UNDERSTANDING ACADEMIC ADVISING PRACTICE: ACADEMIC ADVISORS' PERCEIVED IMPACT OF AN ACADEMIC ANALYTICS TOOL ON THE PRACTICE OF ACADEMIC ADVISING

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ABSTRACT

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Higher education institutions are facing growing pressure to improve retention and graduation rates. Academic analytics has emerged as a strategy to address the completion issue. Because academic advisors are integral in providing successful student success initiatives and they often maintain relationships with students throughout their entire academic careers, academic advising is the essential component to increasing completion rates. Therefore, the technologies included in the academic analytics strategy most often impact academic advising work. The purpose of this study was to investigate how academic advisors perceive the practice of academic advising at Amey State University (ASU) in the context of changing technology tools, specifically the implementation of the Student Success System (SSS).

The study used an exploratory qualitative methodology since there is little other research that seeks to understand the practice of academic advising from the advisors' perspective. Using the NACADA (2017a) Academic Advising Core Competencies as the conceptual framework this study explored how the use of an academic analytics tool changed the work academic advisors do through the Conceptual (understanding), Informational (knowledge), and Relational (skills) components. The participants were all academic advisors from Amey State University, a large, four-year, public, research one institution with a high population of undergraduate students (Carnegie Classification, 2018).

The findings of this study reveal that the academic advisors have a strong focus on student success yet do not identify or connect with the broader student success goals of the institution. There is a lack of trust from the advisors in upper administration in regards to decision-making and a need for clear, transparent, and frequent communication between leaders and academic advisors regarding student success mission and goals. Integration of the Student Success System (SSS) into the academic advisors' daily practice only caused minor disruptions and little improvement to their practice of advising because of the inability to use most of the functions. This study concludes that academic advising practice is constantly changing and evolving due to internal and external forces. The increased attention to retention, completion, and persistence along with the rapid advancements in technology tools to assist these efforts will mark the next era of academic advising practice. Academic advising will need to find ways to deal with the rapid changes in technology tools and seek best practices in transitioning from one tool to another in order to keep pace with the changes.

To my Grandma, Lucille M. Whitford
Thank you for instilling in me a love of education.

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CHAPTER 1: INTRODUCTION

The prevailing focus over the last ten years in the United States higher education system has been on the college completion agenda. This national agenda was sparked by a 2008 report issued by the College Board's Commission on Access, Admissions and Success in Higher Education that called for an increase in the number of Americans that hold a postsecondary credential to at least 55 percent by 2025 (The College Board, 2008). Since then leading foundations, policy organizations, and state and federal policymakers have put pressure on higher education institutions to find ways to increase completion rates. As state and federal policymakers continue to emphasize the importance of increasing rates of college completion, many colleges are beginning to consider the use of technological tools to support students' progress toward their educational goals (Eduventures, 2013; Karp & Fletcher, 2014; Salas & Alexander, 2008; Wagner & Longanecker, 2016).

Recently, academic analytics has emerged as a strategy to address the completion issue (Fletcher et al, 2016; Kalamkarian et al, 2017; Karp & Fletcher, 2014). Because academic advisors are integral in providing successful student success initiatives and they often maintain relationships with students throughout their entire academic careers, academic advising is the essential component to increasing completion rates (Tyton Partners, 2019). Therefore, the technologies included in the academic analytics strategy most often impact academic advising work. Institutions are looking to technology providers to redesign the advising experience so that it is more proactive, personalized, and holistic. The goal is to make advising and planning more efficient so that advisors are better able to serve the students most in need.

Academic advisors share a collective understanding of the components involved in the academic advising practice. The National Academic Advising Association (NACADA) (2017a)

developed the Academic Advising Core Competencies to identify the broad range of understanding, knowledge, and skills that are the foundation of academic advising. Three content components serve as the foundational elements for effective advising practice; the Conceptual, Informational, and Relational (NACADA, 2017a). The Conceptual component consists of the ideas that academic advisors must understand about their institution's advising environment to meet their advising objectives. The Informational component of academic advising consists of the facts and knowledge of the institution and programs that academic advisors must know in order to guide advisees through the completion of their degree. And the Relational component encompasses what academic advisors must do to connect with students. Incorporating the use of new technologies into academic advising work may require that the three components of academic advising will need to adapt according to the changing nature of the work (NACADA, 2017a).

Although, researchers are beginning to pay attention to the influx of use of academic analytics in academic advising, there has been little research to explore how the practice of academic advising may be changing with the integration of these technologies. The purpose of this study is to begin to fill this gap in research by investigating the perceptions of academic advisors about their advising practice through the context of having experienced the implementation of an academic analytics tool.

Statement of Problem

Although, the new vended technologies are meant to make advising and planning more efficient in order to serve the students who need the most support and ultimately increase student success and retention, the technology disrupts, for good or bad, the established academic advising workflow in ways that we do not yet understand (Tyton Partners, 2015). Whether the

technology is implemented well, fully integrated across the institution, and functions as promised, or not, still impacts the work that academic advisors perform day-to-day. It becomes a new tool that replaces other tools that advisors need to learn how to use and incorporate which takes time and may require changing already established routines. Or the new tool becomes one more of many advisors need to utilize in their practice. Either way, it disrupts and impacts the work academic advisors do in positive or negative ways. Institutions often make the decision of using a new vended technology with only minor knowledge and consideration of how it will impact the work of those who will be required to use it daily. The implementation of technologies that disrupt the everyday work of academic advisors could force institutions, colleges, and/or departments to rethink the structure and approach to academic advising changing the nature of the field altogether. Literature addressing how the use of technology tools impact the advising work is just beginning to emerge, leaving academic advisors, administrators, and institutions without a full understanding of the scope of the problem.

Research Questions

The purpose of this study is to investigate how academic advisors perceive their practice of academic advising through the use of an academic analytics tool, the Student Success System (SSS).

The following research questions guided the study:

- How do academic advisors' perceive their practice of academic advising?
- What is the academic advisors' perceived impact of the Student Success System (SSS) at Amey State University (ASU) on the way they practice academic advising?
    - What is the academic advisors' perceived impact of the SSS at ASU on what they need to understand to meet advising objectives?

- What is the academic advisors' perceived impact of the SSS at ASU on what they need to know in order to guide advisees?
- What is the academic advisors' perceived impact of the SSS at ASU on the skills they need to have to convey concepts and information to their advisees?

Purpose of the Study

This study offers insight through the perceptions of academic advisors to how the work of academic advising may be changing in the context of changing technology tools. Using the NACADA (2017a) Academic Advising Core Competencies as the conceptual framework this study explores academic advising practice through the Conceptual (understanding), Informational (knowledge), and Relational (skills) components. The participants are all academic advisors from Amey State University, a large, four-year, public, research one institution with a high population of undergraduate students (Carnegie Classification, 2018). By selecting participants that are all academic advisors at Amey State University (ASU) the study can examine how the integration of a specific academic analytics tool, the Student Success System, has affected the work of academic advisors at a large institution. The names of the institution, academic analytics tool, and participants have been changed in to order maintain anonymity.

Definition of Terms

For the purpose of this study it is important to clarify key terms used throughout the research. There are multiple ways to define *academic advising, academic advisors, academic advising practice,* and *academic analytics*. It is important to have a clear understanding of the ways these terms are used throughout the study in order to fully comprehend the research questions.

Academic Advising

The focus of this study is on academic advising practice. Therefore, it is critical to clearly understand how *academic advising* is defined. Academic advising (also referred to as "advising" throughout the paper) can take many forms and can look very different from campus to campus and even from department to department on a single campus (Cate & Miller, 2015). Crookston (1994) and O'Banion (1994) are credited with the first significant attempts to define the complexity of academic advising. Both Crookston and O'Banion working independently wrote seminal articles in 1972 that described the teaching/learning process of academic advising (Crookston, 1994; NACADA, 2017b; O'Banion, 1994). Crookston (1994) was first to articulate that academic advising is far more complex than the prescriptive approach to advising, simply picking and scheduling courses. He promoted moving away from prescriptive advising to a more developmental, student-centered approach. Crookston (1994) defined advising as "concerned not only with a specific personal or vocational decision but also with facilitating the student's rational processes, environmental and interpersonal interactions, behavioral awareness, and problem-solving, decision-making, and evaluation skills" (p. 5). O'Banion (1994) defined academic advising as a dynamic, relational process between advisor and advisee that is respectful of the student's concerns. He described an ideal advising relationship where the advisor serves as both teacher and guide with the goal of developing the student's self-awareness and fulfillment (NACADA, 2017b; O'Banion, 1994). However, by 1994 O'Banion recognized that there is not one best way to practice advising. He realized that advisors are better when they understand that each method has value in the appropriate time and place (NACADA, 2017b). Towards the end of the 20th century and the beginning of the 21st century new perspectives on academic advising began to emerge such as learning-centered advising (Hemwall & Trachte, 1999; NACADA,

2017b), academically-centered advising (Lowenstein, 1999; NACADA 2017b), and the theory of advising as integrative learning (Lowenstein, 2014; NACADA 2017b).

Still today there is not one concise or single definition that is universally accepted for academic advising (NACADA, 2017b). Each campus has unique characteristics that require advisors to assume specific job responsibilities to meet the needs of students. For that reason, this study defines academic advising as Amey State University defines it because all of the participants for the study are from this institution. According to the institution's handbook, ASU defines *academic advising* as advisement on curricular and other academically related matters. The responsibility for academic advising at ASU falls to academic departments, schools, colleges, or units that serve university-wide populations.

Academic Advisor

The next term that is important to understand for this study is *academic advisor*. Academic advisors are the individuals on a college or university campus that perform the functions of academic advising. There are many positions on a college or university campus that perform advising functions, such as financial aid advisors, athletic advisors, advisors for students with disabilities, counselors, and others (Rentz & Associates, 1996). However, academic advisors are unique in that the institution's curriculum establishes the context for the activity and the institution's policies and procedures set the guidelines (Goetz, 1996). Although factors such as financial and personal issues may affect a student's academic success, academic advisors focus on the academic issue and rely on other advisors' expertise in those areas. Academic advising can be delivered by faculty, professional advisors, counselors, peer advisors, and paraprofessionals (Cate & Miller, 2015; Goetz, 1996; Reinarz, 2000).

Academic advisors at ASU are charged with providing guidance that focuses on the development of a student during their undergraduate experience. According to the handbook, academic advisors are individuals who provide advisement on course options and other academically related matters. Academic advisors have responsibilities in an academic department, school or college, or in a unit that serves university-wide populations. The advising handbook lists the following general job functions, like most other university handbooks, that academic advisors typically performs:

- provide advice on course and curriculum selection;
- monitor students' programs;
- recommend certification for graduation;
- maintain contact with advisors in other units;
- provide incidental information on the relationship between course selection and career options;
- refer students, when necessary, to other units in the university for assistance with educational, career, and personal concerns;
- participate in activities devoted to the retention of students within university programs;
- provide assistance and guidance to students reentering programs;
- may be involved in instructional activities associated with classes, labs, and seminars;
- participate as required by the unit, in professional development activities, both on and off campus, including conferences, workshops, and seminars to enhance the ability and knowledge to perform as an advisor;
- participate in department/school, college, and university-level committees;

- make a significant professional contribution by making scholarly presentations: present papers, lectures, or workshops on campus or beyond related to academic advising or training;
- assume leadership roles involving the coordination, supervision, and training of new academic advisors.

