feel like the advising structure just really depends on the department that you're in.

Charley's passage above also indicates that there is a lack of communication. Advisors are not part of the discussion regarding advising structure at MU.

Several participants shared that they feel academic advising is transitioning to be more centralized which is a part of iPASS reform. The challenge with this transition is that there is a lack of communication. While several participants shared that there is a transition occurring, it was all assumed on their part. Participants said it seems to be moving towards a centralized structure.
was a lack of formal communication that the advising organizational structure was going to change. This is troublesome as it is difficult for advisors to understand goals and objectives if they do not know that there is a transition or shift in structure occurring (Karp & Fletcher, 2014). This is a huge challenge for advisors as they have already indicated that changes happen frequently before advisors are able to adapt. Lack of communication also leads to unclear goals and duplication of efforts across campus. The key is open communication at all levels to ensure goal achievement (Karp & Fletcher, 2014). The shift towards a more centralized advising structure has resulted in a shift in the delivery of advising at MU. In the following section, I will discuss the faculty and professional advising at MU.

Faculty versus Professional Advising

As mentioned above, MU’s advising structure was decentralized during the planning of the five year strategic plan. As is common under the decentralized advising model (Pardee, 2004), advising at MU was led primarily by faculty. However, with the purchasing of Phoenix, MU realized they needed to hire new academic advisors as a supplement to the faculty advising that historically had taken place. Not only were professional advisors to be hired to implement Phoenix, they were also hired to be college specific advisors to assist in academic advising. In addition, newly hired professional advisors were to help train other advisors and faculty on Phoenix (GSC Meeting Minutes, March 2014). Having professional advisors was met with some pushback from faculty, as
faculty members were used to being the student advisors. The change in delivery model called for an organizational cultural shift too (Byrne, 1998). Faculty and other stakeholders on campus had difficulty with the changes in academic advising because professional advising was a new approach that most had not experienced. The campus culture at MU had faculty conducting academic advising for decades. Professional advising was a change in culture at MU.

Faculty advising and professional advising had competing priorities. Faculty wanted to advise students on the subject matter and professional advisors were advising on student engagement, retention, and course selection. Competing priorities can make it difficult for both faculty and professional advisors to reach mutual goals (Krush & Winn, 2010).

Participants shared their experiences with faculty in regard to academic advising. Riley shared an experience with a faculty member after they started their new position as a professional advisor in one of the colleges. Riley recalled:

As the rollout happened, however, with getting into the position, I was met with just a lot of animosity, not only from faculty members within my own college, but faculty members within other colleges. I had a faculty member stop by my office while I was advising a student questioning my credentials and what I was doing and why advisors were hired and where the money was going. And there was a lot of pushback on the faculty end thinking that advisors were taking the faculty advising aspect away from
them versus this what we were trying to create in terms of enhancing the advising that was already happening or not happening on the campus.

Riley’s experience, as well as the of other advisors, speaks to a long-documented misunderstanding of the role of professional advisors and territorialism among faculty (Midgen, 1989). Although faculty offer valuable and expert knowledge in their disciplines, oftentimes they are not adequately trained on general education and advising procedures and processes. (Midgen, 1989). In addition, some faculty may have negative feelings regarding academic advising, as it may be seen as competing with their primary roles of teaching, service, and research (Midgen, 1989; Krush & Winn, 2010). Given that some faculty felt professional advisors were taking the advising piece of their duties away, and that some advisors did not have the qualifications to be an advisor, being trained by a professional advisor did not sit well with some faculty. Resistance to such change and an inability to view this shift as a partnership opportunity to improve student outcomes was exacerbated due to limited communication and clarity of goals at MU.

In addition to challenges related to faculty resistance, participants discussed a learning curve for professional advisors. Professional advisors needed to understand what graduation and retention rates were and how they were calculated because they were now expected to monitor these rates to ensure MU was meeting their goals of student success, which was not the case in the past. Riley mentioned that not only were they trying to learn how to use
Phoenix, they had to learn about information regarding graduation and retention on their own.

We were given a lot of responsibility and a lot of tasks to do as brand new academic advisors. Having not been in a professional advising position before, I had a huge learning curve in front of me. It was like, okay, we need you to handle all of these initiatives now, and I had to scramble to figure out, okay what is a graduation rate, and how do I actually affect it?

When MU decided to hire professional advisors there was a cultural shift. Based on Riley’s account, no one was responsible for monitoring graduation rates at MU in the past. Reports were given to college deans, but there was never a push to increase these rates until the strategic plan was developed in 2015. Professional advisors were seen as the individuals to monitor these numbers and develop programs to ensure students graduate in four years.

A campus-wide discussion about restructuring advising and what it would entail appeared to be missing, causing challenges to iPASS reform efforts. Faculty and professional advisors did not know what each other was responsible for or what each other was doing, which caused tension. Riley shared that there was a lack of information of what faculty advisors expected of professional advisors.

Some faculty advisors were nervous that professional advisors were going to discuss graduate school and career information with students, topics faculty wanted to continue to have with students. It was split. Other faculty
though thought professional advisors were only going to provide course scheduling information. So it created some confusion and frustration. Riley’s comments explain the challenges both faculty and professional advisors had to overcome to ensure students were providing quality academic advising. If conversations took place prior to these changes, a more collaborative working relationship may have ensued.

Professional advisors wanted to help students, but faculty believed they did not have the qualifications since many professional advisors did not have a degree in the discipline for which they were advising. This led to frustration for both the faculty and professional advisors. There was no collaboration to help each other to ensure better customer service for students. Advising was still very decentralized within the college, making it difficult for students to know who their advisor was. The lack of communication also meant that professional advisors did not know what faculty were advising on and how, and vice versa. Participants believed students were getting mixed messages about what advising should entail as some groups were conducting mostly prescriptive advising while the others were providing holistic and developmental advising.

Advising Approaches to Promote Success of the Whole Student

Academic advising approaches are advising strategies that have been proven to be effective in advising students and are grounded in research (Drake,
Jordan, & Miller, 2013). Using different advising approaches, such as holistic and developmental approaches, help advisors connect and serve different types of students. (Drake et al., 2013). When implementing advising technologies, the developmental SSIPP advising framework is encouraged and should be a part of the advising restructuring process. In this section, I will discuss two sub themes, a) holistic advising and advising as teaching and b) transactional academic advising.

**Developmental Holistic Advising and Advising as Teaching**

Participants shared their view of academic advising, which was holistic and developmental advising. Advisors were committed to holistic advising and considered all aspects of the student such as family, life characteristics, emotions, skills, and abilities when advising students (Crookston, 1972; O'Banion, 1972; Jett-Seals, 2018). The SSIPP advising framework is based on the developmental and holistic advising approach and is highly encouraged to be used in collaboration with advising technology. Advising as teaching and developmental academic advising was first mentioned in the GSC Meeting Minutes in January 2014 but there is no mention of advising strategies or approaches after March 2014. The new professional advisors (7) were hired sometime before October 2014 and there is no record of these new advisors receiving any training regarding holistic and developmental advising during their early months of employment.
Many advisors spoke about advising the whole student and making referrals to different departments and other offices for those who may need additional support, such as the career center or the tutoring center where the advisor may not have expertise in the subject matter. Joey shared:

Then, sometimes you see them from their beginning to the end, as well as academic advising requires a lot of relationship building and collaboration with other advisors on campus, other programs. So, we get a lot of referrals from other departments and offices and programs. We may make a lot of referrals to different offices and programs on campus to promote advising for the whole student.

Joey’s quote describes how advising often deals with other aspects that make up the whole student to ensure they are supported to promote success. It requires advisors to practice holistic advising to be able to pick up on affective factors (Garing, 1993) and make the appropriate referrals to support students especially at critical times in a student’s academic journey, such as first few weeks of a term, after midterms, and after finals.

Advisors understood that many of the students at MU were not traditional college students. For example Jordan described academic advising as being supportive of students throughout their whole academic journey:

Academic advising means guiding students through their academic journey until they complete their degree. And that means supporting them as a whole person. So providing them with the tools that they need to
make the right decisions. Helping them to plan ahead so that it is clear on how they’re going to complete those requirements. And helping to prevent less panicked situations, I could say, occur. Knowing that they have me as a support system. So if they have questions, if something doesn’t go to plan, they can always come to me for help to redirect them. But in addition, advising about courses and requirements, it’s more so making sure that they have knowledge of the resources available on campus.

Jordan’s quote above shows that advising is not just about selecting courses for each term. It really about understanding the individual student to help them prior to problems or crises occurring. Similarly, Charley shared their perspective of academic advising and student success: “Academic advising means helping the student and supporting them in their academic journey with whatever they need assistance with. We all have the same mission: help our students be as successful as possible in terms of keeping them on track for graduation.” Jordan and Charley both mentioned that advising is not a one-time occurrence, but rather an accumulation of connections where the student is advised with the whole person in mind throughout their academic career. Similarly, Morgan shared their thoughts on academic advising. They focused on outside forces as well, not just the individual student.

We talk about financial information, and we talked about family issues, anything that may be conflicting with their academics to make sure that when we are advising, we take those things into consideration. Whether
it’s helping out at home with siblings, whether it is transportation issues.
And then if it goes beyond that, beyond our scope, then we do referrals to
the Psychological Counseling Office, here on campus.

Morgan shared that there are a lot of different factors that affect how well a
student does in college. As an academic advisor, they need to be attuned to
these different factors. The Psychological Counseling Office offers assistance
with personal, couples, and group counseling sessions in regard to mental
health.

Participants focused on looking at the whole students when they shared
their personal views on academic advising, which were consistent with the
holistic advising and advising as teaching approach (Lowenstein, 2005). The
advising as teaching approach consists of being able to synthesize the
information so that students can easily understand the information (Lowenstein,
2005). While advisors did not cite specifically where they learned these specific
advising theories, there are advising trainings that do take place periodically.

Adrian shared information about the advising training at MU: “I know that at the
advisor training at MU, that’s been a really good resource for a lot of newer
advisors such as myself, like having more of community base that you can turn to
for guidance, training and support.” Charley also discussed advising trainings as
a resource: “The advising trainings help us learn about different approaches or
theories to academic advising.” It appears that there are advising trainings that
help advisors with advising theories when they onboarded. However, advisor
trainings have not been listed in the GSC meeting minutes since March 2014. It is important that advisors receive adequate training, especially during their onboarding, as it will affect the advisor’s advising approach at the university.

Jessie shared their approach to advising students which consists of reviewing their degree audits and help students understand the information. Jessie answers questions and tries to include all information to help the student make better decisions regarding their academic future. Of these Jessie said:

Academic advising is an opportunity to teach students how to take control of their education, their educational plan, so that they can make decisions for themselves. I feel that in my role, in a sense, I’m a cheerleader and also a guide to help students.

Similarly, Adrian shared similar information that supports academic advising is not just helping student select courses for next term. They shared that academic advising is synthesizing the information in a way that promotes students to learn the material and take charge if their educational goals and plans. Adrian stated:

I help students conceptualize that it is important to meet with their faculty advisors so they gain a good understanding of the types of courses or majors they should be in based on their career choices as well. They need assistance in thinking about the component of moving forward, not just what they’re doing at Mountainside University, but also having them be conscientious of what they want to do in the future, and perhaps what classes they would want to take to help them better prepare for those
choices. Also, for them to be knowledgeable about the policies as well. We have a lot of first generation college students, a lot of those students may not know how to navigate the system. For myself as an advisor, I definitely want to make sure that I am making my students as knowledgeable as possible and giving them the tools so that they can know how to navigate those systems.

From what Adrian stated above, advising is helping students look at their future and see how the courses can be a steppingstone to that future career. Advising is a lot of synthesizing information so that it easier for the student to make their own decisions but also think about their future outside of college. Adrian mentioned faculty advisors because professional advisors at MU understand that they do not have the expertise in the specific academic fields. Therefore professional advisors still encourage students to speak with faculty advisors that make themselves available to students regarding internships, field experiences, and mentoring.

Alex shared similar thoughts about academic advising. Alex added that academic advising is helping students where they are at and with what they need at that moment.

I think it just comes down to, what does the student need at that moment? So, if we look at maybe just orientation, what do they need right at that moment? They need to feel welcomed; they need to get information about what they’re going to register for, and at that point, I think those are the
basic things they need. They want exactly what’s on their mind. So I think for some students, depending on maybe their background or whatnot, they might need more help then another student in terms of understanding their degree audit, or understanding why it is not a good idea to take statistics and college algebra in the same term.

As Alex and additional participants indicated, academic advising cannot be prescriptive where students receive the same information at the same time. Students have different concerns at different times. One way advisors practice holistic and developmental advising, is being present with the student and providing what they need at that time, even if it’s just to listen to them about other things outside of school.

Evidently, academic advisors at MU care about advising the whole student and that advising is not just the scheduling of courses. Holistic advising and advising teaching is important as it is the recommended advising approach to use with the SSIPP advising framework, which is a part of iPASS reform. SSIPP stands for sustained, strategic, integrated, proactive, and personalized (Klempin et al., 2019). After reviewing the participant statements above, they already have the mindset promoted by the SSIPP advising framework. Participants explained that advising is not a one-time occurrence, but rather sustained where several meetings occur throughout a student’s academic journey. Advising must be strategic. According to the SSIPP advising framework, advising needs to be integrated and participants mentioned that they believe in referring students to
different resources that are outside of their expertise. Under the SSIPP framework, advising should be proactive and personalized. Participants stated that advising has to be based on the whole person and their abilities, family obligations, and individual responsibilities. Therefore, advising cannot be a one size fits all approach. While participants shared that their advising approach is holistic and developmental and moving in the that direction more and more, some participants noted that advising is still much very transactional especially with the limited time advisors have to give each student.

**Transactional Academic Advising**

Transactional advising is an advising style where advisors wait for students to seek advising and only address issues that the student bring up such as requests for next term registration (Kalamkarian & Karp, 2017). Transactional advising usually takes place in large broad access campus because the student to advisor ratio is very high and there are not enough advisors to provide an in-depth, developmental advising approach with each student (Kalamkarian & Karp, 2017). Historically, the culture of academic advising at MU has been transactional and continues to be primarily transactional – despite ongoing structural and cultural changes.

Participants shared that most of the advising that takes place at MU consists of scheduling classes for the following term. According to MU’s website, there are specific advising weeks per term that are designed for students to seek advising to determine which courses are recommended for registration for the
following term. In addition, information from a GSC meeting minutes indicates that the senior leadership would like all students to be “seen before they register for the next term” (GSC Meeting Minutes, January 2014). By having specified “advising times” and the senior leadership requesting that all students should be seen prior to registering for the next term, transactional advising continues to be the most common type of advising taking place (GSC Meeting Minutes, November 2013). Although participants aim to focus on the whole student and espoused organizational values (Kalamkarian & Karp, 2017) promote such approach, the push for academic advising at MU is to create educational plans for students. These educational plans list all the courses a student would need to take to graduate. The educational plans are helpful because they allow the student to understand how many courses are required to take per term to graduate in a certain amount of time. Academic advisors are also able to provide pertinent information about prerequisites, sequencing, and course offerings that can potentially stop a student from being successful. Educational plans, if done correctly, can entail a developmental advising process (Winston, Enders, & Miller, 1982); by providing developmental information to students when completing educational plans, such as when to start applying to graduate school, or taking part in internships. However academic advisors from large universities and colleges, such as MU, do not have the resources to be able to make an extensive plan with each student. Most of the time, it is used as a registration
tool. Drop-in advising is often used at MU for students who want to know what courses to register for the next term, especially during advising week.