For the purpose of this study, *academic advisor* is defined as an individual who provides advisement on course options and other academically related matters.

Academic Advising Practice

The focus of this study is on academic advising practice and how the use of an academic analytics tool impacts it, therefore it is crucial to define what *academic advising practice* is as it relates to the study. The practice of academic advising consists of the roles and job responsibilities advisors perform on a daily basis. It is important to understand what academic advising practice is in order to determine whether the integration of an academic analytics tool has an impact on the everyday roles and responsibilities advisors perform. According to the 2011 NACADA National Survey of Academic Advising, full-time professional advisors at large institutions have an average of 600 undergraduate advisees they work with on a yearly basis (NACADA, 2011). Academic advisors also indicated that the top six out of 21 advisor job responsibilities for four-year institutions were: help schedule courses; help develop a plan of study; participate in new student orientation; serve on committees; help with course registration; and help select a major (NACADA, 2011). The same survey also revealed that the number one way academic advisors communicate with students besides face-to-face appointments is through email at a whopping 98.7% and second to that was through course management software at 43.4% (NACADA, 2011).

A look at current academic advisor job postings provides a clear understanding of job responsibilities that are in addition to advising students. Most academic advisors participate in new student orientation and organize, implement, participate in, and assess educational programs or events (NACADA, 2018, March). Other responsibilities of academic advisors are facilitating recruitment activities; maintaining academic records; collecting and analyzing data; participating on committees; teaching courses; certifying for graduation; participating in on-going professional development; supervising student workers; advising student organizations; assisting with curriculum changes; overseeing scholarships; coordinating internships; etc. (NACADA, 2018, March). In addition, some academic advisors serve special populations of students such as honors students, students on academic probation, and student athletes which requires additional outreach strategies.

Academic advising practice is complex and multifaceted. It is not merely meeting with students all day long. There are numerous other responsibilities that academic advisors must attend to in order to provide excellent service to their students. This study defines *academic advising practice* as all of the roles and job responsibilities academic advisors must manage in their daily work.

Academic Analytics

The last term that is important to define for this study is *academic analytics*. This does not refer to those technologies academic advisors use such as email, student information systems, or word processing programs. Academic analytics uses multiple forms of technology to improve student outcomes by fundamentally changing the way students are guided and supported as they make their way through college. Ideally, the technology is used to promote, support, and sustain long-term intrusive and holistic advising relationships (Fletcher et al, 2016; Karp & Fletcher,

2014). Some of the technologies often used can help students identify possible majors and potential courses to take, assist advisors and students in creating educational plans, and support faculty and academic advisors in identifying and reaching out to students in academic difficulty (Karp & Fletcher, 2014).

For this study the term *academic analytics* is used to refer to those technological tools that aim to improve student success through information delivery and data analysis capabilities. This study focuses specifically on the Student Success System as the academic analytics tool since it has been implemented throughout academic advising at Amey State University.

Significance of the Study

The recent focus on academic analytics has sparked a debate about the role technology should play in academic advising. Some argue that the increased use of technology will improve information students receive and therefore improve student satisfaction. Others argue that using technology to replace personal interaction with students will diminish the student experience (Kalamkarian & Karp, 2017). Most likely though, academic analytics will be used in ways that coexist with traditional face-to-face academic advising. However, this move towards academic analytics still creates a shift in how institutions, colleges, departments, and academic advisors think about academic advising services. This study is significant in that it examines how this move towards academic analytics is impacting academic advising practice.

Understanding how the practice of academic advising work is changing is important because it will inform how institutions, colleges, and departments reorganize their advising structures and delivery systems in order to best support student success. The organization and structure of academic advising are critical to providing effective services to students. It becomes even more significant in an era where advising programs are being evaluated for their

contribution to student retention. The factors that influence the organizational structure and delivery system of academic advising change as institutional, college, and department culture, values, and goals change. Therefore, as institutions move to more academic analytics tools that affect the work academic advisors do, it is important to reassess those structures to ensure they are effectively serving students.

Academic advising is a critical function in higher education when it comes to student retention and the completion agenda. This study will enlighten academic advisors, administrators, and institutions about the education, training, and skills academic advisors will need to be successful in meeting institutional completion goals. It will also inform national organizations focused on academic advising, such as NACADA, regarding the professional development opportunities they offer in order to keep advisors knowledgeable about the most current issues facing the profession. Educational programs, such as degrees in student affairs or higher education administration, will also benefit from this study by adjusting curriculum to prepare future academic advisors for the challenges of the field.

CHAPTER 2: LITERATURE REVIEW

An examination of the literature is essential to understand the history and context in which this study is situated. The vast majority of literature on academic advising comes from the professional organization, the National Academic Advising Association (NACADA). NACADA publishes a refereed journal called the *NACADA Journal* that advances scholarly discourse about the research, theory, and practice of academic advising; an electronic collection of resources to assist academic advisors with practice called the *Clearinghouse of Academic Advising Resources*; an electronic publication called *Academic Advising Today* intended for sharing of advising experiences and discussion of ideas related to theory and practice; and recently launched the *NACADA REVIEW: Academic Advising Praxis and Perspectives* a peer-reviewed, online academic journal which aims at connecting the practice of academic advising to theory from related fields such as education, the humanities, and social sciences (NACADA, 2017c). Additionally, NACADA has produced several books, monographs, and pocket guides focused on specific areas of academic advising.

Beyond NACADA there are only a couple of other publications focused specifically on academic advising in higher education. *The Mentor: An Academic Advising Journal*, founded in 1999, is a peer-reviewed scholarly publication about academic advising, and in spring of 2018 a publication called the *Journal of Academic Advising* produced its first issue (*Journal of Academic Advising*, 2018; *The Mentor*, 2018). Additional literature on academic advising can be found in student affairs and higher education journals and publications. However, since NACADA produces the majority of the literature, and academic advising professionals are the largest contributors to the publications, the literature is skewed towards how the organization views advising, possibly leaving out perceptions about the field from other perspectives.

The literature review establishes a foundation of understanding beginning with the evolution of academic advising in order to demonstrate how academic analytics will help shape the future of academic advising practice. Next the literature delves into the delivery systems and organizational models of academic advising, providing clarification of the parameters of the study. The literature then discusses technology in academic advising. This section begins with an overview of technology use in academic advising and moves into discussing the roles big data and predictive analytics play in the academic analytics tools and academic advising practice. This is followed by a description of the Student Success System; the academic analytics tool being used at Amey State University. Finally, the literature provides a comprehensive explanation of the study's conceptual framework, the Academic Advising Core Competencies. Descriptions of the three components of the Core Competencies (Conceptual, Informational, and Relational) will be given to provide the foundation for the study's methods.

Academic Advising

Academic advising is a critical function of higher education. It has evolved from a simplistic, routine, perfunctory course-scheduling activity to a complex process of student development (King, 2000). Academic advising requires comprehensive knowledge, skills, attitudes, and behaviors that necessitate ongoing professional development to keep up with the changing landscape. An ever increasingly diverse student population, complex curricular requirements, and concern about student retention are a few factors that make the field of advising so involved (King, 2000).

Academic advising is distinguished from other types of advising that may occur on campus, such as within student services like financial aid, resource centers for persons with disabilities, and the residence halls. Academic advising is a collaborative relationship between a

student and an academic advisor. The purpose of this collaboration is to assist the student in the clarification of their life/career goals that are consistent with their personal interests, values, and abilities. It is a decision-making process by which students realize their educational potential through communication and information interactions with an advisor (Campbell & McWilliams, 2016; King, 2000). Academic advising is an ongoing and multifaceted process that spans over the student's academic career. Academic advising goes well beyond the clerical functions of scheduling classes and preparing degree plans. The academic advisor serves as a facilitator of communication, an advocate of learning experiences through course planning and co-curricular activities, and a liaison of referral to other campus resources as necessary (King, 2000). Although many individuals on campus assist students in making decisions and accomplishing goals, academic advisors are granted formal authority by an academic unit (college, school, or department) to approve academic programs of study and assist students in progressing towards degree attainment (Campbell & McWilliams, 2016; King, 2000). Therefore, academic advisors play an integral role in the effort to increase the college completion rate.

In order to understand the current context of academic advising and how academic analytics impacts advising practice it is important to understand how academic advising has evolved as a practice. The next section examines the history and evolution of academic advising through four defined eras.

The Evolution of Academic Advising

Academic advising has advanced as an increasingly important function within higher education over the past two centuries. Scholars have determined that there are four eras in the history of academic advising (Cate & Miller, 2015; Himes & Schulenberg, 2016). Each era is characterized by changes in political, social, economic, and technological development

(NACADA, 2017b). Understanding the trends involved with the evolution of academic advising helps guide us on what the future direction of academic advising practice may become. The sections below discuss each of the eras.

The First Advising Era (1620 to 1870)

Frost (2000) and Kuhn (2008) characterized the First Advising Era (1620-1870) as a time when academic advising was undefined in American higher education. In the beginning of the first era the colonial colleges taught a classical curriculum that emphasized ideas and students had little or no choice of courses. Students and faculty lived at the college and the faculty supervised students' studies, living environment, and worship (Frost, 2000). By 1770 the mission of the colleges evolved from educating for service to the church and state to educating for citizenship in the new republic. During this time, colleges expanded the curriculum to include information and skills that settlers needed to survive (Frost, 2000). Major events during the first era influenced the evolution of advising. Between 1790 and 1850 women began to enroll in higher education at increasingly higher rates, and the Morrill Act of 1862 that authorized land grant colleges in each state to teach practical subjects caused changes to institutional missions (Frost, 2000; Himes & Schulenberg, 2016).

The first era is defined by three distinct educational philosophies: utility, liberal culture, and research (Frost, 2000). Utility called for a practical, real-life approach to all courses. Liberal culture had its roots in the classical curriculum of the colonial colleges and promoted the pursuit of art and beauty for their own sake, and research was where investigation and writing defined a university education (Frost, 2000). As the first era progressed the faculty/student relationship suffered. Faculty devoted their energy to research and scholarship and many undergraduates did not want to specialize their education as was the new trend. "Before long, faculty came to

consider it inappropriate to speak to students on a personal basis, and students considered it improper to approach faculty" (Frost, 2000, pp. 7).

The Second Advising Era (1870 to 1970)

The Second Advising Era (1870-1970) is defined as a period when institutions created the specific role of a primary academic advisor but the goals, methods, and theories that guided practice were undefined and unexamined (Frost, 2000; Himes & Schulenberg, 2016). Curricular expansion in the late 19th and early 20th centuries influenced the creation of academic advising. During the first years of the 20th century the elective system provided students with choices about their courses of study (Frost, 2000). This move to the elective system changed the purpose of higher education asserting that all students did not need to know the same things. It also became the foundation for the creation of academic departments because knowledge had expanded beyond the mastery of one person (Frost, 2000). One characteristic of this advising era was the growing distance between faculty and undergraduate students. In 1889, Johns Hopkins University attempted to connect the students and faculty more closely by creating a system of academic advising. This system paired faculty members with undergraduate students to advise them regarding their courses of study. By the late 1930s almost all institutions had formalized advising programs (Frost, 2000). Although, the creation of academic advising was meant to bring the faculty and students closer together evidence suggests that was not the case.

The addition of advising to faculty roles was a burden when trying to keep up with the demands of teaching and research, and advising soon slipped into brief, impersonal interviews (Frost, 2000). By the 1950s institutions began to realize that academic advising required specialists with complex interpersonal skills that could interpret student information, gather information about students' interests, and identify areas in which the student needs support

(Himes & Schulenberg, 2016). Therefore, the first dedicated academic advisors and advising units were created. Despite the growing specialization of advisors there was widespread inconsistency of practice and purpose (Himes & Schulenberg, 2016).

The Third Advising Era (1970 to 2003)

The Third Advising Era (1970-2003) is defined by a more distinct role for academic advising in higher education and increased attention to the purposes, theories, and methods applied to practice (Himes & Schulenberg, 2016). During this era the student population in higher education not only became increasingly diverse with women and students of color attending, but between the 1960s and 1980s enrollment in higher education increased 400% (Himes & Schulenberg, 2016). The greater amount and variety of student needs prompted the continued growth of support structures for students. Along with the growing student population, faculty continued to devote themselves to research leaving little time for advising. Therefore, most campuses continued to formalize academic advising structures (Frost, 2000). “The increased number of academic advisors whose practice was informed by perspectives and skill sets that differed markedly from their faculty peers created a divide between advising done by faculty and primary-role advisors” (Himes & Schulenberg, 2016, pp. 10). In 1972, Crookston (1994) and O’Banion (1994) wrote seminal works that attempted to reconcile student personnel perspectives with teaching in an attempt to move all advisors toward a common ideal of practice (Himes & Schulenberg, 2016).

The increased attention paid to the role of academic advising in student success and the increase of primary-role advisors led to the creation of the National Academic Advising Association (NACADA) in 1979 (Himes & Schulenberg, 2016). In an effort to support the expanding literature in student personnel and academic advising, and to support academic

advising as a distinct field through scholarship, the first edition of the *NACADA Journal* was printed in 1981. National surveys conducted between the 1970s and 1990s indicated national trends in organizational models and delivery methods. The surveys also showed that advising was consistently undervalued and that academic advising programs were critically underfunded (Himes & Schulenberg, 2016).

The Fourth Advising Era (2003 to Present)

The Fourth Advising Era (2003 to Present) is defined by a concerted effort to clarify the role of academic advising and to demonstrate its value to a wide range of stakeholders (Himes & Schulenberg, 2016). Higher education continues to see increased enrollments including new populations such as international students. There is also a strong focus on accountability, student retention, and completion. Given the current atmosphere stakeholders have attempted to further clarify and convey the importance of academic advising (Himes & Schulenberg, 2016). In 2003, initial steps were taken toward making academic advising a recognized profession. In so doing, NACADA created the Certification Task Force to recommend the specific categories of advising competencies that all effective advisors should be able to demonstrate. The result was the Academic Advising Core Competencies that serve as the conceptual framework for this study (Cate & Miller, 2015; Himes & Schulenberg, 2016; NACADA, 2017a).

The evolution of academic advising has been impacted and influenced by social structures within and beyond higher education. Changes in the size and diversity of the student enrollment, modifications to the curriculum and faculty roles, and the increase in scholarship about academic advising have all played a role in forming the structures of academic advising today. The next era of academic advising will be defined by the greater attention on student retention, completion, and persistence and how academic advising plays a critical role. During

this time, all academic advisors, whether primary-role or faculty, will be increasingly judged on their expertise and knowledge as well as their abilities and the results of their work (McGill & Nutt, 2016). To address these issues institutions are turning to for-profit companies for academic analytic tools that help inform decisions about programs, initiatives, interventions, or campaigns targeted to specific student populations. Although these tools are often acquired without input from the academic advising community, academic advisors will be held responsible for implementing these academic analytics tools (McGill & Nutt, 2016). The increased attention to retention, completion, and persistence along with the academic analytics tools to assist these efforts will mark the next era of academic advising practice.

Delivery Systems of Academic Advising

As academic advising has evolved through the ages so have the delivery systems of advising. It is important to understand the different types of delivery systems in order to understand how academic analytics impacts the practice of advising. Although this study focuses on professional academic advisors and their practice, it is important to understand the differences between advisor types (professional, faculty, counselors, peer and paraprofessionals) in order to comprehend the full range of advising practices.

The delivery system of academic advising consists of the people that deliver the advising services, such as faculty advisors, professional advisors, counselors, or peer advisors and paraprofessionals (King, 1993; Reinarz, 2000). The delivery system of advising is intricately connected to the organizational model of academic advising at an institution. The organizational model determines the need for specific types of academic advisors to deliver services to students. King (1993) identified seven criteria for determining the strengths and limitations of each advising type: (a) accessibility and availability; (b) priority placed on advising; (c) knowledge of

the field of study and curriculum; (d) knowledge of student development theory; (e) training required; (f) cost; and (g) credibility with faculty and staff. The sections below discuss the strengths and limitations of each of the academic advisor types.

Professional Advisors

Professional academic advisors come from backgrounds in counseling, social work, education, or higher education administration. Many professional academic advisors receive training in student development theory as part of their education to prepare them for the advising role. Professional advisors also possess knowledge of theories in the social sciences, humanities, and education. Other professional academic advisors come from the same disciplines that the advising unit represents (Reinarz, 2000).

Professional academic advisors differ from faculty advisors due to their full-time status which makes them highly accessible and available to students. They are able to assist students through one-on-one appointments, telephone and video messaging conversations, small-group discussions, and email correspondence (Reinarz, 2000). Their continuity allows professional academic advisors to remain up-to-date on complex curriculum and policy information (King, 1993). Professional academic advisors are dedicated to concerning themselves with the most up-to-date academic and student service information needed to assist their students. With training they are able to answer discipline-specific problems (King, 1993). The financial cost for professional advisors may be greater than that of faculty advisors, but that may vary with campus location and advisor credentials. The concerns with professional advisors are the credibility with faculty and staff and their lack of teaching experience and involvement in the disciplines (King, 1993; Reinarz, 2000).

Faculty Advisors

Many institutions depend on faculty to deliver advising. However, there has been a decline in the use of the Faculty-Only Model. Private two-year and four-year institutions are most likely to rely on the Faculty-Only Model of advising. The benefits of faculty advisors are that they are most able to answer discipline specific questions and have the greatest knowledge of course content and curriculum (King, 1993; Reinarz, 2000). The research shows that mentoring relationships between faculty and students are significant experiences that lead to undergraduate student success. However, many faculty members may enjoy advising but may receive little or no recognition or reward for their commitment (King, 1993). It is also a challenge for faculty advisors to balance their time between teaching, scholarship, and advising. A significant concern is expecting too much from faculty advisors and requiring them to remain informed about student services, increasing complexity in curriculum, and changes in policies and procedures (Reinarz, 2000). Although, faculty advisors may be cost effective to the institution because they do not have to hire additional staff to perform the advising function, the concern is expecting too much from faculty and taking time away from their teaching, research, and service (King, 1993; Reinarz, 2000).

Counselors

Junior and community colleges frequently utilize counselors to provide academic advising. Counselors are full-time employees that perform multiple roles on campus. Counselors serve students through personal counseling, academic counseling, and career counseling. Counselors' strengths are general accessibility to students and knowledge about the curriculum and policies. One difference between counselors and professional advisors is the high priority of counselors to provide psychological and career services to students. Since counselors may be

required to fulfill roles in addition to academic advising it is possible that advising time may be taken away by these other roles. Advising may actually be given a low priority to the other responsibilities that counselors must complete (King, 1993; Reinarz, 2000).

Peer Advisors and Paraprofessionals

Carefully selected and trained peer advisors (undergraduate students) and paraprofessionals (graduate students, practicum students, and others hired for peak advising times) are utilized at many four-year public institutions (King, 1993; Reinarz, 2000). Peer advisor roles may be limited to support roles in orientation or in the residence halls at some institutions, yet at other institutions they may have additional advising responsibilities assigned by advising offices. Peer and paraprofessional advisors easily relate to advisees because they often share the same types of problems (King, 1993; Reinarz, 2000). Careful training and supervision is required for peer and paraprofessional advisors to ensure that they are not crossing boundaries with advisees. Peer and paraprofessional advisors are less costly than professional advisors and they bring energy, creativity, and perspective that can be extremely valuable (King, 1993; Reinarz, 2000). The delivery system of advising is intricately connected to the organizational model of academic advising at an institution. The organizational model determines the need for specific types of academic advisors to deliver services to students.

Organizational Models of Academic Advising

The organizational model is the formalized way that advising services are structured at the institution, campus, college, or departmental level (Pardee, 2000). Organizational patterns and structures are more likely to be found at similar institution types. However, the basis of comparison is in the degree of centralization of their academic advising services ranging from highly decentralized to highly centralized with shared models in between (Pardee, 2000).

Determination of an appropriate organizational structure for the delivery of advising services at the institutional, campus, or department level depends on the institutional context and the characteristics of the institution, the faculty, and the students (Pardee, 2000).

It is important to understand the different types of organizational models of academic advising in order to understand how academic analytics impacts the practice of advising. The organizational structure of advising includes the coordination of the advising program, which can also be centralized or decentralized. Although this study focuses on one institution and its practice, it is important to understand the differences between organizational structures because it is possible for the coordination of advising to be decentralized but the delivery of advising services to be either centralized or decentralized as in ASU's case (Pardee, 2000).

Decentralized Models

In a decentralized organizational structure advising services are provided by faculty or staff in their academic departments (Pardee, 2000). The coordinator of advising in a decentralized system may have little direct oversight of faculty or staff dispersed in the departments. There are two decentralized models of academic advising: the Faculty-Only Model and the Satellite Model.

In the Faculty-Only Model all advising is done by faculty in their department offices (Habley, 1997; Habley & Morales, 1998; King, 1993; Pardee, 2000). Students are assigned to a faculty member within their chosen major area of study. The faculty are usually supervised by the department head who reports to an academic dean. A coordinator in central administration oversees the development of advising policy, training, evaluations, and provides updates on relevant information. The benefits of the Faculty-Only Model are that it is low cost and the advising services are in close proximity to the classes students take in their academic department.

However, the disadvantage of this model is that it takes faculty time away from other responsibilities such as research and teaching (Habley, 1997; Habley & Morales, 1998; King, 1993; Pardee, 2000).

In the Satellite Model advising is provided by central offices in each of the academic subunits (such as colleges in a university) at the institution (Habley, 1997; Habley & Morales, 1998; King, 1993; Pardee, 2000). The satellite offices advise students in the majors within that college or school. College deans or center directors have autonomy within their subunit. It is therefore important to establish a committee of deans and directors of all subunits to review policies and procedures, identify and resolve problems, and establish a referral system for students. The benefits of the Satellite Model are the location in the college or school of the student's major, the capability of responding to student needs, and the ability to provide advising services throughout the day. The disadvantages are that it is much costlier, it duplicates services across campus, and undecided students, major changers, and those with multiple majors need to transition between advising centers (Habley, 1997; Habley & Morales, 1998; King, 1993; Pardee, 2000).