Charley, an advisor from a college shared that majority of their appointments are students coming in as a drop-in format to get educational plans completed for next term registration. Many of the students who come in for advising in a drop-in format are the students that are already self-motivated to seek advising on their own. Charley shared their experiences with drop in advising at their department.

When we do have our drop-ins and we notice that the wait is 15 students long, like I said, sometimes we’re just trying to address what the student is there for which is usually courses for next term and complete and educational plan, what do they need to know to answer their questions at this moment, but then it, again, doesn’t really allow you to elaborate on things that are maybe coming up.

Charley mentioned that they would like to discuss more than schedule courses but based on the time they have to meet with students and the push for educational plans from the university, they only have enough time to plan courses. Similar to Charley, Jessie shared that majority of the academic advising that does takes place is course scheduling and course selection from advising sheets. The advising sheets do not seem to be developmental but rather transactional as the focus is on the planning of courses. Jessie shared:
We have advising sheets that we prepare for the students prior to meeting with them. We go over all of general education requirements. We tend to highlight the classes that students still have pending so they can focus on planning those classes. We go into the major and we do the same for the major so that students recognize required courses for GE major. And then we explain the difference in free electives to reach 120 semester units for graduation. So that they can see the whole picture, including “okay, this is where I plan on graduating based on the classes I have planned.” And at the end of each appointment, I give the students the paperwork, my advising notes, so that they can take with them to track their classes. From some of the conversations that I’ve had and from the meetings, it seems like most offices are creating educational plans, or most of advising centers are doing the same style of advising going over courses for next term I don’t know if they also do their advising sheets or if they just highlight courses on roadmaps, but I know that it’s across campus, they’re really pushing the educational plans, I think that’s it.

Based on the passages from Charley and Jessie, transactional advising is still the major form of academic advising taking place at MU, and it has a lot to do with the advising culture discussed above. Transactional advising is a challenge to iPASS reform efforts because the recommended advising approach is the holistic SSIPP advising framework which uses holistic and developmental advising theories as its foundation. Even though academic advisors are being
trained on holistic advising approaches and they believe that it is the right type of approach to use, MU is supporting a transactional academic advising approach which contradicts iPASS reform efforts.

This contradiction has caused feelings of frustration among academic advisors. Morgan shared some frustration over the transactional advising approach that the university wants professional advisors to conduct, which goes against their personal developmental advising approach.

I think these changes are definitely coming from the senior leadership wanting to see better rates, better numbers in terms of graduation, retention, improve the numbers from four year graduation instead of six year rates. So I think that's the push. And I think even though there's a lot of talk about, Oh, the students, student success, students’ wellbeing, it truly is trying to push students out as soon as possible with the whole educational plans and graduate in four years. I know educational plans can be helpful to show students what is needed to graduate in four years, but that doesn't allow room for students to adjust, especially for the students that we serve, underrepresented populations, to adjust to take four or five different classes when they've never seen anything in college before. They're the first ones in their family. Families may not understand that the responsibilities and dedication to school might be different.

Morgan’s passage shares their frustration of wanting to support the student holistically but being pressured by senior leadership to ensure students
understand the push for graduating in four years and showing them the plan to achieve this. Morgan continued to share their frustration with wanting to provide holistic advising but having to push the four year educational plans on students.

We have students who are homeless. We have students who are undocumented. We have students who are foster youth. They may not have access to all the tools and money to buy books or all of those courses in each term to support a 4 year graduation rate. So I think the expectation of these perfect utopian student who can do it in four years to finish, but that's not the case for all students. So that looks great and trying to provide for all the tools is nice, but students sometimes have different backgrounds and different needs and those are not being met completely.

I don't think it's equitable, definitely.

Jordan also shared their frustration with having to create prescriptive educational plans and how MU is not sure what type of advising is best for advisors to use:

I think [MU] is still trying to figure out what's going to be the best model that works for administration as well as for students. As an advisor the most important thing for me is the of quality contact with the student, whether it's email or over the phone or in person. Making sure that that student has all of their questions answered and not having to just rely on prescriptive, advising educational plans, just telling a student, okay, this is what you need to do because I don't have the time to expand on that. And
like I said, advise them as a whole person. I'm seeing how they're doing as a student, not just their academic performance.

What Jordan shared above shows the conflict that other advisors were experiencing at MU. Advisors want to have conversations with students discussing their goals and future aspirations, but there is not enough time to see all students especially if educational plans are required, causing frustration. There is a strong push for transactional advising with educational plans, but they also want to provide quality developmental advising.

Having a belief that advising should be holistic and developmental but being expected to conduct transactional advising was difficult for advisors, which can also lead to cognitive dissonance (Fischer, Frey, Peus, & Kastenmuller, 2008). Cognitive dissonance is challenging for advisors because participants expressed that they would like to have meaningful conversations with students to ensure they are successful. However, the pressure from senior leadership to ensure educational plans are completed or that students are registered for the correct courses, and a certain number of courses, lead to confusion of what advisors should be doing with students. Advisors felt confusion, anxiety, and anger because they were advising in a way, they did not agree with. In addition, another challenge was in the training. As mentioned above, the SSIPP framework is based on developmental and holistic teaching and is strongly encouraged to be used with technology. However, given limited human resources, a deeply embedded advising culture at MU, and/or a still highly
decentralized advising structure, advisors were limited in fully carrying out this framework. These conditions have led to challenges related to using Phoenix, the technology purchased by university leadership to help advisors increase student outcomes and graduation rates.

**Adopting and Implementing New Advising Technology**

As part of iPASS reform, MU leaders decided to purchase Phoenix. Phoenix is a coordinated care, case management advising technology that uses a predictive analytics algorithm to help advisors assist students in graduating. While implementing a technology-mediated advising tool is part of iPASS reform, MU focused primarily on the implementation of technology, and as demonstrated above, did not focus and commit fully to other aspects of iPASS reform such as the restructuring of advising with all stakeholders involved in advising, most importantly academic advisors who would be the primary users of the product.

There were six sub themes that participants described in regard to Phoenix. Participants shared information such as MU’s decision to purchase Phoenix. Phoenix was purchased without advisors providing feedback on whether the product was a good fit. In this theme there six sub themes: a) decision to purchase Phoenix, b) Lack of communication and planning for Phoenix, c) Implementation – Phoenix’s weaknesses, d) Implementation – Phoenix’s Benefits, e) inadequate training for Phoenix, and f) surveillance.
Decision to Purchase Phoenix

Colleges and universities who participate in iPASS must be ready to take part in the reform processes (Karp & Fletcher, 2014). Part of this process is having conversations with colleges/universities personnel and stakeholders to determine if the institution is ready to take part in changes in both technology and in the culture. Conversations should take place to determine if the technology that will be used will help move the institution towards its advising and student success goals. Part of iPASS reform is having conversations regarding mission, vision and goals to ensure the technology can help advisors meet those goals (Karp & Fletcher 2014).

According to participants, they were not aware that senior leadership purchased Phoenix. Based on the GSC meeting minutes, consultants provided an overview of Phoenix at the March 2014 meeting. At this meeting, it appeared the advisors in attendance had questions about the product. At the same time, some of the advisors that were supposed to use and train others on how to use Phoenix had not yet been hired. Participants shared how they were informed about Phoenix, which is an example of top-down decision making by leaders at MU (Prodan, et al., 2015). Joey explained that while they believed the implementation of technology at MU was from a good place, the leadership did not share with advisors on how Phoenix could be beneficial for them in their jobs.

I feel like it may have been created with the best intent, but I don’t know if in the creation/implementation of this technology that advisors were really
consulted with to make sure that it would be able to function according to what an advisor’s needs are.

Joey shared that while they believe the product had good intentions, MU did not participate in all aspects of iPASS reform, which was asking advisors if the technology purchased was a good fit to help advisors with their regular duties.

A factor of iPASS reform is whether or not the technology is a good fit for the university and the academic advisors using the technology (Klempin et al., 2019). Unfortunately, MU advisors were left out of the conversation and decision making. In fact, Alex noted that advisors at MU were already searching for an advising technology that would help with their need of scheduling appointments and documenting notes prior to the announcement of Phoenix being purchased.

Of this, Alex said:

There were a couple of advisors on our campus a few years ago who needed in their office to have some kind of note taking, check-in type system. So, a small handful of us got together and talked to a handful of vendors that did that, that had that type of product. The outcome of that was we had suggested purchasing [Premier]. However, [Phoenix] had actually already been purchased, but I don’t believe anybody in the advising community knew about the purchase. It’s just like, all of a sudden, we had [Phoenix]. And I do remember a specific conversation with somebody, and I was like, did anybody know this was going to be bought? And the answer was kind of like, no, we just kind of bought it. So
I’m sure that there are some good reasons behind how that happened, that I’m not privy to, but so [Premier], [Phoenix], were two separate decisions, one was a recommendation by advisors. Like, this is the tool of all the vendors we’ve talked to. This seems to be the right tool. And then, [Phoenix] was already something that campus had purchased.

Alex’s narrative highlights why iPASS reform efforts have been difficult to carry out at MU. Advisors were already looking for an advising technology that they can use for their specific needs, only for it to be disregarded because a different product was already purchased. Advisors did not have buy-in for Phoenix, since they already found a different product to purchase. Advisors were blind sighted by the purchase of Phoenix. Sam shared a similar experience of when they found out Phoenix was already purchased by MU’s senior leadership: “Phoenix was a platform that was purchased by certain individuals, but is more used for advisors and advising, but we had no say in it.” Sam provided more information regarding the announcement that Phoenix had already been purchased and went into specifics on how it was introduced and then purchased without advisor buy in. Sam stated:

We have undergraduate advising [Graduation Success Committee] meetings, but for years they were every month. And so, one of those, it was maybe in 2014, I could be wrong on the year. But we had a [Graduation Success Committee] meeting, and two members of senior leadership wanted to attend. They wanted to have a presentation on
something known as [Phoenix]. They ended up also phoning in [Phoenix] consultants. They had consultants that were going to tell us about a product that could help with academic advising, maybe some other departments that could create a coordinated care network that students can seamlessly go through different departments and there’ll be a constant communication.

Advising meetings took place regularly based on Sam’s passage above, yet this was the first time that advisors were hearing about the Phoenix product. From the GSC meeting minutes from March 2014, it is documented that Phoenix consultants came to the meeting to provide information about the product. It also lists that Phoenix would “discover and help with retention/graduation rates” because it had “predictive algorithms which can be used to view student performance and spot at-risk students which include those with high attrition risk and those in the ‘murky middle.’” Sam elaborated about consultants describing predictive analytics:

We would, as advisors, as staff, we would have access to know if a student went to a meeting, had an appointment, what was discussed, and we could better help those students, and not have them fall through the cracks. They had analytic information, where we might use predictive analytics to assist students. It turned out that the product was already purchased. That it was more of a, hey, this is what this product is, and this is what we’re going to start to implement. It was purchased by a
department that had nothing to do with academic advising. It’s still not known if anyone in advising knew about it, but it was a product that was purchased. The campus purchased it and they signed a contract with [Phoenix], so it was already purchased. We were told we had to implement it.

Not only were advisors in the dark about the purchasing of Phoenix, but they did not know that they would be the ones charged with learning the product and training other stakeholders on campus to use it. Not only was it a product they just heard about, it was a product that they did not have much information about. While they were told about the benefits, advisors did not see how it could really help them in their jobs, and then they were given the extra pressure of having to train others. Riley also shared their experience with not having any prior information about how Phoenix in general, and how Phoenix could help them advise students. They also felt that Phoenix was purchased hastily due to the promise of predictive analytics, rather than what the advisors really wanted which was notes and scheduling capabilities so that they can provide a more student friendly and developmental approach to academic advising.

I don’t think the research was done on what were the actual functionalities of what we needed it to do. When [Phoenix] originally rolled out, it was not for notes. It was really more just for the analytics and how our students were doing, so that was all it gave us. As an advisor I’m like, okay, yeah, I can see where my student is, but that doesn’t really help me very much
because I have a tool that already does that. That yeah, we could see how a student was doing, but it doesn’t really give us anything else.

While participants shared that the advisors at MU wanted technology that would be able to keep notes and schedule appointments, concerns were raised. Morgan shared that their department was hesitant about Phoenix because of the data that it would be storing about their students. They shared that some of their students are members of sensitive populations and they were concerned about confidential information that does not need to be shared. Morgan noted:

One of the reservations that we have regarding Phoenix is what if we write notes about students’ situations, home situations, legal situations, immigration status situations. So if we write those notes in that technology, who keeps the server? Where is that information? What if the university decides that next year the contract is out and we’re going to change the new model of advising with new technology? So where does all that information go to? So those are the reservations that we had, and I think that our department administrators have asked those questions and was never given a clear answer. So that’s why we had those reservations. We want to make sure we are protecting our students. We serve undocumented students, we serve foster youth students, we serve homeless students, so we want to make sure that those students are protected more than anything else.
The passage that Morgan shared above is further evidence that MU did not have any consultation with its advisors prior to purchasing Phoenix. Morgan shared that their department had several reservations regarding Phoenix. The March 2014 GSC meeting minutes indicate that there would be additional conversations regarding Phoenix (March, 2014). However, the meeting minutes from the GSC meetings in May 2014 indicate that MU advisors have scheduled weekly conference call trainings with Phoenix consultants. The product had already been purchased and advisors who did not have a say in the purchase were responsible to conducting trainings to the university stakeholders.

The decision to implement Phoenix technology was a top-down decision. iPASS reform consists of both implementation of technology and the stakeholders belief that the technology will help improve their job functions and reach their objectives and goals. These passages clearly show that advisors had no say on the product that was purchased to be implemented for them to use. They were not able to determine whether Phoenix was the product that will help them in their jobs. They were not able to see the “vision of benefits” (Karp & Fletcher, 2014, p. 11) required for end users to have a likelihood of adopting the technology. This is a challenge as it was difficult to recommend a product that they did not have a say in purchasing and did not have a clear vision of the benefits of the product.
Lack of Communication and Planning for Phoenix

In addition to not being consulted on the purchasing of Phoenix, participants discussed a further lack of communication and planning regarding Phoenix implementation. Decisions continued to be made and not fully explained or discussed with academic advisors. Not only were decisions top-down, but they were also not clearly communicated with advisors and stakeholders.

According to the participants, departments were able to choose whether or not they wanted to implement or use Phoenix. However, some participants were expected to learn how to use the product to train others on campus. When asked about the communication and planning at Mountainside University regarding implementation of Phoenix, Riley shared that their job description was not clear. There was no clear planning set in place on how iPASS reforms would take place, or specifically how Phoenix was going to be implemented. There were no milestones or assessments in place to gauge how successful advisors’ iPASS reform efforts were.

I think that we got this plan of, okay, now we have these new advisors under each of the colleges. And I don’t think that it was taken into account that all of the colleges are very, very different in their leadership and their students. We were put into this position of just train, and we weren’t given a plan. We were basically told that our job description would change as the position needed to change. Same thing with using the [Phoenix] product. It was implemented, we got access to it and you were told, okay,
use it, without any help. I mean, we had trained obviously, but there was no real plan in terms of how we are going to implement this to campus. We just rolled it out to everybody.

Riley explained that there was a lack of planning on how Phoenix was going to be implemented to the rest of the campus community. There was no plan to provide any guidance or support for advisors who were also newly employed at MU.