Centralized Models

A centralized organizational structure usually consists of an advising center where a director of advising and an advising staff are housed in one location. Advising for all students from point of enrollment to point of departure is done by staff in a centralized advising unit (Habley, 1997; Habley & Morales, 1998; King, 1993; Pardee, 2000). There is only one centralized model of academic advising: the Self-Contained Model.

In the Self-Contained Model all academic advising of students, from orientation to graduation, is provided from a central administrative unit (Habley, 1997; Habley & Morales,

1998; King, 1993; Pardee, 2000). The dean or director of the unit oversees all advising functions for the institution. The Self-Contained Model has several advantages such as a trained staff, consistent quality of advising, no duplication of services, easy accessibility for students, and on-site supervision of advising services. The disadvantages are that the center is more expensive to staff and operate, students lose faculty expertise, and advisee load may become too large to manage (Habley, 1997; Habley & Morales, 1998; King, 1993; Pardee, 2000).

Shared Models

In a shared organizational structure advising services are shared between a central administrative unit and faculty or staff in academic departments (Pardee, 2000). In all of the shared models a dean or a director coordinates the advising function from the central unit. The dean or director supervises the staff, oversees advising services for the unit, and is responsible for policy and procedure decisions. The challenge is the coordination between the advising center and the academic departments (Pardee, 2000). There are four shared models of academic advising: the Supplementary Model, the Split Model, the Dual Model, and the Total Intake Model.

In the Supplementary Model all students have department advisors. The central administrative unit provides resources and training for advisors (Habley, 1997; Habley & Morales, 1998; King, 1993; Pardee, 2000). This model has an advantage over the decentralized Faculty-Only Model because of the coordination and consistent administrative support. The disadvantage is that the central office may lack credibility with the advising staff since decision making rests with the department advisors (Habley, 1997; Habley & Morales, 1998; King, 1993; Pardee, 2000).

In the Split Model, advising of students is divided between department advisors and central office staff (Habley, 1997; Habley & Morales, 1998; King, 1993; Pardee, 2000). The Split Model works well for student subgroups that require special advising services, such as undecided students, student athletes, or students on academic probation. The advantage of this model is that it offers extra support to students to increase their chances for academic success. The disadvantage is that students may need to transition from a department advisor to a central office advisor or vice versa (Habley, 1997; Habley & Morales, 1998; King, 1993; Pardee, 2000).

In the Dual Model of advising students have two advisors, a department advisor for the major and a central staff advisor for general education, college policies, and academic procedures (Habley, 1997; Habley & Morales, 1998; King, 1993; Pardee, 2000). The benefits of this model are the same as those in the centralized and decentralized models. The disadvantage is that there are potential problems in defining the roles for each advisor. It requires frequent and clear communication among all of the advising staff and students.

In the Total Intake Model all initial advising is conducted in a central advising unit (Habley, 1997; Habley & Morales, 1998; King, 1993; Pardee, 2000). The central unit might be a university college, office of undergraduate services, or a freshman year center. Once students meet specific criteria then they are referred to the academic subunit of their major for advising for the remainder of their program. This model has the advantages of a trained staff, central access, and expertise from advisors in their majors. The only disadvantage is the transition between advisors for students (Habley, 1997; Habley & Morales, 1998; King, 1993; Pardee, 2000). The way advising services are organized and delivered on a campus is influenced by the mission of the university, the nature of the student population, the role of the faculty, and the programs, policies, and procedures of the institution (King, 1993).

Summary

This section presents the current context for academic advising in the United States through understanding the evolution, the delivery systems, and the organizational models of academic advising. Academic advising is a critical function in higher education in the effort to increase the rate of college completion. As shown next, academic analytics tools have emerged as a solution to the college completion agenda. Therefore, the introduction of academic analytics tools most impacts the practice of academic advising, potentially requiring institutions to rethink their delivery systems and organizational models of advising on their campuses.

Technology in Academic Advising

The use of technology in academic advising has greatly improved the services advisors are able to provide students. Prior to the 1970s academic advisors kept student records on paper in physical student folders (McCauley, 2000). The student's academic information, standardized test scores, course placement test scores, special program designations, intended majors, and so on were recorded by hand on forms inside the folder. Advisors maintained and monitored student progress toward completion of a major on a program checklist, recorded transfer courses, and kept track of individual exceptions manually on preprinted forms. Advisors often had to calculate grade point averages by hand or with a calculator, and scheduling of advising appointments was done exclusively by hand (McCauley, 2000). Since the 1980s the capacity and power of the personal computer and the emergence of the information age in higher education has dramatically reduced the time advisors expend in record-keeping chores allowing for more time devoted to a developmental focus in advising (McCauley, 2000). Advances in technology led to computerized degree audit, transfer course equivalency, online course registration, electronic notebook, appointment calendar, and student profile systems. These technological improvements

have liberated advisors from time-consuming, labor-intensive, and redundant tasks, and have also provided easy access to accurate and comprehensive academic and student data (McCauley, 2000).

Technological tools have impacted academic advising practice by allowing advisors more time to spend on developmental advising, an approach where advisors take a holistic view of each student to foster their academic, personal, and career goals (Grites, 2013). However, the new era of technological advancement in academic advising is bigger than just providing tools that make finding information more accurate and efficient. Through the use of big data and predictive analytics, academic analytics tools aim to improve student outcomes by identifying possible majors and potential courses to take, assisting advisors and students in creating educational plans, and supporting faculty and academic advisors to identify and reach out to students in academic difficulty (Karp & Fletcher, 2014). Ideally, academic analytics is used to promote, support, and sustain long-term intrusive and holistic advising relationships (Fletcher et al., 2016; Karp & Fletcher, 2014).

In order to understand how academic analytics impacts advising practice it is important to understand how technology advanced to allow higher education to analyze large amounts of data. The rapid advancement of the ability to analyze large amounts of data ultimately led to the development of academic analytics tools as a way to display and report the outcomes of the analyses. As the model (Figure 1) below shows, it begins with *big data*, the large volume, velocity, and variety of data, which allows for *predictive analytics* to reveal relationships and patterns in that data. Companies then produce products (*academic analytics* tools) that use those predictive analytics specifically in support of student success in higher education. The specific

academic analytics tool used at ASU is the *Student Success System (SSS)*. The next sections examine the data advancements that led to the creation of the Student Success System.

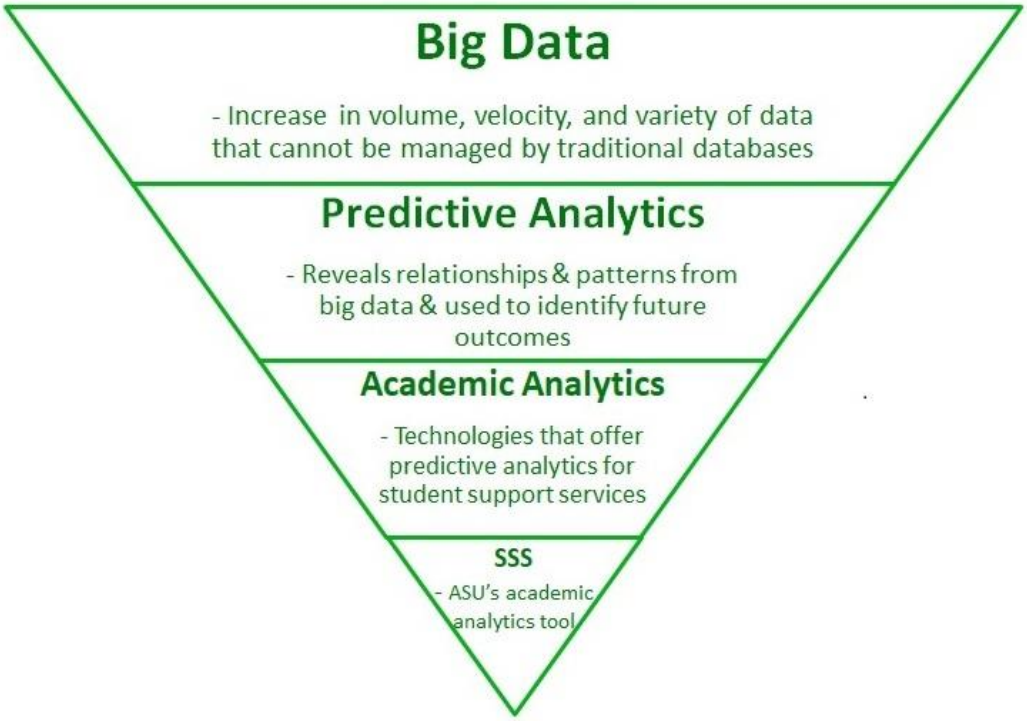

Figure 1. **Summary of Big Data, Predictive Analytics, Academic Analytics, and the Student Success System (SSS).** Through the use of big data and predictive analytics, academic analytics tools aim to improve student outcomes. The Student Success System (SSS) is the academic analytics tool used at ASU.

Big Data

The use of big data to address student retention and completion issues in higher education is a new and emerging practice. However, big data has always existed. Big data refers to the significant increase in volume, velocity, and variety of data that is no longer possible to manage through traditional databases (Gibson & Ifenthaler, 2017; Lane & Finsel, 2014; Rios-Aguilar, 2015). The difference regarding big data today and past eras is that the amount of data being generated is growing at an unprecedented rate, and the ability to use the data to improve how we work, play, and live is revolutionary (Lane & Finsel, 2014).

The use of data in higher education evolved from simple data collection to data mining of big data to newly emerging predictive models that focus on student success. Since the 1980s, the higher education sector has spent hundreds of millions of dollars on administrative technologies to improve access to timely information (Goldstein & Katz, 2005). The practice of data collection in higher education surged in the mid-1990s with the arrival of the internet (Baepler & Murdoch, 2010). Institutions no longer lack the ability to capture, distribute, and manipulate data. Now institutions are focusing on big data by applying tools and techniques to analyze those large sets of data they collect.

Big data promises to turn complex, often unstructured data into actionable information. Although big data and analytics are oftentimes referred to as one concept, analytics refers to the tools and processes used to analyze the big data (Daniel, 2017). Analytics are software tools, machine-learning techniques, and algorithms used for capturing, processing, indexing, storing, analyzing, and visualizing data (Daniel, 2017). Daniel (2015) described three broad analytic models that can be developed from big data in higher education: descriptive, predictive, and prescriptive. Descriptive models come from transactional and interactional data about teaching and learning and can be used to identify trends such as student enrollment, graduation rates, and patterns that can help improve student learning (Daniel, 2015; Daniel, 2017). Predictive models allow institutions to discover relationships in data that might not be evident in descriptive models, such as the relationship between demographics and completion rates. Predictive models aim to predict future outcomes by looking into trends and associations to identify potential risks or opportunities. They enable institutions to identify students at risk of failing and to intervene early (Daniel, 2015; Daniel, 2017). Prescriptive models use both descriptive and predictive

models to help institutions assess their current circumstances and make data-informed choices based on valid and consistent predictions (Daniel, 2015; Daniel, 2017).