Not having a plan is detrimental to iPASS reform efforts. When advisors do not have buy-in for the product, nor a plan to determine if implementation efforts are working, people will not have faith in the product (Klempin et al., 2019). Jamie expressed that there was a lack of planning of Phoenix when it was first implemented as well. Jaime explained how the lack of planning caused problems early on in the implementation of Phoenix:

From the historical record, [Phoenix] was very optional. And so, the tool was only as good as the users using it and there was no plan on how to implement it. So, with there only being maybe one office using it or a couple of offices using it, but not completely. So some advisers updated records and others didn’t. No one was leveraging any of the analytic tools. We weren’t using it to schedule appointments. It was pretty much an under-utilized and an expensive piece of software. But it definitely wasn’t rolled out well, it is so defragmented. So, technology and data are only so good without direction. I think the tools were purchased, poorly delivered
and very often not supported at all. So I think advisors were left to be kind of left alone

Jaime spoke about the lack of planning on how to implement Phoenix and how there was no buy-in from the advisors who were tasked with training Phoenix to other potential users on campus. If the advisors conducting the training were not using the product in their daily practices, then advisors would not be able to sell others to use the product as well.

**Implementation – Phoenix’s Weaknesses**

As highlighted throughout, Mountainside University purchased Phoenix without any consultation from stakeholders and academic advisors who were to be the primary people using and training others on the product. The technology portion of the iPass framework “consists of the management system, hardware, and software” (Prodan et al., 2015, p. 483). Even though the technology portion of iPASS was already purchased, implementation efforts were difficult because there were so many problems with the technology itself.

Riley shared that Phoenix had several “glitches.” Information was not being pulled correctly from university data systems and the information was inaccurate. There was a lack of compatibility between Phoenix and MU’s other data platforms. Riley shared more about this topic below.

The other issue that we had is a lot of the information, especially on the graduate student side was completely wrong. It was not pulling accurate
information from university system database. The information was not syncing properly. Some departments on the undergraduate side, was not syncing properly. We kind of figured out, why would we use this information to pool lists of students if we wanted to, kind of do, these interventions with them, if it was not pulling everything properly?

The early interactions advisors had with Phoenix was negative. Not only did advisors not have a say in the product, Phoenix’s data algorithm was not accurate which is a huge problem when participants are already skeptical of the product. Riley continued to share the difficulties with the implementation of Phoenix. Everyone was given access to the product, but no one knew how to use it. Riley recalled:

That, and the campus gave anybody, and everybody access to the systems. We had hundreds of people who had unlimited access into the system and had absolutely no idea how to use it. It just kind of debuted as this great tool, but then nobody was really taught how to use it properly and it just floundered on campus, especially again, because of the glitches and not pulling our student populations properly.

Riley’s comments indicated that Phoenix was not successful at MU. The data from Mountainside University and the analytics that Phoenix was using was incompatible. Not only did everyone have access to the product, people did not know how to use it properly, and when it did provide information, it was often incorrect. This caused a huge barrier for people using the product.
Jordan shared similar sentiments that Phoenix was not compatible with MU’s data.

I think there were a lot of things initially with the software that had to be tailored to our university and how we operate and to advising in general. We are different in as far as our student population, how we operate. So a lot of things had to be adjusted, just the way things were laid out, the information. There are things that I would still like to see improved with this. The system doesn’t quite meet all of our needs just yet. And hopefully they’re able to make those adjustments. There’s a lot of things that go into advising. And I think that’s part of it and having to make sure that it works for the advisors that are going to use it.

Jordan shares that that there were a lot of issues with Phoenix when it was originally implemented which shows that the product was not a good fit with MU when it was purchased.

Similarly, Jamie shared information about the predictive analytics and the associated concern levels that it assigned students as a way for advisors to monitor student success. Jamie explained that Phoenix was not able to provide accurate risk levels based on the data that Mountainside University was using. For several years, while risk levels were still shown on student pages, advisors ignored the information as it was not accurate. Sam shared their disappointment with the product: “I would say for what we were promised with Phoenix, it hasn’t lived up to what we were promised. It’s actually fallen flat. The predictive
analytics had been proven by our data office that the predictive analytics, it’s not reliable, and that was a big part of Phoenix. So we’re paying a lot of money for us to document.”

Not being able to use predictive analytics was another huge barrier to successful implementation of Phoenix. The whole reason why MU senior leadership was interested in purchasing Phoenix was due to its predictive analytics algorithm and after it was implemented, the concern levels were incorrect. As such, participants raised questioned as to why use the product in the first place. Jamie shared that it was not until several years later that Phoenix was able to correct the predictive analytics so that the concern level would actually mean something: “It wasn’t until recently where Phoenix was finally able to redevelop their model to fit our question of whether a student can graduate in four years. Which has always been our question, but the tool was not answering that question.” By the time the Phoenix’s predictive analytics worked, the people that did use and initially buy in to the product, had ignored the concern level for several years.

Although issues related to concern levels have been addressed, participants indicated that Phoenix has failed to meet expectations. Jordan provided an example of how they currently try to use the product, but it continues falls short.

It’s definitely come a long way from wherever it originally started from. But I will say, as I said, it’s not perfect. There are some things such as the search function specifically. I would like to be able to look up how many
students have not taken a course. That way I can reach out to those students and make sure that I’m communicating whatever it may be regarding that course. For example, if I’m looking up a lower division course, and I run a list of students that have not completed it; it only gives me an option of, show me students that have not registered in this course between a certain time period or ones that have received a final grade, or that have received midterm grade or that are registered. So a student may register for the course, but then drop it. So I don’t know if this system tracks that they were registered and then exclude them from that list.

The search functions is something that can really help advisors target specific groups of students to ensure they are receiving the assistance they need. However, as participants indicated the technology was not consistent or accurate it was difficult to get more stakeholders to use the product. Other advisors on campus did not want to use the product because there was no buy-in.

Jordan shared more mishaps with Phoenix regarding pulling reports for students.

Also, if they were a transfer student and completed that lower division course at a community college, it would not track that that course has been met. I did have this issue the other day, I ran the list for a lower division course, and it didn’t provide transfer students who had completed it at a community college. So the sophistication isn’t quite there yet. And those are the tools that we need to keep up with the extra reporting pieces that we now have to do as advisors.
Phoenix had the potential to be a great advising tool for advisors to use to ensure they were proactive and reached out to all groups of students. However, because the technology did not produce accurate results, Phoenix was required to redesign their predictive analytics algorithm. However, it is still hard for advisors to have faith in the product, after years of it not being accurate or consistent. This played a huge role on whether advisors used the product. If they did not believe in the product then they would not use it, which made training others on campus even more difficult. Even though there was a general dislike of Phoenix, participants did share that there have been some improvements and they do like some functionalities.

Implementation of Phoenix - Benefits

Although participants did not have a say in the purchase of Phoenix and had a general dislike for it, there were some functions of the product that participants really enjoyed. As a reminder, Phoenix was originally purchased for its predictive analytics to help advisors determine if a student was in danger of stopping out. However, majority of participants discussed the self-scheduling and documentation function of the product as the winning features. Several of the newer advisor participants expressed their satisfaction of the product, but they were not aware of the challenges Phoenix presented when it originally implemented.

On average, “cultural change takes a long time, 3-5 years at a minimum” (Murray, Richardson, & Richardson, 2003). It has been about 5 years since
iPASS reform efforts started at MU, and participants did share that although they were originally opposed to Phoenix, there are some tools that they do enjoy using. Sam shared that while the product has fallen flat, there are some nice aspects of the product such as the self-scheduling tool for students. Sam shared that Phoenix has made appointment scheduling with students much easier. Participants discussed how normally there is that back and forth email exchange or phone call to schedule appointments. Often times appointments block out before a student is able to finalize the appointment scheduling process which leads to frustration. However, Sam shared that the scheduling function is really helpful in Phoenix because students are able to self-schedule their own appointments.

I think the appointment scheduling piece is great. So as a coordinator, instead of having students have to call in for appointments, I gather just ID numbers of students that I want that are on Phoenix or that need to check in with my program, and I can send them a mass email with a link to schedule an appointment. So I think for certain things like technology as a coordinator, it's definitely helped out because I can run those lists and send those invitations, out with Phoenix. Honestly, once I have a list, I can send an invitation out within minutes and then immediately within a few seconds have students already scheduling appointments. I think as a coordinator, it's definitely helped out with that.
Having student self-schedule appointments is really helpful for advisors as advisors are often having to meet with students and coordinate different programs within their respective departments and offices. Riley also shared that they have grown to enjoy using Phoenix, and it has become a part of their advising steps. This makes sense as the quote from Murray et al, indicates that cultural change takes about 3-5 years. Many of the participants cited that they started liking certain aspects of Phoenix around 3-5 years after initial implantation. While the predictive analytics may not be as sophisticated, advisors are still using Phoenix for communication, such as documenting appointments, keeping notes on students, and communication with other advisors on campus.

Phoenix gives me a lot of information in terms of being able to keep notes and summaries on who a student has seen and where they fit in and kind of their history, and that’s a lot of information that you cannot get from a degree audit or their transcripts or anything like that. And the ability to integrate that system into my calendar has just made my workflow so much easier as an advisor. It’s definitely a system that I will admit still has some bugs, there’s still some things that I continuously ask for. But I think that it is a vital tool for an advisor in a campus as large as ours to kind of help with that connectivity piece, not only to our students but to other advisors on campus.
Riley’s passage above indicates that there are some positive functionalities of Phoenix. However, advisors still see many functionalities of Phoenix as lacking. They know there are some bugs and are still wishing for different features, but it is making some progress in establishing usage amongst advisors. Jordan also shared that they are starting to use Phoenix daily. They are also using the note functions and student self-scheduler for appointments.

It is now a regular part of advising on a daily basis, something to do for each appointment. Again, it is extra steps in the day. So just making sure to adjust priorities and making sure we adjust our time so that all of those notes are inputted. It has helped with keeping notes and understanding the conversation that a student has had with an advisor prior to the appointment. Before that, we didn't have the access for that it was just simply as being introduced to the product. And then it's slowly being rolled out. So now we're at the point where we are using it in everyday in advising. We're able to view the notes, the history, what courses they're in, what they've completed. But now it's at the point where students are starting to have access. When that is going to happen exactly, I don't know yet. But students now should be able to make an appointment through this system, which is helpful for the all advisors. So it's still being slowly rolled out, but now they're slowly rolling out for students.

Jordan shared that while some functionalities of Phoenix are being used, there is still a lot of areas for growth. There is also still a plan missing on how this product
can help advisors. To date, it is being used mainly for appointment and notes documentation as Charley mentioned in the next passage. Charley also indicated that the note functions are helpful especially during difficult time like these, where people are working remotely due to the COVID-19 pandemic:

I think it's a nice way of keeping record of what conversations were had with the student, what departments they have already been to, to see what services and resources they've received. It's nice to kind of go back into your notes if you have met with the student already and seeing what that conversation was last time. And you get to ask them if they have any updates or you kind of get to pick up where you left off originally. Especially right now, in this crazy time where everything is now virtual and online, it definitely is super-helpful to have because we still get to have those meetings with our students, whether it's through a video teleconferencing program or still answering questions via email. I feel like the technology now has definitely made it possible for universities to move online or virtual in a crisis such as what we're going through today. Phoenix has made it possible for advisors to stay connected based on the appointment and notes documentation functionalities especially during the COVID-19 pandemic. It has been a good tool to help keep communication between different departments and offices when assisting students remotely.
Inadequate Training for Phoenix

Mountainside University’s plan to use academic advisors to train other possible end users in the university is a common plan (Karp & Fletcher, 2014). The problem that Mountainside University faced during the implementation is that advisors charged with training others felt they received inadequate training themselves. Sam provided insight on how the original training took place with Phoenix.

We got trained on it, and it became a train the trainer. So we had training sessions with Phoenix consultants to basically give their knowledge to us. Then we were then supposed to take that knowledge to then implement it across the board, across campus. Phoenix ended up purchasing another advising technology company, which is also a kind of appointment scheduling, appointment note taking system, no analytics in it or predictive analytics, but it became a product that the university wanted as well. I’m unsure if there were any conversations with anyone in advising or with any other stakeholders for that. All I know is that we were told they were merging the two products, so we were told to hold off on the original implementation. Then when they ended up combining both products under Phoenix, we were trained on that in order to then implement that across campus.

Based on the passage Sam shared above, training for Phoenix was set up for failure since the company merged with another company and training efforts
were delayed. Training was stalled in the middle of MU trying to get buy-in and gain users for the product. Training was difficult for advisors because training was spread apart and consultants conducting the training were learning the new product at the same time they were training advisors at Mountainside University. Due to the two companies merging, this set back the training and implementation efforts at Mountainside University.

Joey also shared information about the lack of training for advisors who had to train others on campus. When asked if there was training provided for newly hired advisors Joey answered that there was very minimal training.

No, there definitely wasn’t enough training. It was kind of like a quick thing, maybe an hour, a couple of hours. Because initially I was supposed to train others in my college, but I was still fairly new. So, I was tasked with the responsibility of being a trainer. I didn’t really even know what that entailed. Then, having to do some initial trainings, and then having that responsibility. Okay, well now faculty, we’re trying to get them to utilize this technology, so now you need to train the faculty. So, that was really overwhelming because I was still trying to learn how to use this technology.

As indicated by participants, it is difficult to have the confidence to train others when you lack confidence in the product you are providing training for. Since advisors were hired to help train Phoenix users, several advisors were very new to their positions and placed in a position of having to train others can be difficult.
Joey also shared their frustration with trying to learn more about the different aspects of Phoenix.

Researching the different notes as well as trying to figure out how to use all of the different tools on the technology, especially, if you weren’t really trained formally on how to do it is very difficult. It was introduced and, here, you need to use it. Here’s some basic functions. But as you start using the tools and you want to use it for a particular function, you may not know how to use the technology. As time went on, I think more advisors had questions on how to use certain functions of Phoenix.

Joey’s passage above shows how unprepared advisors were when training other campus stakeholders at MU, and the frustration they felt. Joey added how MU created smaller groups to be the initial trainers, but the purpose of the group was unclear and what the group was supposed to do was also unclear.

I know there were smaller groups, that had a different responsibility of having to figure out and learn quickly on how to use certain higher level functions on the technology and based on what they were trained in. I don’t even know. Sometimes I don’t know what that includes or how high of a level the training is. Then, they go ahead and let the rest of the advisors who are not part of the smaller group know how to utilize this technology and thinking how we can use this technology in our particular advising offices. If you weren’t part of that smaller group of advisors doing the training, there’s no formal training from anyone, which I feel like could
be useful. So, it doesn’t put such pressure on them to have to train everyone else when they are also learning how to use this technology.

Again, Joey shared that the smaller group of advisor trainings were not clear, and the larger group of advisors could have benefitted from a more formal type of training possibly with the consultants specifically from Phoenix. Joey, along with other participants, also expressed that learning how to use new technology and train others, while they are still advising students was too much pressure.

Advisors don’t have all day, really, to be trying to figure out how to use technology because most of our job tasks are meeting with students, and we have to be available to meet with students. We don’t have downtime to figure out how to use this technology.

This passage from Joey shows that MU did not provide plans to where advisors would be able to take time out of their day to learn the product and train others. Rather advisors were expected to learn while they were advising students. This expectation added to the roles and responsibilities of already overburdened advisors.

Jamie also shared their experience with the training of advisors to use Phoenix and it’s roll out: “I think the tools were purchased, poorly delivered and very often not supported at all. So I think we advisors were left to be kind of left alone.” Advisors felt abandoned during this implementation process. It does not seem like they received enough support, or training in order to effective trainers for the rest of campus. Joey shared their frustrations with the training process as
they felt they did not have enough time to learn the product before they had to train others.

So, we need a little more time to adapt before everything starts rolling out quickly, because we’re not experts on this. This isn’t what a lot of us have backgrounds in, and so it can take some time to learn how to utilize it and what works and what doesn’t work. Now, it’s been tweaked more to be more user-friendly. It’s still not as user friendly as it could be, but I don’t think when this technology was created that enough advisors, experienced advisors, were consulted with to make sure that it would meet the needs of the advisors, in how we approach helping students in their academic journey.

MU did not take into account that advisors may not have the technical background to understand Phoenix functionalities and that there would be a large learning curve for advisors to understand the product enough to conduct training. Overall, MU was not ready to implement Phoenix because the individuals who would be responsible for the training were not well versed in technology, this knowledge gap was exacerbated by the technical errors and glitches in the system itself.

**Surveillance**

In addition to feeling frustrated and abandoned, the idea of surveillance was brought up by several of the participants as a challenge that affected professional advisors. Surveillance in the workplace is “management’s ability to
monitor, record, and track employee performance” (Ball, 2010, p. 87). Several of the academic advisors were concerned regarding surveillance because of the lack of communication currently happening at Mountainside University. While advisors were told they would not be judged based on the numbers of students seen, information regarding numbers for all advisors were being distributed to all advisors. Several participants cited that it is not clear what was going to happen with the information recorded and what possible disciplinary actions may take place. While the notes and appointment documentation seemed to be very helpful and used by all advisors, participants believed the data could also be used to surveil them. People get nervous about surveillance when there is a lack of monitoring awareness, or clear information (Ball, 2010). Charley explained that there is a focus on the number of students each advisor sees, which makes them nervous. Surveillance also brought up the lack of trust between professional advisors and senior leadership. Trust is built between two groups based on the interactions that take place between the two (Tierney, 2008). With senior leaders not being transparent about the numbers and why they are closely monitoring advisors, advisors will feel there is a lack of trust, which participants shared below.

It seems like now they’re very focused on receiving the numbers and kind of looking at how many students each department is reaching out to and having appointments with, or how many points of contact with our students. That has definitely changed the way we receive different
information from the senior leadership or different departments on campus, and from the stakeholders. It definitely has been more about the numbers it seems like and almost seems like we’re being watched a little bit more carefully. To be honest, it makes me a little bit nervous just because it makes me feel like I’m being evaluated based off of numbers, quantity, not necessarily the quality. And especially for something like academic advising, I feel like it’s more so about the quality and having those interactions with our students that are more meaningful than reaching out to a hundred students and not really making those connections with our students, especially with the student population that we have at [Mountainside University]. I feel like those students definitely need a lot more support than other campuses in the area.

Charley explained that they were worried because there is a focus on advisor numbers and if they are seeing a certain number of students. While there was a focus on advisor numbers, there was also a lack of communication on whether these numbers would be used for evaluation and assessment. Charley was also concerned because the focus is on the numbers, but this goes against what they believe is most important in advising, which is creating meaningful interactions with students.

This is another example of cognitive dissonance that advisors are experiencing at MU. Advisors wanted to speak with students and help them developmentally. However, advisors felt they now had a quota of students that
need to be seen or else they would receive disciplinary action. Advisors understand it is important to help students individually based on their needs, but advisors are also feeling the pressure to make sure increased graduation rates are achieved. Charley shared more about the pressure of having to serve students, but also the university.

So I feel like it’s definitely important to build that rapport with our students, make those connections, opposed to just trying to reach out as many students as possible. Again, going based off of retention and graduation rates, I know they look to the advisors to keep those rates up to again help out with the funding. And so I feel like it’s coming from the higher levels and then the responsibility is put on the advisors.

It is difficult to feel pressure from the university regarding graduation and retention rates. Advisors know that students are the ones responsible for passing the courses, departments are in charge of having the capacity to ensure students are able to enroll in needed courses. However, advisors feel that the pressure of students not doing well is placed on their shoulders. Sam mentioned that completing appointment documentation can be time consuming especially if they have back to back appointments, but they want to make sure they are receiving credit for seeing the student.

I think for my time management organization, I struggle because I have to make sure that I factor in my 30 minute appointment. But knowing that within those 30 minutes, I need to make sure that I’m also writing,
documenting, and writing my notes to put in Phoenix. If appointment runs over, it becomes do I do my notes and then see my next student, or see my next student and then come back? A lot of times I find myself coming back to add notes in my advisor reports. But by that time, those couple hours not doing it, I have to now think what did I talk to that student about and trying to make sure I get all the information. So I think it does have its benefits, but the only thing I guess I’ve really changed is my time management and making sure that I’m doing my part to document.

Based on Sam’s passage above the purpose of the appointment documentation is changing. Instead of it being a way for advisors to communicate and break down silos, advisors complete to ensure they receive “credit” for seeing a student. Alex also shared their concerns about surveillance and how it may affect professional advisors.

I don’t think people like feeling that if they don’t put appointment documentations in [Phoenix], that they are going to be judged for that. But I don’t think people like the idea of, are you going to base my work off of the appointment documentations I put in there? And I think that when I look at it from an administration down, and then advisor up, what are they thinking about what administration is telling them? I think that’s the concern. I think that’s the challenge there. I think in terms of advisors just utilizing appointment documentations, and if that’s a good idea, I think people are on board with that. I think as a whole people would say, “Yes,
it’s a good idea because our students move to different majors, they move around a lot. So yes, that is a good idea.

While advisors placed notes and appointment documents in Phoenix, it was to help other advisors help students who may have moved majors. However, there was a lack of communication between senior leadership and advisors regarding the number of students an advisors sees, which is causing some confusion and worry amongst advisors. Alex shared below that the appointment documentations seem like it is working against advisors and is being used as a way to track advisors.

And now that really almost all of our colleges, have multiple advisors, I do think the note system makes a lot of sense because now you can go into an advising office and see one of five people. That’s way different than when there’s only one or two advisors, right? So I think everybody’s on board with that. But I think the concern, as we were told appointment documentations are necessary was, “Okay, so I’m being judged on the number of appointments documentations,” and I don’t think that makes people feel good.

Advisors were not receiving clear information on what appointment documentations would be used for in regard to advisor productivity. Advisors expressed feelings of fear and nervousness. Surveillance can negatively impact students because advisors are concerned about their numbers. Number inflation can occur where advisors create appointment documentations for every
interaction, even if it was not meaningful. Further, in advisors’ quest to ensure numbers are high, advisors may not take the time to developmentally advise students and use a transactional advising approach that is not known to promote student success. This can potentially counter some of the goals of academic advising. Participants already shared that senior leadership is requesting professional advisors monitor and track students. Advisors may feel the pressure to produce numbers and create strategic advising campaigns. Thus targeting different groups such as PELL grant recipients, persons of color and first generation college students. The monitoring and targeting of students groups and demographics may further perpetuate stereotypes and deficit thinking for the purpose of increasing four-year graduation rates. To ensure they are reaching their numbers quota, advisors may defer to transactional advising instead of developmental and holistic advising. Thus countering academic advisors’ goal of assisting students with their personal and academic goals, and ultimately lead to a decrease in four-year graduation rates.

It is clear that there were several challenges to the implementation of Phoenix that clearly affected academic advisors. When MU purchased Phoenix without consultation with advisors, buy-in was impossible to obtain, as they did not see the vision of benefits that is often required for end users to adopt a new technology. They were placed in difficult situations of having to quickly learn how to use a product and then train others where they were viewed as experts. Advisors were left to scramble and navigate the implementation alone and
blindly. The fact that Phoenix did not live up to its expectations was also a challenge for advisors as they were required to use a product that did not work and was not a good fit for MU.

From the passages that the participants shared, it is clear that MU is experiencing changes and challenges even to this day, several years after Phoenix was initially implemented. Leadership matters and plays an important role in getting stakeholders together to make iPASS reform not only possible, but successful. When Phoenix was initially implemented it appeared the leadership was not effective enough for everyone to get on board to use the product. However, when someone who has skills and qualities that embody transformational leadership came on board at MU, more progress toward full iPASS reform started to occur. This means strong leadership is very important to ensure all groups are being provided with what they need to ensure successful implementation iPASS reform. This includes successful integration and implementation of technology, but also conducting advising restructuring of processes, approaches, and structures with advisor feedback to ensure compatibility.

Leadership Matters at All Levels

In order iPASS reform efforts to be successful, leadership plays an important role at all levels (Klempin et al., 2019). It requires leadership that is able to support their employees and to provide guidance when things are not
working appropriately. Based on the themes above MU advisors underwent changes in advising structure and delivery without advisor consultation or feedback. MU senior leadership pushed transactional advising even though advisors believed in holistic, developmental advising, which better supports iPAss reform. Furthermore, MU purchased advising technology that advisors were not consulted with or approved in purchasing, even though they were tasked with training MU stakeholders. MU advisors have had to adapt and be flexible with the often changing initiatives and expectations from senior leadership. However, having the right leadership can make a difference in whether advising initiatives are successful or not. In this section, I will discuss garbage can model decision making, transformational leadership, and advisors as leaders. I will also discuss how these subthemes affect iPAss reform.

Garbage Can Model Decision Making

Garbage can model of decision making is when leaders try to match solutions that have nothing to do with the problem but happen to be already on hand when problems arise (Fardal & Sornes, 2008; Olson, 1972). Participants shared that leaders at Mountainside University tended to implement new processes or strategies that have nothing to do with problems but just to do it. When asked about changes taking place at Mountainside University, Sam responded that changes are probably coming from someone higher up in leadership. The changes are “probably based off maybe a conference or something, some study or something that they heard. Because it was almost like
all of a sudden, we were told this was going to happen (changes in advising population).” This quote is consistent with several of what advisors had mentioned in their interview. Changes at MU happen often and quickly even before advisors are able to adjust, new changes take place. Morgan shared similar thoughts about leaders coming up with something different just to say something has been done.

I feel that honestly, sometimes I feel like they’re just trying to check the box that they can say they’re meeting the goal, trying to just meet the goals or solve problems. Come up with something innovative and come up with something different from some study, and I mean, there has been some administration turnaround that they have left because they feel like this is too much or maybe what the administration is just making sure that we meet the goals, but truly not looking into the student’s wellbeing or even the advisors’ wellbeing as well. So, yeah.

According to participants MU has a track record of coming up with new processes or initiatives to fix issues, but these changes are often short-lived. Participants have cited that Phoenix was purchased without consultation from end users, or advisors. In addition, it seemed to them as if senior leadership changed things for the sake of changing things to seem like problems were being addressed. It also seemed to them as if senior leadership at MU was not taking into account the students’ or advisors wellbeing, which participants lamented was
really unfortunate and carried negative implications for stakeholders. Sam also shared their thoughts on how decisions are made at MU.

I mean it’s only my opinion, my assumption, but I’m assuming that it’s something that’s coming down from someone higher up in administration, or a suggestion from maybe someone in [another department]. Probably based off maybe a conference or something, some study or something that they heard. Because it was almost like all of a sudden we were just told this is what’s going to happen, and now we’re working towards making that happen.

Decisions are obtained from senior leadership that are from conferences or studies where they have a solution available for a problem but there is no research if the solution is going to successful or helpful.

In addition to data collected from interviews and organizational documents, I was able to observe a town hall meeting for Mountainside University’s Strategic Plan. Feedback from the strategic plan town hall meeting would be used to help the president and leadership team determine whether or not additional outcomes should be added to the original 2015-2020 strategic plan goals. Much of the focus was still on increasing graduation rates and Mountainside University’s president was presenting how the graduation rates have increased by a few percentage rates for both first time freshmen and transfer students. Even though the information regarding graduation rates from executive leaders sounded positive, there was no mention of academic advising
during their presentations. During the question and answer section, an attendee mentioned that they did not hear anything about academic advising. They asked specifically if there would be any changes happening to advising. Mountainside University’s senior leadership member took the lead in answering the question. They said that advising is really the centerpiece in achieving goals of increasing graduation rates and that technology would be supporting the advising mission.

The senior member of MU leadership also mentioned that there was a new career readiness task force and they are excited to hear what they have learned. No mention of what the career readiness task force was charged with doing and how it relates to academic advising was provided. In light of the continued challenges experienced by study participants, it was a bit worrisome to hear that academic advising was not really discussed, and when someone asked specifically about it, they relied on the use of technology as the support for academic advisors. We already know that the introduction of technology alone does not increase graduation rates (Klempin & Barnett, 2020). In addition, it begs the question if senior leadership is aware of the issues regarding Phoenix. It is unclear what the senior leadership meant in that comment regarding academic advising. In the next section, information on how transformational leadership can help move iPASS reform efforts are discussed.

Transformational Leadership

As noted previously, leadership matters. Leadership impacts organizational culture (Klempin et al., 2019). Although leadership seemed to be
lacking, participants cited that transformational leadership helped with progressing reform efforts. Participants indicated there was one person who took the lead in university’s iPASS reform process. Several participants shared that a new high level administrator took on the implementation process of Phoenix. This high level administrator took control of iPASS reform efforts about 3 years after the initial implementation of Phoenix. Many actions that the high level administrator did were consistent with iPASS reform such as bringing stakeholders and end users to the table to find out what they needed, liked, or did not like about the product. These actions were missing during the initial years of iPASS reform. The high level administrator was also responsible for adding caseloads to academic advisors at Mountainside University. This high-level administrator exhibited traits of a transformational leader such as trust.

Based on the interview statements of the participants, trust is important, and seems to be lacking at MU. Trust consists of different groups of people in an organization who participate in different interactions and actions that consist of differing levels of risk and faith (Vidovich & Currie, 2011; Tierney, 2006). Senior leadership and professional advisors at MU continue to have interactions where the trust is being tested between the two groups. “Trust is a two-party relationship in which an individual commits to an exchange before knowing whether the other individual will reciprocate” (Tierney, 2008, p. 30). From the beginning of iPASS reform efforts, MU leadership conducted top down decision making where advisors and faculty were not part of the larger dialog regarding
advising structures/processes and advising technologies. The findings indicate that advisors were not notified or consulted with regarding the purchasing of Phoenix. This negatively affected the buy-in of advisors in using the product. The introduction of surveillance brings up a larger issue with trust. It appears trust is lacking in both groups at MU. Senior leadership wants to ensure advisors are advising a certain number of students to ensure increased levels of student success, however, there is a lack of communication from senior leadership and advisors describing expectations and what the numbers will be used for. Based on the interviews, participants expressed, fear, nervousness and confusion.

Tierney (2006) states that trust is built from repeated actions or interactions. With MU senior leadership lacking communication, planning, and not including advisors in the conversations regarding advising, the idea of surveillance is a worrisome topic for academic advisors at MU. To help advisors and senior leadership, trust must be built within the organizational culture. If MU wants to be able to adopt new efforts to improve student success, there must be level of trust. Between all stakeholders with the same goal in mind. Tierney (2008) states that “a level of trust is critical if individuals are going to take risks and participate in shared decision making” (p. 39).

Transformational leadership is effective because followers are more likely to be on board with changes because they feel like they are a part of the shared vision (Lo, 2010). Transformational leaders make followers feel like they are part of the solution and they feel trust and respect. Participants attributed true
progress toward iPASS reform to this leader, such as asking for advisor feedback on the Phoenix capabilities, changing advising structure based on advisor input, and advocating for academic advisors at MU.

Sam provided some insight on why more people at Mountainside University started using Phoenix.