Big data has heightened the attention on data-driven decision making in higher education institutions. Through the use of statistics and computer software, institutions are able to discover patterns and other meaningful information that aid in making decisions at all levels of the institution. Daniel and Butson (2013) proposed a conceptual framework to put big data in the context of higher education. They described the use of big data in higher education through four dimensions as a way to connect to siloed data systems: institutional analytics, informational technology analytics, learning analytics, and academic analytics (Daniel, 2105; Daniel, 2017; Daniel & Butson, 2013). Institutional analytics refer to a variety of operational data that can be analyzed to help make effective decisions about improvements at the institutional level. Institutional analytics include assessment policy analytics, instructional analytics, and structural analytics. Institutional analytics allow institutions to make timely data-driven decisions across all departments and divisions (Daniel, 2015; Daniel, 2017; Daniel & Butson, 2013). Information technology analytics aim at integrating data from multiple systems (student information systems, learning management systems, and alumni systems) in order to reveal the barriers to student access and usability, and to evaluate any attempts at intervention. Information technology analytics cover usage and performance data relating to institutional use of technology services, developing data standards, tools, processes, organizational synergies, and policies (Daniel, 2015; Daniel, 2017; Daniel & Butson, 2013). Learning analytics refers to the measurement, collection and analysis, and reporting of data about learners and their contexts. Learning analytics is undertaken more at the teaching and learning level of an institution and is largely concerned with improving learner success (Daniel, 2015; Daniel, 2017; Daniel & Butson, 2013). Academic

analytics provide overall information about what is happening in a specific program and how to address performance challenges. Academic analytics combine large data sets with statistical techniques and predictive modelling to improve decision making, and can be used to address matters of retention, attrition, and early warning intervention (Daniel, 2015; Daniel, 2017; Daniel & Butson, 2013). The two dimensions that directly impact the work of academic advisors are learning analytics and academic analytics. Those two dimensions use big data to specifically improve learner success by allowing advisors to intervene and assist students at the first signs of academically at-risk behaviors.

Big data allows institutions to track the activities of students in real time from knowing where they eat using their identification card to how often a student accesses course material through online learning management systems. All of this information can be used to predict barriers to success, customize learning experiences, provide real-time interventions, and create student success models (Lane & Finsel, 2014).

Predictive Analytics

The use of data to predict patterns and trends is nothing new. Corporations such as Target, Walmart, Netflix, and Amazon use predictive analytics to personalize coupons, predict the amount of Pop-Tarts that will sell during hurricane season, make personalized recommendations about what movie customers might enjoy next, and suggest products the customer would like based on shopping history (Lane & Finsel, 2014). Higher education is a late adopter of predictive analytics since it has been used in other industries for many years to assess consumer behavior (Eduventures, 2013).

Predictive analytics is an area of statistical analysis that reveals relationships and patterns from large amounts of historical data (big data) that is used to identify the likelihood of future

outcomes (Daniel, 2015; Eduventures, 2013; Wagner & Longanecker, 2016). Predictive analytics aims at estimating the likelihood of future events by looking into trends and identifying associations about related issues and identifying any risks or opportunities in the future (Daniel, 2015). Predictive analytics can be used throughout the university to inform decisions and outcomes in areas such as advancement, residential life, academic affairs, and student success. Institutions of higher education are beginning to use predictive analytics to inform recruitment efforts, improve student learning outcomes, increase retention and graduation rates, enhance faculty hiring, determine long-term viability of majors, predict employment paths, explore admissions standards, guide capital improvements, and advance academic advising among others (Eduventures, 2013; Fenwick & Edwards, 2016). The use of predictive analytics allows faculty, administrators, and staff to make more informed and faster decisions. It also helps institutions demonstrate success in key areas for accrediting agencies, the federal government, and state legislatures. The use of predictive analytics is attempting to move higher education institutions from a reactive and retrospective use of the data to being able to make detailed predictions of the future (Denley, 2014).

Since student success and retention is a priority for higher education, institutions are beginning to use predictive analytics as a means of improving graduation rates. There have been thousands of published research studies on student retention and success. There are numerous studies supporting that prior academic ability, college admission test scores, high school GPA, race, gender, and socioeconomic status all are important factors leading to student success and retention (Raju & Shumacker, 2015). However, these factors do not alone predict student success and retention. Predictive analytics rely on a long history of data that allow institutions to anticipate future opportunities or barriers to success by finding students who are most at risk and

developing steps to intervene in a timely manner (Boerner, 2015; Eduventures, 2013; Wagner & Longanecker, 2016). Predictive analytics provide real-time data on students' needs, interactions, experiences, engagement, outcomes, and more (Rios-Aguilar, 2015).

Companies have recently started to develop technological programs that analyze an institution's big data through the use of predictive analytics. These technological programs are utilized mostly in academic advising as a way to improve student persistence and graduation. This study refers to those technological programs that use big data and predictive analytics as academic analytics tools, which is explored in the next section.

Academic Analytics Tools

The use of technology in academic advising plays an important role by including multiple tools that provide accurate information in a very efficient way. Until recently the tools used in academic advising only provided the information the advisors needed to analyze and draw conclusions based on their professional expertise. Recently, technologies have emerged that offer robust information delivery and data analysis capabilities for student support services. These academic analytics systems seek to improve degree attainment by facilitating both intra-institutional coordination of student supports and data-driven academic decision-making for advisors and students (Kalamkarian & Karp, 2017). There are several vendors that offer academic analytics systems that provide predictive models, metrics, and assessments that summarize student learning, engagement, and interaction (Boerner, 2015; Eduventures, 2013 Rios-Aguilar, 2015). These systems are being used by faculty and staff to identify students at risk of not persisting and to implement interventions. In practice, academic advisors are primarily the ones implementing interventions and providing the appropriate levels of support based on the predictive analytics (Boerner, 2015; Eduventures, 2013).

As of 2017, there were 180 companies providing technology solutions to support student success and increase retention (Tyton Partners, 2017b). The technology solutions are divided into 12 distinct product categories and four workflow areas (see Figure 2). Of the 180 companies, 80% of them only offered one or two products out of the 12 categories and 20% of them offered three or more. There were no companies that offered a solution over all product categories (Tyton Partners, 2017b).

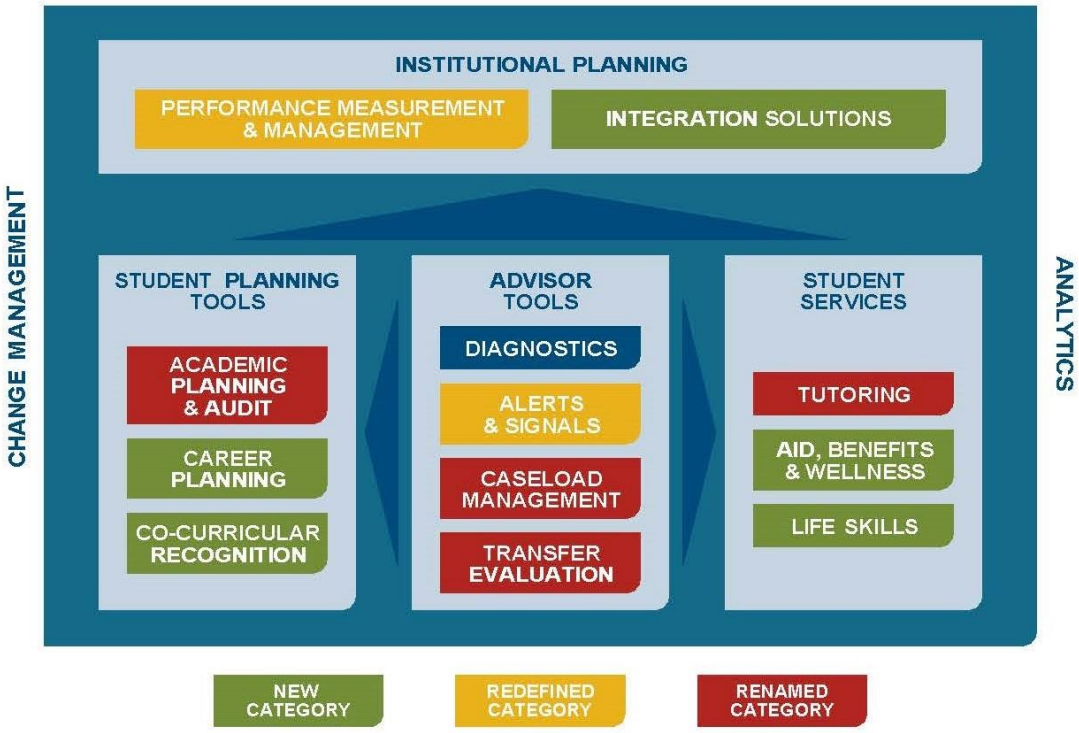

Figure 2. **Student success technologies are segmented into 12 distinct product categories across four workflow areas.** New Category, Refined Category, and Renamed Category are updates from the 2015 version Tyton published. Tyton Partners. (2017b). *Driving Toward A Degree: The Evolution of Academic Advising in Higher Education: Part 2: The Supplier Landscape.* Tyton Partners Consulting LLC.

The demand from institutions for academic analytics tools is high. The most established and well-defined academic analytics tools include the product categories of academic planning and audit, diagnostics, alerts and signals, and tutoring (Tyton Partners, 2017b). Emerging academic analytics tools include caseload management; career planning; transfer evaluation; aid,

benefits, and wellness; and life skills (Tyton Partners, 2017b). Emerging products continue to evolve as providers add distinctive features and new companies enter the market. Products in the early stages of development are performance measurement and management, integration solutions, and co-curricular recognition (Tyton Partners, 2017b). Early stage products are rapidly evolving as new suppliers continue to enter the market with unique offerings. Technology advancements are outpacing higher education's ability to implement these tools and see the results of their use on retention and persistence.

Amey State University (ASU) implemented an academic analytics tool, the Student Success System (SSS), in May of 2016 according to a blog post by the provost. The next section discusses the specifics of the Student Success System.

Student Success System

The Student Success System (SSS) is an academic analytics tool that combines technology, research, case management, and predictive analytics to help institutions positively improve retention and degree completion outcomes for students according to the user guide. The SSS combines technology with process improvements to identify student actions that could affect retention, graduation, and timely progress to a degree. An ASU technology website explains that the implementation of the SSS at ASU is one part of a broader initiative to transform student success at the institution. The SSS is primarily used by academic advisors at ASU to schedule appointments with students and to pull student data and information that is helpful in intervening before a student is in academic trouble.

The Student Success System uses a proprietary predictive model that identifies at-risk students and isolates systemic barriers to degree completion according to a website about the SSS. The SSS uses ten years of ASU data to identify student performance patterns that influence

persistence and graduation rates. The data is analyzed to create a predictive model specifically for ASU and the results of the analysis are used to create success markers that correlate with success in a certain degree program. Academic colleges reviewed the data and identified specific success markers for each major, unit, and college to be used in the predictive model. Examples of success markers are designating performance at or above a specific grade in a critical course, and designating that a critical course should be passed by a specific semester. The results of the predictive model are provided to academic advisors through reports in the SSS at the college, program, and course level. The tool has limitations though, in that it is not able to consider repeat credits, test scores, or transfer credit as success markers.