We had leadership that came in that was very good. They were leading by example and they really cared very deeply about student success, cared very deeply about academic advising. You could tell that, and it rubbed off on people. Their leadership really helped out and changed a lot of the negative stigma that stayed from prior leadership.

Sam’s passage above described the new leadership that took control of advising as a true leader because they created clear vision of what they believed academic advising should look like at MU. They also had communication with the advisors and provided advisors with what they needed to help advisors accomplish the vision (Nutt, n.d). Riley shared their thoughts on how the high level administrator was not afraid to talk to people and find out what they felt, or how they were feeling. They were not afraid to advocate for advisors. Riley explained:

When the [high level administrator] came into the leadership role, they were already knowledgeable about Phoenix. When they came in, they took the time to meet with all of the advisors or at least the different areas to kind of say, well what’s working and what’s not? If there was a problem,
they would say let’s troubleshoot together instead of just letting people go
back to their departments to figure things out. The high level administrator
was not afraid to take a step back to find out what people needed and get
organized, then moving us forward again but stronger.

When the new leader took on the role, they took the time to understand what
advisors needed so that they can be successful. They were also well versed in
advising strategies and organizational change. They also advocated for advisors
to senior leadership. This is important, because participants cited this specific
person as the one who made strides in advising and in the implementation of
Phoenix. Riley continued with saying:

It was really more of, instead of this being a top down decision, this person
really ended up going from the ground up and asking those of us who
were actually doing the work and working with the product. They would
find out what we were thinking and take it up the ladder to the other
stakeholders to kind of say this is what the advisors are asking for and
how the advisors are seeing the product. I think they understood the way
to approach the change to making sure that they took everybody’s
account and to work it out together, knowing that not everybody is going to
be happy, because that’s not necessarily always going to happen, but at
least making sure that everybody at least had some kind of voice in the
matter to make sure that we knew that our voices were going to be heard.
Participants said that under the new leadership, it was the first time they felt like they were listened to and that they had a voice at the table. Adrian mentioned how they appreciated that the new leadership tried to get advisors on the same page in terms of campus knowledge by establishing advisor onboarding trainings. Adrian also appreciated the advising training program that the high level administrator created.

I know that with the advising academy that the high level administrator started, that’s been a really good resource for a lot of newer advisors such as myself, like having more of a community base that you can turn to for guidance, training and support. I think in that respect, the leadership component was very strong.

According to the GSC meeting minutes, trainings were not established until the new leadership started. The new high level administrator knew MU advising was growing and made onboarding advising training available for new advisors. This was a change in culture, as there was normally no training for new advisors as Riley had mentioned previously.

The new leader eased concerns and pressure regarding all the changes advisors were experiencing. Jamie mentioned that although there was a push for increased graduation rates and that academic advisors were taking on the pressure of increasing the rates, advisors are not the ones solely responsible if the graduation rates do not increase.
I think we are a vital support service for that, but ultimately an advisor cannot be a substitute for lack of seats or lack of course offerings for instructors with high DFWI rates. We are supporters, champions, cheerleaders, but there’s only so much we can do. So, I think the new high level administrator understood this, and understood that leadership can also provide too much pressure.

The new leadership understood that there were several factors and variables that can impact graduation rates, several that academic advisors cannot control. However, their leadership made advisors feel like they were being listened to and were supported. Not only are leaders required in high positions, but leaders are needed amongst the advising population for programs to be successful (Krush & Winn 2010). In the next section I explain how academic advisors took the initiative to carry out iPASS reform efforts even though support and communication was missing.

**Advisors as Leaders**

Leaders amongst academic advisors is important because they are often considered change agents in the university and are students' best advocate (Campbell, 2002). Being a leader in advising can be burdensome because changes happen often and there are so many critical issues that are currently facing students that advisors need to be aware of (Campbell, 2002). For some advisors, training others on Phoenix was a responsibility that was placed on them in addition to advising students. Mountainside University did not understand the
stress and pressure of having to train the campus community in new technology. In addition to training, some advisors mentioned an increase in work overall as advisors. Sam shared their experience of the extra workload training others put on their shoulders.

It did get to a point where many of the other Phoenix trainers within the colleges seemed bombarded with their role as academic advisors, that their role as a trainer for Phoenix wasn’t something that they could handle or whatnot. I know I was spending many hours, whether coming in early or staying late, to get caught up on my work, so that way I could still help implement Phoenix. It was a very stressful time during those couple of years.

Even though the task of training campus stakeholders on Phoenix was difficult, Sam took the lead amongst the small of group of advisors and tried their best to provide training that was useful to the campus community. They spent many hours, often outside of work hours to learn the product and complete regular job duties so that they can push Phoenix forward. Leaders among advisors is important as it helps to move adoption of iPASS reform efforts amongst other advisors. Leadership skills in advisors in important as many look to advisors to be flexible and have different skills, such as in report writing, statistics, and presentation skills.
Joey shared their experience as an academic advisor at Mountainside University is often about taking the initiative to learn new things that will help with their job duties.

As for changes. I think ever since I started as staff in advising, I feel like being in an advisor role, you’re constantly exposed to having to adapt. There are so many different things going on in campus, especially with the implementation of Phoenix. We’re always hearing about the new advising model. So, there’s always these different types of strategies, techniques, and campaigns going on over the campus. So, it can be a little overwhelming at times as far as what is expected of advisors, and constantly having to change and adapt to the current situation. It just seems like there’s been a constant adaptation for advisors just over the years that I’ve been here. So, I would say as being an advisor currently you just have to be open to learning new things quickly and acting quickly. Having critical thinking skills, logical reasoning skills, as well, problem solving skills, and be ready to hit the ground running, because decisions can be made and the focus can change at the drop of a hat, I would say.

According to Joey, being an advisor often requires adaptability and flexibility. However advisors need to have leadership skills to lead advising initiatives that are important in supporting and encouraging student success. Advisors often have good listening skills and are able to encourage others to see their viewpoints. Additionally, advisors must have the willingness to learn new things
so that they can support the student body. It’s making the effort to learn and adapt to new things so that the student is supported.

It can be really overwhelming as far as what a particular individual or even a group of individuals are able to complete, and what’s being asked of them. So, sometimes it doesn’t seem realistic as far as what’s being asked of advisers, although we may have all of the willpower and what to do, absolutely everything that we can do to help students. Sometimes, I feel like it can be a little unrealistic as far as what we can do if the task keeps on changing constantly. We’re only one individual or a small group of individuals trying to do absolutely everything that we can do.

Joey’s passage above is evidence that advisors try their best to take on new challenges and adapt to changing policies, but this is a challenge that can lead to burnout and stress. If advisors experience burnout and stress, mistakes tend to happen which can lead to incorrect information being passed along to students. Joey also discusses that they have experienced burnout. “I know that there is a problem with advisor burnout that I’ve experienced personally, that really had to make me take a step back and really look at what I was able to do and able to achieve in order to try to balance out all of the different job tasks that are required of you.” Advisors have a lot of expectations placed on them and it is important that they take care of themselves mentally and that leaders understand the roles they have in the goal of increasing graduation rates.
Chapter Summary

In this chapter I presented the findings of the study. The five themes listed in this chapter show the iPASS reform efforts MU conducted to provide a better advising experience and increase graduation rates for students. It also showcases the iPASS reform efforts and challenges that affected advisors at MU. While MU restructured their advising processes, one of the challenges was that there was a lack of communication between the different groups conducting advising which led to conflicts. Advisors believe in holistic and developmental advising, but the challenge is that MU’s culture of advising is largely transactional. This causes cognitive dissonance in advisors because they are forced to conduct prescriptive advising to ensure they complete educational plans mandated by senior leadership. The implementation of Phoenix was a difficult experience and challenge to advisors. Advisors took on the responsibility of learning the product and training others even though they did not provide feedback on the purchasing of the technology, nor had information and proof that Phoenix was going to help with their daily advising strategies. In fact, they had to still use the product and train others even though the product had several shortcomings. Finally, leadership plays an important role. High level leadership and leaders among academic advisors had to step up and take initiative to make lasting changes that mattered. Without transformational leadership where someone takes ownership of the issues and processes on hand, there will be no progress, as was the case with Phoenix and iPASS for several years. In addition,
it is important that leaders understand that they need support and advocate for themselves and those around them in order for positive change to be lasting.
CHAPTER FIVE
DISCUSSION AND RECOMMENDATIONS

Introduction

Colleges and universities, especially those that are considered broad access, such as Mountainside University, are having difficulty supporting the students who are enrolling in their institutions. Several of these students are stopping out or taking longer than four years to graduate (Schneider & Deane, 2015; Scott, Bailey, & Klenzil, 2005). To help students graduate in a timely manner, many colleges and universities are taking part in iPASS reform to support students in their degree attainment journey (Karp & Fletcher, 2014).

Nonetheless, there is limited research on iPASS reform implementation outside of the iPASS Initiative, which “provided three years of financial, technical, and change management support to 26 institutions as they redesigned their advising processes and adopted and implemented new technologies” (Klempin, Pellegrino, Lopez, Bartnett, & Lawton, 2020, p. 1). Further research indicates that iPASS grant has now provided support and resources to 45 colleges and universities to implement iPASS reform (Klempin, 2019).

Accordingly, the purpose of this intrinsic case study was to understand the ongoing iPASS reform efforts at Mountainside University (Karp, Kalamkarian, Klempin, & Fletcher, 2016). I was particularly interested in understanding what
iPASS reform efforts entailed at Mountainside University, the challenges that arose, and how these challenges affected professional academic advisors.

Therefore, in addition to contributing to the limited research regarding iPASS reform, this study also provides insights into the ways iPASS reform affects academic advisors (Klempin & Barnet, 2020). This is important because the little research that does exist focuses on universities that participated in iPASS reform through the iPASS initiative where universities were given support, and funding. This study focuses on MU, a university that did not participate in the iPASS initiative, thus resources were lacking. The existing research lacks the voice of academic advisors who experienced the implementation of iPASS reform. This study allows advisors a chance to share their experiences and challenges they experienced through the process. This knowledge is important because ultimately advisor working conditions translate into the learning conditions of students. In the following section I provide a discussion of the results section of my study with support from the existing literature. Finally, I present conclusions and recommendations for leaders, academic advisors, and universities which is necessary for changes to be lasting and effective (“Advising Redesign,” 2017; Klempin & Karp, 2018).

Overview of Findings

The interview data for this study was collected from March 17, 2020 to May 29, 2020. Different sources were used for data collection such as
documents for analysis and participant observations. Document analysis consisted of meeting minutes from August 2013 – February 2019, and strategic planning documents from 2014-2015. All documents were available on the MU website and was available to the public.

The primary data source consisted of 13 participant interviews with professional academic advisors. In addition, documents such as Mountainside University’s strategic plan, strategic plans from various academic departments, and meeting minutes from the Graduation Success Committee were also reviewed. Mountainside University’s Strategic Planning Town Hall meeting was observed at the research site. Review of these various data sources helps promote triangulation and increase trustworthiness (Glesne, 2011).

From the 13 professional advisors interviewed for this study, the length of time employed at Mountainside University ranged from one year to 10 years. The interview questions were drawn from the literature on developmental and holistic academic advising (Austin et al., 1987; Hatch & Garcia, 2017; Hester, 2008; Lanlan & Fosnacht, 2019; Pascarella & Terenzini, 2005; Propp & Rhodes, 2006) and iPass reform (Kalamkarian et al., 2019; Karp & Fletcher, 2014, Klempin et al., 2019), as well as organizational change in higher education (Kezar, 2011; 2014). All data sources were coded. After the data was coded, I then categorized the codes and put the categories into themes (Saldaña, 2016). The five interrelated themes I constructed are: a) Commitment to Student Learning and Student Success through Academic Advising, b) Advising and Related Cultural
Shifts, c) Advising Approaches to Promote Success of the Whole Student d) Adopting and Implementing New Advising Technologies, and e) Leadership Matters at All Levels. I discuss these themes below.

Theme 1: Commitment to Student Learning and Student Success through Academic Advising

Changes in academic advising at MU were driven by both internal and external forces, aligning with the scientific management and evolutionary schools of thought respectively (Kezar, 2014). There were external demands from accreditation agencies that pushed MU to re-evaluate its advising structure to survive, which aligns with evolutionary and institutional change. With MU creating a strategic plan at both the university and academic college levels, the changes that MU enacted regarding academic advising were intentional and planned. MU decided to change the advising structure due to feedback and goals established in the 2015-2020 strategic plan.

MU senior leadership created a strategic plan to increase four year and two year graduation rates and promote student success from 2015-2020. Documents from MU’s strategic planning meetings indicated MU had an internal desire to improve academic advising based on student and faculty surveys which aligns with strategic management change (Kezar, 2014). University-wide strategic planning motivated the development of strategic plans at the college level as well. The few academic advisors at MU during the planning phase of the strategic plan also shared discussions about changing academic advising. A
series of advising topics regarding developmental and holistic advising took place from January 2014 – March 2014. In addition, advisors were exposed to developmental advising topics such as holistic advising and advising as teaching (Lowenstein, 2005). Furthermore, advisors and departments created new advising mission and vision statements and learned about creating advising assessment plans.

To ensure that MU was promoting student success through academic advising, MU committed to implementing iPASS reform. iPASS stands for Integrated Planning and Advising for Student Success (Klempin, Kalamkarian, Pellegrino, & Bartnett, 2019). Redesigning of the MU’s advising structure was the first part of iPASS reform at MU. The university was creating changes in advising to create better experiences for the student and promote student success. According to Klempin et al., (2019), the goal of iPASS is “to transform advising systems so that they can support a more intensive and personalized case-management model and provide holistic and developmental advising which leads to improved student outcomes, using advising technologies” (Klempin et al., 2019; “What we Know about Technology, 2017, p. 1).

While MU had early conversations with senior leadership regarding improving academic advising, early conversations were lacking important groups of people, such as professional and faculty advisors. Conversations were occurring separately, rather than happening as a whole. Change happens at several levels within an organization and MU aimed for a campus wide structural
change in academic advising but failed to include the different levels where change also must take place, which is at the professional and faculty advisor levels (Kezar, 2014).

While MU was starting to restructure advising at the campus wide level, it also purchased an advising technology, Phoenix, which is the second part of iPASS reform. However, there were several factors that MU did not take into consideration that negatively impacted iPASS reform such as the current structure of academic advising and advising culture (Karp & Fletcher, 2014). iPASS reform encourages the restructuring or redesigning of academic advising processes simultaneously as the implementation of technology. The goal is to determine whether MU was “project, technological, organizational, and motivational ready” to take part in iPASS reform efforts (Karp & Fletcher, 2014). Since MU was not trying to conduct change at different levels of the university, iPASS reform started at MU already at a disadvantage (Kezar, 2014). I will go into further detail about the different “readiness for iPASS reform” in the following sub themes and the challenges professional advisors experienced due to not taking part in these important conversations for student success (Karp & Fletcher, 2014).

Theme 2: Advising and Related Cultural Shifts

In this theme, there were two sub themes: Decentralized versus centralized advising and faculty versus professional advising. These two
subthemes were important because it described the transitions that occurred in both the advising structure and culture at MU.

**Decentralized versus Centralized Advising.** The participants of this study defined the advising structure at MU as mostly decentralized, where faculty and professional advisors are responsible for advising from their colleges or departments (Pardee, 2004). Departments and colleges were given authority to develop their own advising practices and processes. MU had a decentralized structure because advising was largely a faculty-only model where students sought advising from a faculty member at their respective department or academic college (Pardee, 2004). However, participants shared that the structure was transitioning to be more centralized, or where “professional and faculty advisors are housed within one academic or administrative unit” (Pardee, 2004, para. 3). MU hired 7 new professional advisors to help implement technology and to be housed specifically in the departments and academic colleges with the faculty advisors. This shift in ways of doing (Schein, 1990) resulted in tension and a bit of resistance, which is likely to occur as organizations undergo cultural changes (Denison & Spreitzer, 1991; Kezar, 2014).

Participants of the study cited changes toward a more centralized advising model where both professional and faculty advisors were located in one area. However, due to reorganization of reporting lines for academic advisors as well as the change of advisor caseloads, MU is now moving toward a shared advising model, more specifically, a split model of advising. While it was not explicitly
shared, several participants expressed that MU was moving toward a centralized model, however based on the literature on advising structures, MU is actually moving toward a shared advising structure (Pardee, 2004). In the shared advising model, some students receive advising from a general advising office and others receive advising from an academic college or department (Pardee, 2004). Specifically, MU is moving towards a split-model structure of academic advising where freshmen and sophomore students are advised by a general advising office and once a specific criteria is satisfied (junior status), they are reassigned to advisors in their department or academic college (Pardee, 2004; Habley, 1997). The split model is conducted at 46% of four-year universities (Pardee, 2004). This is a testament that there is a lack of foundational advising theory and information regarding academic advising at MU (Habley, 1997; Pardee, 2004)

**Faculty versus Professional Advising.** Since advising at MU was decentralized because of the faculty only model, it moved towards a centralized model because it incorporated advising to be conducted by professional advisors and faculty in one administrative unit (Habley, 1997; Pardee, 2004). However, according to participants, while not explicit, advising at MU is really moving toward a shared advising structure due to changes in advisor caseload (Pardee, 2004). These changes in structure led to changes in advising culture at MU because faculty and professional advisors had to share advising duties and responsibilities, which can lead to competing priorities (Krush & Winn, 2010).
With advising moving to a shared model, there is also competing interests between professional advisors from colleges and advisors from the general office at MU, as college professional advisors are losing a part of their caseload. This is also a cultural shift in advising at MU because for several years, professional advisors of the colleges were responsible for advising all students within their college caseload.

In the early stages of iPASS reform, professional advisors did not have a clear view of the university’s goals nor faculty advisors’ goals regarding academic advising. If faculty and professional advisors were allowed to develop shared goals and values, the changes in advising would have been smoother and more successful (Jackson, 2011; Karp & Fletcher, 2014). When academic advising is shared between professional advisors and faculty it is important that both groups develop decisions regarding advising together. This leads to a stronger academic advising program (Krush & Winn, 2010). Participants shared that faculty expressed confusion about the role of professional advisors. Some were nervous that professional advisors were to take over career and graduate school advising. Others were under the idea that professional advisors were going to provide only course scheduling information. There was a change of advising culture that faculty advisors likely experienced but did not have the opportunity to discuss goals and objectives with the campus community to clear confusion. With MU advising being faculty-only for some time, faculty may have had opinions similar to what professional advisors are currently feeling with the loss of certain
advising populations. To ease this, change efforts must include all levels of the university so that clear goals and objectives are discussed, and confusion and tension is minimized (Kezar, 2014).

Theme 3: Advising Approaches to Promote Success of the Whole Student

In this section, I describe the changes in academic advising MU conducted. There are two sub themes a) Developmental Holistic Advising and Advising as Teaching, and b) Transactional Academic Advising. These sub themes explain the type of advising approaches that are predominantly used at MU.

Developmental Holistic Advising and Advising as Teaching. Several participants shared their belief that academic advising should be developmental and holistic (Crookston, 1972; Lowenstein, 2005; Mc. Roy, 2018 O’Banion, 1972) because they understood that there are several factors that affect students’ ability to be successful in college, such as the ability to navigate the college pipeline, student engagement, family obligations and duties (Grites, 2013; Mc. Roy, 2014; Pascarella & Terenzini, 2005). These factors are often outside of the student’s control and require assistance to handle these factors to promote success in academics (Mc. Roy, 2018). Participants shared that it is imperative developmental advising occurs to ensure students are feeling supported and encouraged to persist.

MU professional advisors believed in holistic and developmental advising but expressed the university’s push for transactional advising in the form of
educational plans, which in fact contradicts the goals of iPASS reform. iPASS reform requires developmental and holistic advising to be conducted with technology to improve student outcomes (Klempin et al., 2019). This is another reason why iPASS reform efforts were not successful at MU. Professional advisors were utilizing technology, but not using it in a way to still provide holistic and developmental advising. The SSIPP advising framework is recommended to use with advising technologies because together, it can help professional advisors create the “ideal advising experience” for students in higher education (Kalamkarian et al., 2018; Klempin et al., 2019). The SSIPP framework was designed to “help students navigate college and take into account academic and nonacademic aspects of the student experience” (Klempin et al., 2019). Professional advisors were using technology as a separate advising tool, merely to keep notes and schedule appointments. However, if professional advisors used Phoenix with the SSIPP advising framework in mind, it would be easier to still conduct developmental and holistic advising, since the SSIPP framework was designed to incorporate advising as teaching and holistic approaches with technology to support student success (Kalamkarian et al., 2018; Klempin et al., 2019).

Transactional Academic Advising. The culture at MU regarding advising has been transactional as the university encourages students to seek advising during “registration weeks.” In addition, senior leadership has requested that all students are seen by advisors before they register for courses. This promotes the
mentality in students that advising should be done for course selection assistance. While this is not negative, it does promote prescriptive transactional advising to take place, which is opposite of developmental and holistic advising practices that encourages advising to discuss personal and career goals (Lowenstein, 2005). In addition, with MU’s goal of increasing four year and two year graduation rates, educational plans were heavily stressed. Educational plans can be used to conduct developmental advising, such as planning not only courses, but also personal goals, career goals, internships and field experiences. However, several participants cited educational plans being used specifically to notify students of their expected graduation term. Participants also shared that advising for registration week is on a drop in advising format, thus the only information that can be shared during the meeting is course selection information. Professional advisors at MU are receiving mixed messages regarding goals of academic advising. Research indicates that developmental and holistic advising are strategies to improve graduation rates (Hatch & Garcia, 2017; Austin et al., 1987; Hester, 2008; Lanlan & Fosnacht, 2019; Pascarella & Terenzini, 2005; Propp & Rhodes, 2006) but MU advisors are feeling the pressure to provide educational plans that are mostly prescriptive. MU there are competing goals between senior leadership and advisors. Even though academic advisors at MU believe in developmental and holistic advising, the culture is largely transactional, causing cognitive dissonance Fischer, Frey, Peus, & Kastenmuller, 2008). In addition, it is difficult for advisors to conduct
developmental advising in their daily appointments with students because students are usually seeking advising during high traffic times such as registration week, where advisors are experiencing higher than normal student appointments or drop in advising. Students come in for advising only asking for course selection. They do not seek advising as an opportunity to plan out future goals and career aspirations, or to learn about different opportunities such as internships and field experiences. Research regarding iPASS efforts cite advisors felt that they often did not have enough time to provide holistic academic advising, and often had to settle for prescriptive, transactional academic advising (Mayer, Kalamkarian, Cohen, Pellegrino, Boynton, & Yang, 2019). Participants shared that during registration times with high traffic, advisors felt they did not have enough time with students especially when they saw the long line of students waiting for a drop in advising appointment. Conversations need to occur to determine the best practices for academic advising at MU and have ongoing evaluation of whether the current advising structure is helping advisors assist students in achieving the goal of competing in a timely manner.

Theme 4: Adopting and Implementing new Advising Technologies

Advising technologies were developed to assist academic advisors in their daily practice (Kalamkarian & Karp, 2017). The goal of iPASS is to help colleges in advising redesign to improve the student’s experience with academic advising and ultimately lead to increased persistence and completion rates (Karp & Fletcher, 2014). In this section, I describe the implementation of new advising
technology at MU. There were six sub themes in this section: a) decision to purchase Phoenix, b) Lack of communication and planning for Phoenix, c) Implementation – Phoenix’s weaknesses, d) Implementation – Phoenix’s Benefits, e) Inadequate training for Phoenix, and f) Surveillance.

**Decision to purchase Phoenix.** While MU advisors were introduced to Phoenix, they were not able to provide feedback prior to MU senior leadership purchasing the product, even though they were the population that was tasked with using the product and training other campus individuals. MU advisors did not have the “motivational readiness” to purchase Phoenix (Karp & Fletcher, 2014, p. 10). In other words, advisors did not have a clear understanding of why Phoenix was needed and a clear need for the product was not established by advisors and other possible end users of the product (Karp & Fletcher, 2014). Without establishing the need of the product, and how the product will solve that need, advisors will not have buy-in or any reason to use the product in their daily processes (Karp & Fletcher, 2014). According to Kezar (2014), “poor change efforts can lead to poor morale, disengagement by employees, and wasted time and productivity” (p. xvi), which is what occurred at MU initially. When Phoenix was initially implemented, professional advisors did not have the vision of benefits (Karp & Fletcher 2014) where advisors understand and see how the new advising technology can help them be more productive, more effective and conduct developmental advising. Faculty who were expected to learn the product also did not have any buy-in as they were also not part of the early conversations.
that to purchase Phoenix. When professional advisors were training faculty, many felt faculty were not paying attention and was there because they were being forced, which caused frustration and low morale for professional advisors.

Lack of Communication and Planning for Phoenix. Simply implementing technology does not improve student outcomes. A full redesign of academic advising structure is imperative to iPASS reform. Advisors need to understand not only is the vision of benefits in implementing new technology imperative to iPASS reform, but also have plans on how change efforts will look like at the institutional and project level (Karp & Fletcher, 2014). Participants cited that they did not have much support, communication or planning, thus MU lacked organizational readiness (Karp & Fletcher, 2014). Meaning, advisors cited that there was a lack of goals and communication that was taking place regarding iPASS reform. They were not part of the decision making process and they were not able to provide feedback on their level of change (Karp, 2014). These changes fall under the culture of a university, so it makes sense why change efforts for iPASS reform was so difficult to enact. Advisors also cited there was a lack of planning and communication regards to IT compatibility with Phoenix system. Advisors did not know if IT was involved in any of the planning of Phoenix implementation. Thus, MU lacked project readiness to conduct iPASS reform. Finally, it has already been documented that advisors were not motivationally ready to implement iPASS reform because they did not have a vision of benefits on how it would be helpful, they did not fully understand the
need for reform in the first place and a clear plan on how Phoenix was going operate or function was not provided. Not having technological, organizational, project, and motivational readiness at MU created challenges for advisors because they did not have a clear plan or communication of what the goals were, what was expected of advisors, and why iPASS reform was necessary (Kezar, 2014)

Implementation – Phoenix’s Weaknesses. The implementation of Phoenix was not an easy experience. Participants shared several examples of problems and issues when Phoenix was first implemented at MU. Some examples include data not being accurately pulled, incorrect information regarding student risk levels, and inaccurate information being displayed for students. Most importantly participants shared that the predictive analytics function of Phoenix was not compatible with MU’s existing data platform. Furthermore, Phoenix’s predictive analytics was developed using a model whether students would graduate, regardless of the number of years. MU wanted the predictive analytics to determine if a student could graduate in four years. MU was not “technologically ready” to implement iPASS or purchase Phoenix (Karp & Fletcher, 2014, p. 4). MU did not establish whether or not it’s existing data platforms were compatible with Phoenix is predictive analytics algorithm. One sign that a university is technologically ready to implement iPASS advising technologies is the maturity of IT systems (Karp & Fletcher, 2014).
Implementation- Phoenix's Benefits. After some time, advisors were able to use some of Phoenix's capabilities. Advisors shared that they enjoyed certain functionalities that Phoenix had such as the note taking/appointment documentation and student self-scheduling tools of Phoenix. Conversations of advisor need would be a good way to determine whether the technology is a good fit for the university (Karp & Fletcher, 2014).

Inadequate Training for Phoenix. In addition to issues with the actual product, there was challenges with training as well. MU decided to use the trainees serve trainer model to help implement Phoenix which is a common training practice (Klempin et al., 2019). However, due to Phoenix acquiring a new company and product, training of advisors at MU was staggered and not consistent. There was also not enough training to make advisors feel confident in training other individuals at MU. Participants shared that training was inconsistent and lacking, which led to them feeling unconfident when training others, specifically faculty. MU did not take part in a “project readiness” discussion to determine what resources was available for iPASS reform (Karp & Fletcher 2014).

Surveillance. This was a surprising sub theme that emerged from the data. Surveillance in the workplace is “management’s ability to monitor, record, and track employee performance” (Ball, 2010, p. 87). Advisors cited recent nervousness about surveillance, and how the appointment documentation can be possibly used against them. Based on the data collected, many advisors are
nervous that the appointment documentations that are completed after meeting with a student are now being used to monitor the work completed by individual advisors and advising centers. Advisors cited that the emphasis is on the number of students an academic advisor sees in a given period. This coupled with lack of communication with senior leaders made the situation uncomfortable. While participants understood that it is common to have assessment and evaluation of their work, many were feeling fear because they were not given clear information about expectations or the required number of students they must see. This caused challenges to MU advisors because they are given the choice to either provide developmental advising that can take a much longer time when advising students (Mayer, Kalamkarian, Cohen, Pellegrino, Boynton, & Yang, 2019) or complete transactional educational plans that the university is requesting and can increase their number of student seen. This also defeats the purpose of iPASS reform at MU

**Finding 5: Leadership Matters at All Levels**

Leadership is important when conducting iPASS reform, or any change at a university. Without leadership, change is often unsuccessful and leads to feelings of confusion and anger amongst people who experienced it (Kezar, 2014). Leadership plays an important role in iPASS reform regardless of the level. Leadership in all levels is important for the success of iPASS reform at universities. There are three sub themes in this section: a) garbage can model decision making, b) transformational leadership, and c) advisors as leaders.
**Garbage Can Model Decision Making.** Garbage can model of decision making is when leaders try to match solutions that have nothing to do with the problem but happen to be already on hand when problems arise (Fardal & Sornes, 2008; Olson, 1972). Participants shared that many of the changes taking places at MU appear to be a form of garbage can decision making because solutions tend to come from conferences, meetings, or studies.

**Transformational Leadership.** Leadership impacts organizational culture (Klempin et al., 2019). Although leadership seemed to be lacking at MU, participants cited that transformational leadership helped with progressing iPASS reform efforts. Participants shared that when iPASS reform was first initiated at MU, there was a lack of communication, guidance, and planning. Participants did share positive changes that took place when leaders from all levels (high level administrators and academic advisors) took the initiative to try to make iPASS reform efforts successful. Participants shared that when new leadership took control of iPASS reform and Phoenix, positive changes took place. Participants really highlighted the change in climate when new leadership took over iPASS reform. Advisors cited wanting to go the extra mile, they were motivated to make positive changes, not just for students and the university, but for themselves. Just as poor change efforts leads to low morale, transformational leadership leads to increased work effort and a positive attitude more aligned with university goals (Kezar, 2014). Participants shared that advisors were asked for their feedback regarding the implementation of Phoenix and other advising initiatives.
Conversations were taking place and advisors felt they had an opportunity to voice their concerns and feel supported.

Advisors as Leaders. Leadership amongst academic advisors was also important for iPASS reform efforts. Participants shared that there were some advisors that had to work extra hours to ensure they conducted trainings and completed their other job duties. There were certain advisors that were change agents and led the way for other advisors to start using Phoenix. By being the individuals responsible for training and marketing the technology to faculty and other individuals on campus, advisors had to have leadership skills such as the ability to “humanize” the change and make it relatable to other advisors, and he adaptive to all changes taking place (Klempin & Karp, 2015).