A website about the SSS explains that the Student Success System is designed around a three-stage model: triage, assess, and intervene. The triage stage allows academic advisors to proactively find students in need of intervention instead of reactively reaching out once the student is in academic trouble or waiting for the student to reach out to the advisor. The SSS provides advanced searches, early alerts, and other risk identifiers to assist advisors in triaging students academically at risk. The assess stage provides advisors with information about key trends such as GPA, credit accumulation, and student performance that indicate success. The advisors find this information by viewing a student's individual profile which highlights the data to indicate issues such as a declining GPA or poor performance in a key course. The visual data allows academic advisors to assess a student's record and makes it easier to suggest solutions to the issues. The intervene stage provides academic advisors several ways to contact students in academic trouble to provide assistance and suggestions for improvement. The SSS offers a way to contact students through email and text messages, to document the interventions through notes, and to set reminders for follow-up with the student. The three-stage model provides

academic advisors the means to identify, reach, and monitor students all while having the ability to determine the effectiveness of the interventions.

At the center of the Student Success System are the student profiles. The student profile is a set of information about the student and their academic performance at the institution. The profile includes details similar to a limited student information system profile; however the focus of the information center is on proactively identifying students at risk of not graduating in their major and providing tools to support the student. The Overview tab shows an academic summary of the student including major, GPA, total number of credits, number of Ds and Fs received, number of repeat courses and withdrawals, the risk indicator, and missed number of success markers (see Figure 3). Advisors can also see how many staff alerts the student received, staff working with the student, and if the student has received any support on campus. The Success Progress tab gives detailed information about the student's performance against the success markers established for that major. The Reports/Notes tab shows information about cases, alerts, progress reports, advisor and tutor reports, and notes. The Class Info tab displays the student's schedule for the current term and also shows a term-by-term view of the student's academic record. The Major Explorer tab uses the advising application's predictive analytics model to generate information about whether a course of study is a good fit for the student. The More tab gives the advisor access to the student's calendar, study hall statistics, future, past, and no-show appointments, and conversations. The student profile also allows an advisor to message the student through the system, add a note to the student, schedule an appointment, and issue an alert. Essentially, the student profile in the SSS should be the primary tool used by the academic advisors to triage, assess, and intervene if students are at-risk academically.

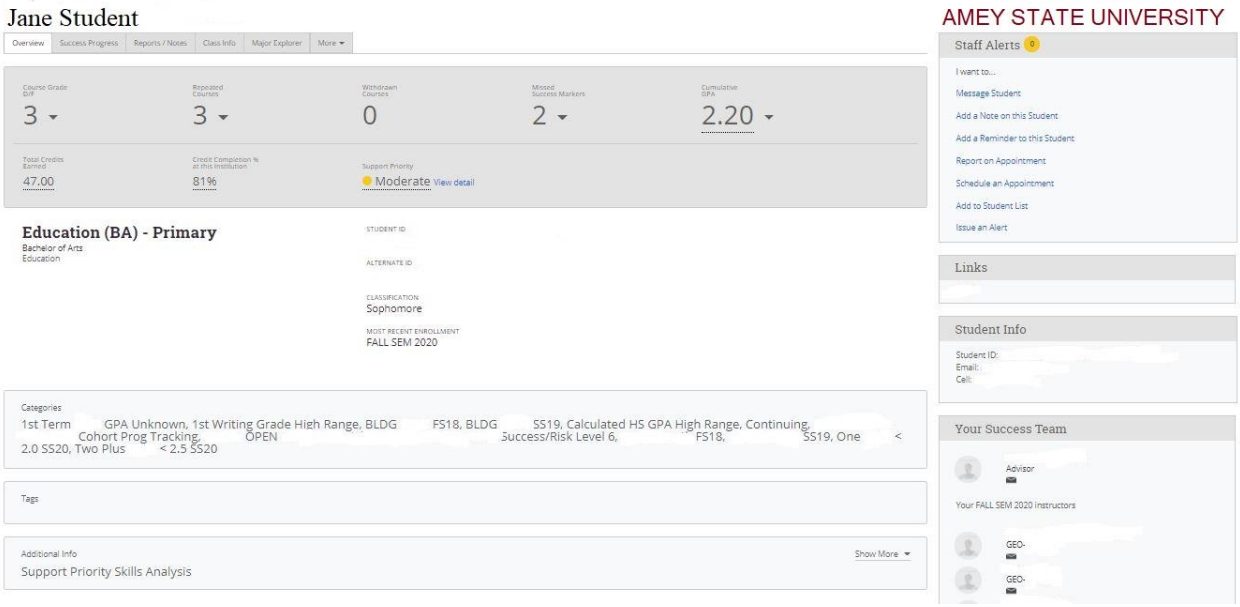

Figure 3. **Student Success System Student Profile.** The student profile is a set of information about the student and their academic performance at the institution. Screenshot of the Student Success System at Amey State University.

Summary

This section presents how higher education institutions have come to use academic analytics tools as one solution to improving student success through understanding the importance of big data and predictive analytics. There is a strong focus on data-driven decision making in higher education and academic analytics tools such as the Student Success System play a large role in determining what data is being used and how it is being analyzed. This study focuses on how academic advisors perceive the impact on academic advising practice due to the implementation of a specific academic analytics tool. The study uses the Academic Advising Core Competencies as the conceptual framework. The next section explores the Academic Advising Core Competencies.

Conceptual Framework: Academic Advising Core Competencies

NACADA (2017a) developed the Academic Advising Core Competencies to identify the broad range of understanding, knowledge, and skills that are the foundation of academic advising. The model's purpose is to guide the professional development of academic advisors and advising. It can be used for self-assessment and evaluation, to clarify academic advising roles and responsibilities, to identify strengths and areas for staff development, and to support curriculum development and establish learning priorities (NACADA, 2017a). Its intended users are primary role and faculty advisors; advising administrators, supervisors, managers, and mentors; and learning professionals, trainers, and researchers (NACADA, 2017a). Three content components (Conceptual, Informational, and Relational) serve as the foundational elements for effective advising practice, and within these components lie the 20 core competencies of academic advising which are described next (NACADA, 2017a).

Conceptual Component

The Conceptual component consists of the ideas that academic advisors must understand and apply in practice to meet their advising objectives (Campbell & McWilliams, 2016; Folsom, 2015; NACADA, 2017a). Academic advisors must have an understanding of the history of the field of advising, theories adapted to advising from student development and other fields, and the ethics that guide practice (Folsom, 2015).

The Conceptual component has six core competencies: (1) the history and role of academic advising in higher education; (2) NACADA's Core Values of Academic Advising; (3) theory relevant to academic advising; (4) academic advising approaches and strategies; (5) expected outcomes of academic advising; and (6) how equitable and inclusive environments are created and maintained (NACADA, 2017a). Each core competency provides guidance as to how

it is important to the practice of academic advising. The Conceptual component provides the context for the delivery of academic advising. It covers the ideas and theories that advisors must understand to effectively advise their students (NACADA, 2017a).

Informational Component

The Informational component of academic advising consists of the facts and knowledge of the institution and programs that academic advisors must master in order to guide advisees through the completion of their degree (Campbell & McWilliams, 2016; Folsom, 2015; NACADA, 2017a). Managing and delivering information is a critical aspect of academic advising. Academic advisors must grasp the ways academic advising is organized and delivered on their campus; know their campus definition, mission, and vision for academic advising, and commit to a philosophy of academic advising for themselves and their advising units (Campbell & McWilliams, 2016; Folsom, 2015). Academic advisors must also know information pertaining to applicable laws, policies, procedures, and referral resources both on and off campus such as the Family Educational Rights and Privacy Act, transfer procedures, and legal services (Campbell & McWilliams, 2016). Information about student needs such as academic progress, living conditions, and transition issues is critical for academic advisors in order to connect students to the necessary support services. Academic advisors must develop a deep understanding of their own innate viewpoints and preconceptions, as well as their personal values, stressors, and levels of commitment (Campbell & McWilliams, 2016).

The Informational component has seven core competencies: (1) institution specific history, mission, vision, values, and culture; (2) curriculum, degree programs, and other academic requirements and options; (3) institution specific policies, procedures, rules, and regulations; (4) legal guidelines of advising practice, including privacy regulations and

confidentiality; (5) the characteristics, needs, and experiences of major and emerging student populations; (6) campus and community resources that support student success; and (7) information technology applicable to relevant advising roles (NACADA, 2017a). The Informational component provides the substance of academic advising. It covers the knowledge advisors must gain to be able to guide the students at their institution (NACADA, 2017a).

Relational Component

The Relational component encompasses the skills academic advisors must have to convey concepts and information to their advisees (Campbell & McWilliams, 2016; Folsom, 2015; NACADA, 2017a). Academic advisors must develop strong communicative skills and interpersonal approaches to establish advising relationships. These skills are critical to effective academic advising because the nature of the relationship forged between advisor and student directly affects the nature of advising interactions (Folsom et al, 2015; NACADA, 2017a). These skills are especially important when delivering difficult news to students. Advisors must apply relational skills in order to maintain trust with the student and integrity in the advising relationship (Folsom et al, 2015).

The Relational component has seven core competencies: (1) articulate a personal philosophy of academic advising; (2) create rapport and build academic advising relationships; (3) communicate in an inclusive and respectful manner; (4) plan and conduct successful advising interactions; (5) promote student understanding of the logic and purpose of the curriculum; (6) facilitate problem solving, decision-making, meaning-making, planning, and goal setting; and (7) engage in on-going assessment and development of self and the advising practice (NACADA, 2017a). The Relational component provides the skills that enable academic advisors to convey

the concepts and information from the other two components to their advisees (NACADA, 2017a).

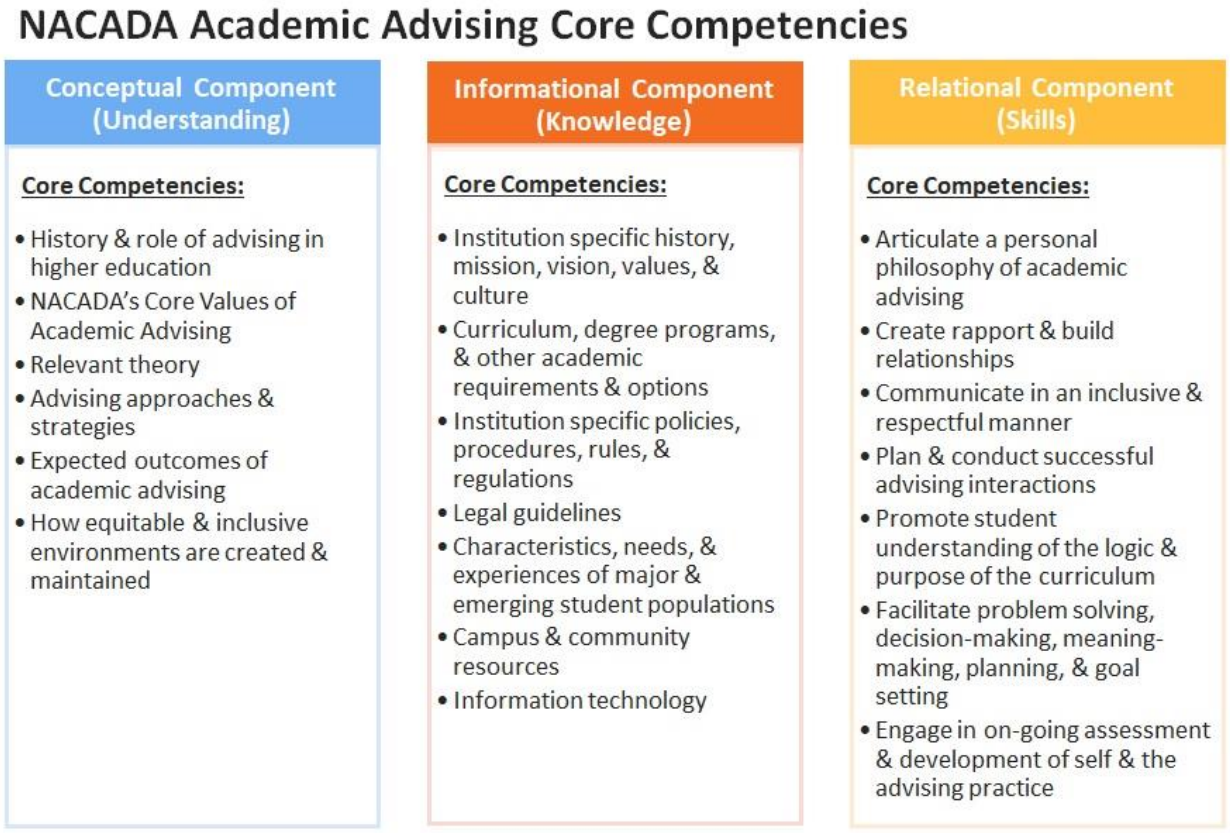

Figure 4. **Academic Advising Core Competencies Model.** Academic advisors must understand all three components (Conceptual, Informational, and Relational), and be able to synthesize and apply them in academic advising interactions. NACADA: The Global Community for Academic Advising. (2017a). *Academic Advising Core Competencies Guide* (Pocket Guide, PG23). ISBN# 978-939213-31-0.

Summary

The Academic Advising Core Competencies Model identifies the broad range of understanding, knowledge, and skills that are the foundation of academic advising (NACADA, 2017a). As Past President of NACADA Wes Habley stated, "without understanding (conceptual elements), there is not context for the delivery of services. Without information, there is no substance to advising. And, without personal skills (relational), the quality of the advisee/advisor

relationship is left to chance" (NACADA, 2017a, p. 4). The 20 core competencies housed within a framework of three component areas demonstrates the complexity involved in the work of academic advising. However, the model does not acknowledge that academic advising is susceptible to forces that can change the practice of academic advising and possibly the competencies required to move forward as a field. For this dissertation, the core competencies model provides a framework to understand the practice of academic advising. The three component areas (Conceptual, Informational, and Relational) along with the competencies frame the questions required to understand if the practice of academic advising is changing because of the introduction of academic analytics.

CHAPTER 3: METHODS

Problem and Research Questions

Institutions often make the decision of using a new academic analytics tool with only minor knowledge and consideration of how it will impact the work of academic advisors who will be required to use it daily. Academic analytics is meant to make advising and planning more efficient in order to serve the students who need the most support and ultimately increase student success and retention; however, the technology might disrupt, for good or bad, the established academic advising workflow in ways that we do not yet understand (Tyton Partners, 2015). The purpose of this study is to investigate how academic advisors perceive their practice of academic advising through the use of an academic analytics tool, the Student Success System (SSS).

The following research questions guided the study:

- How do academic advisors' perceive their practice of academic advising?
- What is the academic advisors' perceived impact of the Student Success System (SSS) at Amey State University (ASU) on the way they practice academic advising?
    - What is the academic advisors' perceived impact of the SSS at ASU on what they need to understand to meet advising objectives?
    - What is the academic advisors' perceived impact of the SSS at ASU on what they need to know in order to guide advisees?
    - What is the academic advisors' perceived impact of the SSS at ASU on the skills they need to have to convey concepts and information to their advisees?

Research Design

Constructivism is an epistemology that asserts that knowledge or understanding is created by the individual through the interaction of what they already believe and the ideas,

events, and activities with which they come into contact (Jones, Torres, & Arminio, 2006; Ultinir, 2012). Constructivists do not believe there is one single truth or reality, but that individuals create their own truths and reality through their interactions with their environment (Glesne, 2011). Research in this paradigm aims to understand a phenomenon through others' interpretations (Glesne, 2011). It is important for the researcher to focus on the specific context of the phenomenon being studied in order to understand the historical and cultural aspects that influence the participants' meaning making (Creswell, 2014). Since the goal of constructivism is to understand and interpret a phenomenon from the perspectives of others it follows that the research method is qualitative in nature.

This particular study seeks to understand how multiple academic advisors at one institution perceive academic advising practice in the context of changing technology tools. Since there is little other research that seeks to understand the practice of academic advising from advisors' perspective this study uses an exploratory qualitative methodology. The data collection strategies include one-on-one, in-depth, broad, general, and open-ended interviews so the participants can construct the meaning of the phenomenon (Creswell, 2014). I, as the researcher, recognize that my background and experiences shape my interpretation and will acknowledge in the researcher positionality section of this chapter how my meaning making is a product of my personal, cultural, and historical experiences (Creswell, 2014; Glesne, 2011). This study uses inductive reasoning influenced by theory to reach conclusions. The theory or conceptual framework for this study is the Academic Advising Core Competencies. The study does not seek to generalize to other contexts, to contribute to the broader phenomenon of impact of academic analytics tools, or to develop new theory. This study deeply seeks to understand

how academic advisors at Amey State University perceive academic advising practice in the context of changing technology tools.

Study Context

In an effort to focus the inquiry, participants are all academic advisors from Amey State University, a large, four-year, public, research one institution with a high population of undergraduate students (Carnegie Classification, 2018). By selecting participants that are all academic advisors at Amey State University the study examines how the integration of a specific academic analytics platform, the Student Success System, has affected the work of academic advisors at a large institution. The names of the institution, academic analytics tool, and participants have been changed in order to maintain anonymity.

My selection of Amey State University as the sole institution for this study is more than a matter of convenience. I began this study with an understanding of the campus culture, the structure of academic advising, and the institution's expectations for the use of the SSS in academic advising. My experiences at ASU are important in determining if and/or how the practice of academic advising has been impacted by the implementation of the SSS. My knowledge about the complex structure of academic advising at ASU is also significant when selecting participants for the study to ensure the context of advising is similar when examining the practice of the profession. Since this study is also not seeking to generalize to other contexts it is important to keep the study focused at one institution.

Academic Advising at Amey State University

Academic advising at ASU is organized as a mixed model according to ASU's academic advisor manual. Based on the definitions of organizational models for academic advising explained in the literature review, ASU's overall advising structure is decentralized and utilizes

the satellite and shared models of advising. Central leadership provides coordination for advisor professional development, resources, technology, community-building, communication, and advising policy, but academic advising occurs independently in each of the academic colleges. The academic colleges provide advising independently to allow advisors to specialize in their major, certificate, program, or area of expertise, leading to better guidance on schedule planning, academic support, career preparation, and staying on track to graduate (Pardee, 2000). The term "mixed model" used by ASU most likely refers to the fact that each academic subunit's advising structure is different and based on the needs of its undergraduate students. Most of the academic subunits at ASU also utilize a satellite model, where the coordination of advising comes from a central office but the academic advisors are dispersed and housed within the academic departments. There are only a few academic subunits at ASU that utilize a centralized model, where the coordination of advising and the academic advisors are all located within one centralized office.

There are 15 academic units that advise undergraduate students at ASU. Of the 15 academic units, 14 of them are academic colleges that grant undergraduate degrees and one works primarily with undecided or exploratory students. According to the academic catalog, ASU offers a liberal general education curriculum that consists of coursework in the three core knowledge areas: arts and humanities; biological and physical sciences; and the social, behavioral, and economic sciences. Therefore, ASU considers the colleges that offer coursework for the general education requirements as the core colleges and those are the colleges of arts & humanities, natural science, and social science. The three core colleges all structure their academic advising in the satellite model. The core colleges also do not have secondary admission requirements for their majors that students must apply for or meet requirements in order to

pursue them. Similarly, the college of agriculture structures their academic advising in the satellite model and, for the most part, does not have secondary admission requirements for their majors. According to the academic advisor directory, the three core colleges and agriculture have a combined total of 82 academic advisors. It is not known how many of those are professional academic advisors as defined in the next paragraph. Due to their similarities, participants are all from the three core colleges and agriculture.

Professional academic advisors at ASU are categorized as academic specialists and are considered to be academic staff members according to ASU's advising handbook. Academic specialists are identified by one of three functional areas in which the majority of their responsibilities fall. Advising/teaching/curriculum development is the functional area that academic advisors fall into at ASU. Advising specialists devote 50% or more of their time to advising students regarding curricular and other academically related matters. The distinction between academic advisor/specialists and other kinds of advisors at ASU is determined by the reporting structure of the unit where the advisor works. Appointment as an academic specialist is limited to academic units that report to the provost. This study focuses solely on professional academic advisors, also known as advising academic specialists.

Participant Selection

Purposeful sampling was used in this study to identify participants. In qualitative research, purposeful sampling is utilized to ensure selection of information-rich cases that have the greatest possibility for producing understanding about the phenomenon of interest (Jones, Torres, & Arminio, 2006). Participants for this study are all current academic advisors at ASU. Although, other institutions have implemented the use of the SSS as an academic analytics tool they may not use the same functions or have the same expectations for use as ASU. Therefore, it

is important to limit this study to participants at one institution to gain an understanding of the impact the SSS has on the practice of academic advising. All of the participants are also professional academic advisors (i.e., academic specialists with the advising functional area designation who spend 50% or more of their time advising) whose primary responsibility is academic advising for undergraduate students at ASU. Limiting this study to only professional advisors removes confusion regarding what constitutes advising practice. Faculty advisors and advising administrators may blur the lines between what practice they perform for academic advising and faculty or administrative responsibilities. In order to get an in-depth understanding of advising practice and how the SSS has impacted it, all advisors are from one of four colleges (social science, arts and humanities, natural science, or agriculture). All of the core colleges and agriculture have a satellite model advising structure, therefore advising practices may be more similar to each other than that of centralized units. Finally, all participants have been academic advisors at ASU since at least 2013 because they would have experienced what advising practice was like before, during, and after the implementation of the SSS.