Challenges to Successful Implementation of iPASS Reform

Findings revealed multiple reasons why iPASS reform efforts faced numerous challenges at Mountainside University. According to Klempin and Karp (2018), in order for lasting transformative change to take place; change must take place in three areas: structural, process, attitudinal. Even though iPASS reform had a slow start at Mountainside University, there was leadership that helped move the process along eventually. They improved goals and mission statements, communication amongst advisors and departments, and even made changes to the processes of advising such as incorporating caseloads. Still, iPASS reform efforts were stalled and is currently still not where it should be after
almost six years of implementation efforts. iPASS reform efforts should have focused on the people and the culture of academic advising from the start (What we Know about Technology Mediated Advising Reform, 2017). As previously mentioned, the advising culture at Mountainside University was transitioning, and still transitioning today according to participants. In this section I will review the changes that were made in structure, process, and attitude. These are also commonly called Kezar’s (2011) three dimensions of change (Klempin et al., 2019).

**Structural**

According to “What we Know,” (2017), the structural dimension of transactional academic advising consists of drop-in advising appointments, advising operating as generalist even in the college level, and advising is focused on peak advising periods. From the findings in chapter four, it listed that majority of academic advisors at the time were operating from a decentralized structure. Different departments and offices had the autonomy to determine their advising processes which were conducted primarily by faculty. Participants had mentioned that during registrations season, there would be a large number of students seeking drop in advising. Participants feared that advising was becoming more quantity based rather than quality based, especially when they knew administration was watching the numbers of students advised. The focus was on providing courses for next term, to ensure students did not take courses they did not need and increase the number of students seen. With transformative
leadership, caseloads were created making it easier for advisors to support a smaller group. Notes and appointment documentations were made mandatory for advisors to ensure there was open communication to better serve the student. Educational plans were also encouraged. Even with these changes, iPASS reform was able to move forward, but not enough. Advising is still seen as largely transactional as majority of advising takes place during peak periods of time right before registration for the next term begins. Students know that they should seek advising during advising week which contrasts the sustained advising approach of the SSIPP framework (Klempin, et al., 2019). By using the SSIPP framework, students will start to see that advisors can assist them throughout their academic journey. They will receive assistance when it is needed, receive personalized information throughout different points of their education. Services and information will be integrated, and advisors will be proactively reaching out. There would be social cognition changes for students as well, because they will start to see advising as being holistic rather than transactional.

Process

For the transactional advising approach, the process includes advisors as being seen as the person to get information for classes and registration, or also known as prescriptive academic advising. With the focus on educational plans, majority of the advising session is based on creating plans to ensure students know which courses to take to graduate in a timely manner. For the most part, advisors still reach out to students in the same manner or format. Advisors at
Mountainside University, although they believe in holistic and developmental advising, almost all of them mentioned educational planning to determine what courses are needed to graduate as a daily practice with each student, mostly transactional process. Predictive analytics to conduct early alerts, proactive advising methods are not yet possible due to the poor match of data and Phoenix’s data processes. One thing that Mountainside was successful in terms of process, was creating an integrated approach where advisors were able to keep notes and appointment documentation to keep all student success stakeholders in the loop.

Attitudinal

For the most part, students at Mountainside University see academic advisors because they want to know what courses to register for next term. Advisors have not changed the processes enough for students and academic advisors themselves to change the culture of academic advising. In addition, the advisors did not have buy-in. In order for lasting change to take place in the attitudes of academic advisors, sensemaking must happen (Kezar, 2014). According to Kezar (2014) “sensemaking is about changing mindsets, which in turn alters behaviors, priorities, values, and commitments” (p. 64). Sensemaking is consistent with second order change which often results in a deeper change because it is changing a person’s or group perspective. In Mountainside University, the advisors see Phoenix as a product that can help them communicate with others and obtain information about students. However, they
need to change their perspective to where they see Phoenix as a tool to use the SSIPP advising framework where they leverage the Phoenix technology to conduct strategic, sustained, integrated, proactive, and personalized academic advising. According to Kezar (2014), sensemaking can happen by developing new “language and new concepts” that describe a changed advising structure (p. 64). For example, changing the term educational planning to actually mean planning for students four years, both academically and personally, and beyond their time at Mountainside University. In addition, using SSIPP framework advising model with Phoenix. Second order change can only take place if all academic advisors start thinking about educational plans as more than just schedule planning. In the following section, I offer a Change Plan (Kezar, 2014) for MU. Other institutions interested in iPASS reform might find this change plan useful as well.

Recommended Change Plan

It is important to determine the type of change that is occurring, in order to know which approach to change is required and recommended (Kezar, 2014). Due to external demands to increase graduation rates for budget, implementation of iPASS reform efforts deals with evolutionary and institutional change theories. In addition, many of the changes that will take place are based on Mountainside University’s strategic plan and desire to improve graduation/retention rates and student engagement. Therefore, scientific management theories are going to be helpful to understand changes that needs to take place in order for IPASS to be
successful. Change agents must also look at the political changes that take place since faculty, staff, and administration will need to move iPASS reform efforts forward. Since faculty and staff’s beliefs of academic advising are different, social cognition and cultural change is required. Second order change and sensemaking will be required for change efforts to be successful. Change agents will need to focus on all aspects of change that fall under structural, procedural, and attitudinal.

Many of the changes at Mountainside University is due to evolutionary, institutional, and scientific management change theories. In order for iPASS reform efforts to be successful, change agents must review change theories in scientific management, social cognition and cultural theories. There must be plans and processes developed to help people process and administer change. In addition, people need to buy-in to the changes that are going to happen. Further, there was already a culture in place for academic advising at Mountainside University. New norms and values must be developed and supported to make changes in the stakeholders. For example, faculty members had to understand that professional advisors were not hired to take advising away from them, rather to supplement their advising efforts. If there was a space where these clear goals were established iPASS reform may have been easier. Change agents must also look at how ready the institution is to change, and what stage they are in.
Even though there is senior leadership with individuals who made the decision to purchase Phoenix and start iPASS reform, there is no one responsible for academic advising. Professional advisors report to the deans where their department is tied to. The individuals responsible for helping the graduation rates increase report to people who may not be involved with academic advising at the university. This makes accountability and assessment very difficult. Without strong leadership, change efforts will drag and buy-in will be difficult to achieve. It will require shared leadership to ensure all three groups of stakeholders interests will be acknowledged during iPASS reform.

Given that Mountainside University’s academic advising structure has been decentralized for quite some time, and advising has been primarily conducted by faculty advisors, second-order change is necessary. People will need to rethink how advising will take place at Mountainside University and come together to determine how it will take place in the future. Since second order change is necessary, Kezar (2014) states that changes in social cognition and cultural theories are necessary because people need to move away from Mountainside University’s history of academic advising and create a new structure. People need to change their attitudes and see academic advising in a new light where all parties are actively involved. Therefore, social cognition and cultural change will need be the leading change management theories used to move iPASS reform forward. Political change will also be necessary to understand the different groups and their interests. Scientific management
change management is important to make sure processes are in place to support those implementing iPASS reform (Kezar, 2014).
Mountainside University's iPASS Change Framework

**Type of Change**
- Content Change: scientific management, evolutionary, political and requiring sensemaking
- Degree of Change: second order
- Levels of Change: institutional and group (faculty and staff)
- Focus of Change: Structural, processes, and attitudes
- Source of change: external and internal

Analysis Added

**Context for Change**
- Scientific management, social cognition, cultures
- External Stakeholders: Possible state college agencies
- Institutional status: challenging organizational norms and values
- Institutional culture: academic advising mostly decentralized, conducted by faculty members, newly hired professional advisors, no documentation of advising
- Capacity and readiness: iPASS reform technology purchased but campus is not ready

Analysis Added

**Agency/Leadership**
- Top down or bottom up, no formal leader of academic advising
- Shared leadership: shared interests between faculty, staff, and administration

Combine to Focus Approach

**Approach to Change: Summary of Main Theories Only**
- Social cognition theory: help individuals see iPASS reform as helpful in achieving student success in their daily practices
- Political theory: help groups (faculty and professional advisors) understand why iPASS reform is helpful to their jobs and to support student success
- Cultural: help support attitude changes in terms of how advising should be conducted and who should conduct advising
- Scientific management: help create structure and processes to support change

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*Figure 1. Mountainside University Change Framework*

Recommendations for Leaders, Advisors, and Stakeholders Experiencing iPASS Reform

The previous section provided a recommended change plan for implementation of iPASS reform at MU. While is provided with a general plan on how to provide iPASS implementation, which was cited as lacking by participants, this section will provide specific recommendations for different aspects of advising and iPASS reform.

**Recommendations for Leaders**

It is recommended that those placed in leadership roles understand how to manage and process change, thus promoting lasting change (Kezar 2014). Whereas, those that merely maintain status quo and promote consistency are managers (Klempin & Karp, 2015). Leaders that are able to promote lasting change by processing change and encouraging others to take on the change must utilize techniques in the social cognitive school of thought, as leaders must promote people to change their perspectives to adopt new changes (Klempin & Karp, 2015; Kezar, 2014). Change efforts are very difficult in higher education and very few change efforts are largely successful. Several leaders tend to ignore 4 key signs that change will fail in higher education (Kezar, 2014). I will describe the 4 signs below.
Do Not Ignore Change Processes. When Mountainside University started iPASS reform efforts, senior leadership purchased technology for advisors to use without their consultation or feedback. According to Kezar (2014) university and college leaders tend to focus on interventions or programs and believe the change will be successful, however they fail to address the change process. According to Kezar (2014), “poor change efforts can lead to poor morale, disengagement by employees, and wasted time and productivity” (p. xvi). In addition, change agents believe that stakeholders will readily accept change because they believe it is a good idea (Kezar, 2014). According to Kezar (2014) many leaders tend to focus on the content of change. In the case of Mountainside University, technology was the content, and leaders believed an implementation of new technology was all it needed.

Do Not Ignore Context. When universities and colleges begin change, they do not take into consideration all of the different external and organizational contexts and agents of change that assist with the change process (Kezar, 2014). In Mountainside University, iPASS reform efforts were difficult to implement because leadership did not take into consideration how iPASS reform would affect all stakeholders. They did not determine if the technology that was purchased was a good fit for the advisors who were tasked with implementing and training. According to Karp and Fletcher (2014), colleges and universities must be “technological, organizational, project and motivational ready” to be
successful in iPASS reform (p. 4). Leaders should ensure these conversations are conducted with all levels of change in the university.

**Do Not Rely on Simplistic Change Models.** Senior leadership at Mountainside University believed that implementing technology alone would help academic advisors and support increased graduation rates. According to Kezar (2014) this is an example of simplistic change models. Technology is only one part of iPASS reform. iPASS reform efforts take into account the structures, processes and attitudes of people experiencing the changes. Senior leaders sometimes do not understand that multiple approaches and or theories for change is required to ensure lasting change (Kezar, 2014). The following figure (Figure 1.) describes the change framework that Mountainside University could have used to address iPASS reform. The framework lists the type of change that is happening at Mountainside University, context of change, agency/leadership and the approaches to change that is necessary to make IPASS reform successful. It is important to note that this is just one recommendation based on the data collected through interviews, documents and observations at Mountainside University.

**Not Grounding Change in Research.** According to Kezar (2014) some leadership do not review literature on change models and focus entirely on word of mouth. In addition, technology adoption in higher education can sometimes be based on mimetic isomorphism where peer references and influence can potentially affect whether a specific technology is purchased (Tingling & Parent,
2002; Kezar, 2014). While it is unclear how Phoenix was purchased, whether it was due to word of mouth or not, there is evidence that several colleges and universities are starting to utilize technology in advising to help achieve outcomes (Karp & Kalamkarian, 2016).

Based on the change framework above, several change efforts will be necessary to provide support for all levels of change: for faculty, administrators, and most importantly staff. This is because staff will be the driving force in implementing Phoenix. If staff do not have buy-in, implementation of any type of implementation is expensive.

To combat advisor fears and nervousness regarding potential surveillance, there must be open communication from senior leadership and advisors. There should be clear expectations on what advisors are expected to do and clear guidelines on what evaluations will be based on.

Recommendations for Professional Advisors

Advisors must be knowledgeable of several advising theories and approaches to ensure they are able to positively help a student. One recommendation for advisors is to commit to professional development and annual training to keep information current. Therefore, advisors will be able to understand research and complete reports needed for changes initiatives that have to deal with retention or completion rates. It is also recommended that advisors schedule longer appointments so that they can fully utilize the advising technology and provide developmental academic advising. Third
recommendation for academic advisors is to learn leadership skills. What was gathered from the data, changes in advising and advising initiatives need leadership skills among academic advisors. Having leadership skills ensures that the voice of advisors will be heard during change conversations and that the needs of academic advisors are advocated to senior leadership. Senior leadership cannot change what they do not know is not working.

**Recommendations for Initial Planning with All University Stakeholders**

The first recommendation is for members of IT, professional advisors, faculty advisors, students, and senior leadership have conversations to determine the fit of the technology with the university, and how ready for change people are at the university (Karp & Fletcher). When people have a shared understanding of the goals of academic advising, and how technology can help them achieve those goals, there will be more participants buy-in (Karp & Fletcher, 2014). It is recommended that all advisors, faculty advisors, administrators, and IT have a conversation of what is needed for advisors to help achieve the goal of increased graduation rates and determine which technology would be a good fit based on the goals, needs, and existing technologies. The university have open and transparent communication regarding the need for technology, and how implementation efforts will take place. Without a clear plan, implementation will suffer and be inconsistent.

Determining the technological, project, motivational and organizational readiness of a university to adopt new technology is a recommendation to ensure
good fit (Karp & Fletcher, 2014). Determining “readiness” of a project will determine best practices for training, how support will be provided before, during, and after implementation, what incentives will be provided for campus-wide adoption, and what resources are available for the project to be successful (Karp & Fletcher, p. 4). A comprehensive training guide and in person training from vendors/consultants should be developed and consistent. The table below lists questions that university stakeholders should discuss together to ensure everyone involved is aware of the purpose, how it will benefit stakeholders, and the plan for implementation.

Table 5. Recommendations for Technology Implementation

<table>
<thead>
<tr>
<th>Questions to ask for implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Technological Readiness</strong></td>
</tr>
<tr>
<td>- Is our current IT system mature and able to handle new technology?</td>
</tr>
<tr>
<td>- Is the new advising technology compatible with existing data platforms?</td>
</tr>
<tr>
<td>- What is the past experience of end users with IT implementation?</td>
</tr>
<tr>
<td><strong>Organizational Readiness</strong></td>
</tr>
<tr>
<td>- Is there a clear mission for the new implementation?</td>
</tr>
<tr>
<td>- Is there communication amongst all stakeholders? (advisors, administration, IT, faculty, students?)</td>
</tr>
<tr>
<td>- How open to change are stakeholders?</td>
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<tr>
<td>- Who are making the decisions?</td>
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<tr>
<td>Should there be more people at the table?</td>
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<tr>
<td>-------------------------------------------</td>
</tr>
<tr>
<td><strong>Project Readiness</strong></td>
</tr>
<tr>
<td>- What are the available resources?</td>
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<tr>
<td>- Who will conduct the training?</td>
</tr>
<tr>
<td>How will end users be trained?</td>
</tr>
<tr>
<td>Who will train additional campus</td>
</tr>
<tr>
<td>stakeholders?</td>
</tr>
<tr>
<td>- What support will be provided</td>
</tr>
<tr>
<td>throughout the implementation process?</td>
</tr>
<tr>
<td>- Are there any incentives for end users?</td>
</tr>
<tr>
<td><strong>Motivational Readiness</strong></td>
</tr>
<tr>
<td>- Is there a need for reform at the</td>
</tr>
<tr>
<td>university?</td>
</tr>
<tr>
<td>- What are the vision of benefits?</td>
</tr>
<tr>
<td>- Do end users have a clear understanding</td>
</tr>
<tr>
<td>of how technology will work when</td>
</tr>
<tr>
<td>integrated in everyday duties?</td>
</tr>
</tbody>
</table>


### Additional Recommendations for Policy and Practice

**Recommendations for Policy**

As can be seen from the results of this study, the position of professional academic advisor is a relatively new position in universities and colleges. Some of the participants mentioned that they had a lot of information to learn in order to be an effective advisor. At this time, academic advisors are not considered
professionals according to fellow academic advisors, colleges, and universities (Shaffer, Zalewski, & Leveille, 2010). I recommend that colleges, universities, and academic advisors push towards professionalization of academic advisors. There are four stages that lead to professionalization. The first step is looking at academic advisors as an occupation. The second step is creating and establishing schools of academic advising. Third step is forming advising associations and finally, the fourth step is ratifying codes (McGill, 2019; Shaffer, Zalewski, & Leveille, 2010). Further, universities and colleges need to hire advisors that have master’s degrees to ensure they have knowledge of advising theories and other information pertinent to the position (Shaffer, Zalewski, & Leveille, 2010). Similar to Mountainside University, several colleges and universities are looking to academic advisors to help increase graduation and retention rates. They are also being called upon to help increase student engagement (“Center for Community College Student Engagement, 2018; Tinto & Pascarella, 2005). Many advisors are often feeling pressure to perform and ensure students are feeling supported and encouraged, but also ensuring they are completing degrees for their institution’s sake. The problem is that advising is not considered a profession (Aiken-Wisniewski, Johnson, Larson, & Barkemeyer, 2015). There are several reasons why this is the case. First, many professional advising positions on campus are relatively new. The job descriptions are often incomplete and not consistent across campus. Academic advisors with the same title but from different departments can have completely different responsibilities
and expectations. Job descriptions often ask for degrees from several disciplines such as education, psychology, social work, and even business administration. Academic advising positions are not a career that others go to school to become. They are often considered steppingstones to get to different positions or careers on campus (Aiken-Wisniewski et al., 2015). Therefore, I recommend that advisors have clear job expectations/descriptions, same job titles, minimum qualifications of a master’s degree for employment, knowledge on advising theories, policies concerning higher education and how to understand, create, measure, and report performance metrics and data that align with department and college goals and advising approaches. These are important skills for advisors to have to ensure they are qualified to practice academic advising but also have the skills determine whether persistence and completion rates and be able to report the findings to senior leadership.

While many universities and colleges are now being funded based on student success outcomes, and external agencies demanding higher levels of student success, much of the pressure to reach these goals have been placed on professional academic advisors. Leaders should promote professional development and provide funding for advisors to attend conferences that support student success such as NACADA conferences and institutes (drive by and summer) as well as Student Affairs Administration in Higher Education (NASPA) conferences.
Recommendations for Practice

While I recommend professionalization of advising as a profession, I also recommend that professional development and continuous learning of academic advisor's be required and implemented in daily practice. Universities should develop annual training and onboarding for advisors to ensure consistent information and knowledge amongst academic advisors. There are new advising approaches that can be utilized for different students. Knowledge of different approaches can help advisors serve a large population of students. After review of the history of academic advising, it has changed to accommodate the changes that take place in society and in higher education (Gordon, 2004). Academic advisors must stay abreast of the theories, practices and information to ensure they are able to successfully assist students in an ever changing environment. As can be seen from Mountainside University, advisors shared a holistic and developmental approach in working with students. However, when asked if technology had changed their approach to advising students, none had mentioned the SSIPP framework or other theories that can potentially help when using technology in advising. By taking part in professional development in academic advising, advisors will be able to stay knowledgeable of new approaches that can be used in their daily practices that can potentially help student succeed.
Recommendations for Future Research

For the purpose of this study, I was interested in the iPASS reform efforts from the perspective of professional academic advisors. I did not consider faculty and administrators view on iPASS reform at Mountainside University. After reviewing the data collected, several participants mentioned the importance of faculty in student success and their hopes of faculty using technology. I recommend future studies on the role and impact of faculty and administrators on iPASS reform. Further studies include replication of this study in hopes to interview larger number of professional advisors, as the number participants in this study was small. In addition, the study would take place at another university conducting iPASS reform for a longer period of time from the start of iPASS reform efforts through several years after technology implementation. The sub theme of surveillance emerged from the data. Future research would look closer into how surveillance can affect academic advisors. Both administrators and advisors need to be aware of the benefits and consequences of advising technologies in regard to surveillance. It is also recommended that the research on iPASS reform efforts at MU and other colleges and universities continue. It is imperative that findings are shared since advising technologies are becoming more commonplace in colleges and universities.
Limitations

For this study I focused on professional academic advisors in general. I did not take into account advisor status or differentiated based on their area of work, such as college advisor versus a special program advisor. Depending on advisor status or their area of work, different views or perspectives may not have been captured in this study. Another limitation was the number of participants. While case studies do not have a required number of participants, the study could be strengthened if there was a larger number of participants.

Delimitations

All participants of this study were professional academic advisors. Faculty advisors and administrators did not participate. As a result, it can be reasonably assumed that information gaps regarding iPASS reform exist.

Conclusion

In this chapter, I discuss the findings on the study regarding iPASS reform efforts at Mountainside University, which is a public, four-year, comprehensive university. I have provided recommendations on how iPASS reform efforts can be conducted at other universities. I also provided recommendations for practice and future research. The findings of this study highlight how MU tried to implement iPASS reform to help increase graduation rates, the challenges as a result of iPASS reform efforts, and how these challenges affected professional
advisors. The findings of this study forces one to rethink through how we understand the purpose of academic advising and ways in which academic advising is being used to increase graduation rates. Should academic advising be a tool to push students to graduate within the traditional four years, despite the personal challenges students may be facing to meet external pressures? If so, this counters the narrative that has been associated with academic advising in recent years regarding developmental and holistic advising (Lanlan & Fosnacht, 2019). Advising, may then be used as a way to monitor and track student progress rather than truly supporting the student, which is contrary to what academic advising is all about (Austin et al., 1987; Hatch & Garcia, 2017; Hester, 2008; Lanlan & Fosnacht, 2019; Pascarella & Terenzini, 2005; Propp & Rhodes, 2006.) Instead of advising being a tool to support the student, it may become a tool to support university processes to ensure timely completion. Or should academic advising provide developmental academic advising and center on students’ family, work, and personal obligations, which indicate they may be more successful and have a more meaningful college experience if they graduate in five years? The push for students to graduate in four years at MU is causing advisors to conduct transactional advising, which counters the primary goal of academic advising and iPass reform, which is to developmentally assist students in their academic journey. More research on this topic is imperative, strongly encouraged, and should be ongoing.
APPENDIX A

INTERVIEW PROTOCOL
Appendix A

EXPLORATION OF iPASS REFORM AT A PUBLIC, COMPREHENSIVE
FOUR-YEAR UNIVERSITY

Interview Protocol

Interviews will be semi-structured, and the process will follow the subsequent protocol

1. Introduction
2. Provide information about the study and informed consent information to the interviewee
3. Allow time for interviewee to ask any questions or share concerns
4. After interviewee has signed the consent form, begin recording and start interview

The following questions will guide the interview for professional advisors:

• Please tell me about your advising role on campus.
• What does academic advising mean to you?
• How would you describe advising at Mountainside University?
• How would you describe the advising structure currently on campus?
  - Has this been the structure since you started working here?
• How would you describe any changes taking place? If any?
  - If so, how do you feel about the changes that are taking place?
  - Where do you think the changes have been originating from?
  - How do you think the changes are affecting academic advising for you as an advisor?
  - How do the changes affect your department?
• What does iPASS reform mean to you?
• How do you feel about technology mediated advising tools?
• What are your experiences related to iPASS reform?
  o Advising restructure or redesign?
  o Implementation of technology in advising?
• How do you feel about using technology mediated advising tools?
• If you could offer any recommendations to other campuses implementing iPASS, what would you offer?
APPENDIX B

EMAIL INVITATION TO PARTICIPANTS
Email Invitation

Dear Participant,

I am writing to you because I would like to invite you to participate in a study regarding iPASS reform and academic advising. I would like to invite you to share your thoughts on iPASS reform, which includes technology-mediated advising tools and academic advising procedures in your respective department. The information you share will be used to help provide other universities with best practices in iPASS reform implementation. There are no right or wrong answers to questions. In order to be eligible to participate, you must be a professional advisor who has been advising for at least one year. This study has been approved by the California State University, San Bernardino Institutional Review Board.

If you have any questions about the study, please contact me. My phone number is (626) 392-4381 and I will be happy to discuss any questions you may have. If you are interested in participating, please e-mail me at mdomingo@csusb.edu and submit the signed Informed Consent (attached). Dr. Edna Martinez, Associate Professor, is my dissertation chair. If you have any questions or concerns, please feel free to contact her at emartinez@csusb.edu.

Thank you very much for reading this e-mail.

Sincerely,

Maria Domingo
Doctoral Candidate
APPENDIX C

INFORMED CONSENT
Exploring the Implementation of iPASS Reform at a Four-Year Public, Comprehensive University

INFORMED CONSENT

PURPOSE: Maria Domingo invites you to participate in a research study titled Exploring the Implementation of iPASS Reform at a Four-Year, Public, Comprehensive University. The purpose of this study is to explore how a four-year, public, comprehensive university implements iPASS reform. Specifically, I seek to understand what organizational changes are necessary to fully implement iPASS reform. I seek to explore how iPASS impacts academic advising and the work that academic advisors do. I hope to learn about the relevant and emerging issues related to iPASS reform and academic advising. This project will help address the gap in literature dealing with iPASS reform. This study was approved by the CSU San Bernardino Institutional Review Board.

DESCRIPTION:

I would like to learn about your perspective regarding iPASS implementation and academic advising for undergraduate students. Your participation would include one interview, which will last 30 to 60 minutes. The interview will be conducted in a format preferable to you. This includes face-to-face in person, or face-to-face using Zoom, which is a video conferencing tool. With your permission, all interviews will be digitally audio recorded.

PARTICIPATION:
Your participation is completely voluntary. You do not have to answer any questions you do not wish to answer. You may skip or not answer any questions. You can decide to withdraw from the study at any time and your statements or comments will not be part of the study.

CONFIDENTIAL:

Confidentiality of all participants during the study will be protected. Names and any other demographic information such as gender, race, and ethnicity will not be collected during observations. Additionally, pseudonyms will be assigned for the university, all participants, colleges, departments, and or offices. In an effort to protect confidentiality, any data collected will be kept under lock and key and in a password protected computer that is not shared with others. The data will be destroyed three years after the project has ended.

DURATION:

The extent of your participation would include one interview, which will last 30-60 minutes. Following the interview, you may be contacted via e-mail with follow-up questions for clarification. This would require no more than ten minutes of your time.

RISKS:

I do not know of any risks or discomforts to you in this research study as you will not be identifiable by name. Answering questions about your current work environment may cause some discomfort. During these questions, you are free to skip or choose not to answer.
BENEFITS:

There are no foreseeable benefits to you personally from taking part in this study. However, the general benefits resulting from this study is a deepened understanding of iPASS reform implantation and academic advising.

AUDIO:

With your permission, all interviews will be audio recorded and transcribed. I will rely on a secure transcription service that has a strong protocol, including encryption, secure portal and disable downloads to help transcribe the interviews. I understand that the researcher will use audio recording devices during the observations.

Initials _______

CONTACT:

If you have any questions regarding this study, please contact Maria Domingo at mdomingo@csusb.edu or (626) 392-4381 or Dr. Edna Martinez at emartinez@csusb.edu or (909) 537-5676. You may also contact California State University, San Bernardino’s Institutional Review Board Compliance Officer, Michael Gillespie at (909) 537-7588 or mgillesp@csusb.edu.

RESULTS:

The results of this study will be published as a part of Maria Domingo’s dissertation. The dissertation will be available online as a part of CSUSB Scholar Works, an online open access institutional repository showcasing and preserving
the research, scholarship and publications of California State University, San Bernardino faculty, students, and staff. The repository is a service of the John M. Pfau library. In addition, the results of this study will be disseminated through various outlets such as conference presentations and publications. An executive summary of finding will also be provided to research participants and their respective institutions.

CONFIRMATION STATEMENT:

I have read the information above and agree to the researcher’s

SIGNATURE:

Signature: __________________________ Date: ___________________
APPENDIX D

INSTITUTIONAL REVIEW BOARD APPROVAL
March 17, 2020

CSUSB INSTITUTIONAL REVIEW BOARD
Expedited Review
IRB-FY2020-238
Status: Approved

Ms. Maria Theresa Domingo and Prof. Edna Martinez
COE - Doctoral Studies
California State University, San Bernardino
5500 University Parkway
San Bernardino, California 92407

Dear Ms. Domingo and Prof. Martinez:

Your application to use human participants, titled “Exploring the implementation of iPASS reform at a four-year, public, comprehensive university” has been reviewed and approved by the Institutional Review Board (IRB). The informed consent document you submitted is the official version for your study and cannot be changed without prior IRB approval. You are required to keep copies of the informed consent forms and data for at least three years.

The study is approved from March 17, 2020 through March 16, 2021.

Your IRB application must be renewed annually and you will receive notification from the Cayuse IRB automated notification system when your study is due for renewal. If your study is closed to enrollment, the data has been de-identified, and you're only analyzing the data - you may close the study by submitting the Closure Application Form through the Cayuse IRB system.

You are required to notify the IRB of the following as mandated by the Office of Human Research Protections (OHRP) federal regulations 45 CFR 46 and CSUSB IRB policy. The forms (modification, renewal, unanticipated/adverse event, study closure) are
located in the Cayuse IRB System with instructions provided on the IRB Applications, Forms, and Submission Webpage. Failure to notify the IRB of the following requirements may result in disciplinary action.

- Ensure your CITI Human Subjects Training is kept up-to-date and current throughout the study.
- Submit a protocol modification (change) if any changes (no matter how minor) are proposed in your study for review and approval by the IRB before being implementing in your study.
- Notify the IRB within 5 days of any unanticipated or adverse events experienced by subjects during your research.
- Submit a study closure through the Cayuse IRB submission system once your study has ended.
- Keep your CITI Human Subjects Training up-to-date and current throughout the study.

The CSUSB IRB has not evaluated your proposal for scientific merit, except to weigh the risks and benefits to the human participants in your IRB application. This approval notice does not replace any departmental or additional approvals which may be required. If you have any questions regarding the IRB decision, please contact Michael Gillespie, the IRB Compliance Officer. Mr. Michael Gillespie can be reached by phone at (909) 537-7588, by fax at (909) 537-7028, or by email at mgillesp@csusb.edu. Please include your application approval number IRB-FY2020-238 in all correspondence. Any complaints you receive regarding your research from participants or others should be directed to Mr. Gillespie.

Best of luck with your research.

Sincerely,

Donna Garcia

Donna Garcia, Ph.D., IRB Chair
CSUSB Institutional Review Board

DG/MG
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