In order to ensure that all participants met the above criteria I began my selection by sending an email to all of the academic advisors in the core colleges and agriculture at ASU as listed in the academic advisor directory and asked those interested in participating in the study to complete a brief initial questionnaire (see Appendices A and B). The initial questionnaire asked them background information and questions regarding the criteria listed above. Once I got the results of the initial questionnaire I created a tentative interview schedule for those participants that met all the criteria. The participants that met all criteria received a follow-up email to schedule a time for an interview (see Appendix C). Participant information and the consent form was attached to the email to schedule the interview (see Appendix D). The total number of

participants sought was 10-12 or as many as needed to reach saturation in the data (Jones, Torres, & Arminio, 2006). A total of 15 academic advisors completed the initial questionnaire and 12 of them met all of the criteria for selection. The participants' identities are not revealed during this study. When participants are referred to it is through the use of pseudonyms to protect their identities. The demographics of the professional academic advisors who participated in the study are presented in the tables and information that follows.

Table 1:

Gender Breakdown of Academic Advisors

Gender	*N*	Percentage
Female	8	66.7%
Male	3	25.0%
No Response	1	8.3%

Table 2:

Race/Ethnicity Breakdown of Academic Advisors

Race/Ethnicity	*N*	Percentage
White	10	83.4%
Black/African American	1	8.3%
Hispanic/Latino	1	8.3%
Asian	0	0%
American Indian/Alaskan Native	0	0%
Hawaiian/Other Pacifica Islander	0	0%

Table 3:

College Membership Breakdown of Academic Advisors

College	*N*	Percentage
Social Science	4	33.3%
Arts and Humanities	3	25.0%
Natural Science	3	25.0%
Agriculture	2	16.7%

Table 4:

Percentage of Job is Academic Advising

Percentage of Advising	*N*	Percentage
91-100%	6	50.0%
76-90%	5	41.7%
51-75%	1	8.3%

Table 5:

Work Appointment of Academic Advisors

Appointment	*N*	Percentage
12-month full-time	8	66.70%
9-month full-time	2	16.65%
12-month part-time	2	16.65%

- Participants ranged in age from 33 to 60 years old, with an average age of 46.8 years.
- Participants had worked as a professional academic advisor at ASU from 5 to 21 years with an average of 10.2 years.
- The participants indicated that the number of students they advised during the last academic year ranged from 116 to 1000+ with an average of 520.5 students.
- The highest level of education of the 12 participants were 1 had a Bachelor's degree, 10 had a Master's degree, and 1 had a Ph.D.

Degrees of the participants varied in terms of area of study:

- 3 were in Higher Education and Student Affairs
- 2 were in Social Work and Counseling
- 4 were in a STEM field
- 1 was in a World Language
- 1 was in Business
- 1 was in Advertising

Data Collection

The data for the study was collected in November and December 2018. It is important to note that the data were collected before the COVID-19 pandemic since advising practice may be different mid- and/or post-pandemic. This dissertation is being submitted mid-pandemic so long-lasting changes to advising practice are yet to be known. The general design of the study was face-to-face, one-on-one, and in-person qualitative interviews using a semi-structured interview guide (see Appendix E). Interviews were semi-structured to allow flexibility for probing follow-up questions and to explore additional issues by both the interviewer and interviewee as they arose (Glesne, 2016). I only asked probes and points of clarification in order to allow the

participants to share as freely as possible. The questions asked the participants about their practice of academic advising at ASU, which consists of the roles and job responsibilities they perform on a daily basis. The questions began with having the advisors explain their typical work day, exploring how they prepare for appointments, and how they conduct advising sessions before specifically asking about technology use and their perceptions of the SSS. Since the main goal was to understand the advisors' perceived impact of the SSS on academic advising practice at ASU it was important to allow them to state their views on the SSS organically without intentionally or unintentionally leading them. Therefore, having them describe their typical day would naturally include how they use technology and I then probed and asked follow-up questions.

The interviews ranged in length from 40 minutes to 1 hour and 15 minutes with the average interview lasting 55 minutes and all took place in the participants' offices at ASU. The interviews were all audio recorded and later transcribed by a transcription company in an effort to save time and allow me to begin data analysis. After the interviews were transcribed I compared them against the audio recordings for accuracy. Additionally, I took descriptive field notes both during and immediately following the interviews to enhance the richness of the data (Glesne, 2016).

Pilot Study

A pilot study was conducted to test the interview protocol before proceeding. Three professional academic advisors at ASU who met all of the criteria were asked to participate. I urged the pilot participants to think critically about the interview questions and their suitability to the research questions (Glesne, 2016). I conducted the pilot study just as I planned to conduct the primary study. The pilot participants were given the same information about the study ahead of

time and completed the initial screening questionnaire and participated in the interview. After the interview I sent the pilot participants the interview questions and asked for feedback. I then made any adjustments needed to the interview protocol before conducting the primary study.

Data Analysis

The data analysis for the study consisted of several phases of coding. Due to the constructivist epistemological stance of this study the coding methods were selected to reveal the participants' actions, processes, and perceptions within the data (Saldana, 2016). This study used Attribute Coding, Concept Coding, Pattern Coding, and Structural Coding. Analytic memos were completed throughout the coding process as a way to continuously think critically about the coding process. All of the coding methods and analytic memos are described next.

I began my analysis of the data by organizing the information from the initial questionnaire each participant completed using Attribute Coding. Attribute Coding is the documentation of basic descriptive information such as the fieldwork setting, participant characteristics or demographics, data format, time frame, and other variables of interest (Saldana, 2016). I created a spreadsheet and listed all of the participants next to each other to easily compare the data and listed the following descriptive information for each participant: pseudonym, advising appointment, the percentage of their job is advising, when they began their advising role at ASU, the college they advise for, highest level of education, degree and discipline, gender, race/ethnicity, and age. Attribute Coding provides fundamental participant information and contexts for analysis and interpretation. Through Attribute Coding unanticipated patterns of interrelationship, and influences and affects may emerge from selected characteristic combinations (Saldana, 2016). The Attribute Coding was critical because I referred to the spreadsheet often to look for patterns and relationships throughout the data analysis. Therefore,

this was an important first step in preparing and categorizing interview data for further detailed analysis at a later time.

I next repeatedly read through the interview transcripts and began assigning Concept Codes to segments of the transcripts. Concept Coding assigns macro level meaning to data as a series of codes or categories (Saldana, 2016). As I read and re-read the transcripts I highlighted the segments of the transcripts and assigned concepts that I saw emerging. That way it was easy to go back to the transcripts to find the concepts and transcript sections when it came time for further analysis. A concept is a word or short phrase that symbolically suggests an idea and is highly interpretive (Saldana, 2016). For that reason I used the research questions and the conceptual framework to guide me in the development of the concepts (Saldana, 2016). Some concepts that emerged were advisors being overworked and overwhelmed, student success, perceptions of advising caseloads, attitudes towards technology use, and others. I repeatedly read through the interview transcripts until I felt I had assigned Concept Codes to everything pertinent to the study.

I then condensed the concept codes into the major themes of the study through Pattern Coding. Pattern Coding is a way of grouping concept codes into a smaller number of categories, themes, or concepts. Pattern codes are explanatory and inferential codes that identify a developing theme, configuration, or explanation (Saldana, 2016). I first created a list of all of the concept codes and then grouped similar concepts into broader themes. Once the study themes emerged I created a large spreadsheet and listed the themes across the top and each participant along the side then filled in the boxes with the transcripts sections from the participants that matched the theme. This spreadsheet allowed me to visually see all of the themes, transcript

sections, and participants and helped me determine which themes were worth exploring further for this particular study.

Finally, I labeled each theme according to a research question which are based on the components of the conceptual framework, the NACADA Academic Advising Core Competencies, using Structural Coding. Structural Coding is question-based coding that labels and indexes segments of data related to a specific research question. This method codes and categorizes the data to investigate commonalities, differences, and relationships in comparable data segments (Saldana, 2016). I took each theme on my large spreadsheet and color-coded it according to the framework component it related to. For example, all themes that matched the Conceptual Component were changed to blue, Informational Component to orange, and the Relational Component to yellow. Then I went one step further and matched transcript segments to the core competencies within each component. Again I used color-coding to indicate which segment of the data went with each competency. For example, in the Informational Component (orange) the data matched two of the competencies that fall under that component. I used different shades of orange to indicate which competency matched the data. I did the same for all of the themes. This final step in organizing and analyzing the data allowed me to begin writing up the findings.

Throughout data collection and the coding process I took analytic memos to aid in the analysis of the data. Analytic memos are the researcher's written reflections on the coding processes, code choices, the progress of the inquiry process, and the developing patterns, categories, themes and concepts in the data (Saldana, 2016). The objective of memo writing is for the researcher to reflect and think critically about what they are doing and why (Saldana, 2016).

Trustworthiness

Trustworthiness of a study is about alertness to the quality and rigor of a study, and about what criteria can be used to assess how well the research was conducted (Glesne, 2016). There are eight primary strategies that contribute to the trustworthiness of a study (Creswell, 2014; Glesne, 2016). This study employs three of the strategies to ensure the trustworthiness of the study: peer review, clarification of the researcher's bias and subjectivity, and prolonged time in the field (Creswell, 2014; Glesne, 2016).

The first method that was used to ensure trustworthiness is peer review. Peer review is a strategy where the research is examined by someone other than the researcher and they ask questions about the qualitative study (Creswell, 2014). Two individuals familiar with academic advising at ASU but do not work in the field reviewed, asked questions, and gave feedback about the study. The second method used is clarification of the researcher's bias and subjectivity. This includes self-reflections from the researcher about how their background shaped the interpretation of the findings and is discussed in the next section (Creswell, 2014; Glesne, 2016). Lastly, as described in the researcher positionality section, I spent prolonged time in the field (Creswell, 2014; Glesne, 2016). I have been in the academic advising profession for nearly 15 years and a majority of that time has been working at ASU. Therefore, I have an in-depth understanding of the phenomenon of the study. The utilization of these strategies ensure trustworthiness of the study by demonstrating the quality and rigor in which the study was conducted.

Researcher Positionality

The researcher's positionality is important because it describes the relationship between the researcher and the participants and the researcher and the topic (Jones et al, 2006). As the

researcher it is important that I disclose my positionality to this investigation. I currently work as an academic advising administrator at Amey State University. In my role I serve as the director of undergraduate advising in one of the colleges. I have worked at ASU for 12 years and was an academic advisor before, during, and after the implementation of the Student Success System. My familiarity with the institution, academic advising, and the academic advisors served me well as a way to foster rapport with the participants, ask appropriate questions, and make meaning of the participant responses. Although there are benefits to my familiarity with ASU, it was important not to allow my experiences and perceptions to bias my understanding of the participants. All of the participants were aware of my experiences in academic advising at the institution.

I have had an interest in the use of technology in academic advising for many years. I have studied the use of technology in education, overseen implementation of new technologies for academic advising in my office, and participated in a working group dedicated to technology use in advising. I served as one of the trainers in my office for the SSS. In that role we learned how the SSS functioned and then trained our colleagues within our office how to use it. Also, during the time of writing this dissertation I chaired a university-wide working group that was dedicated to leveraging technological tools for academic advising in support of improved student success. The working group was also charged with enhancing collaboration amongst academic advisors across campus in an effort to streamline processes and increase transparency of services to enhance the student experience. I recognize that my experiences as an academic advisor at ASU and with the implementation of the Student Success System, and my interest in the use of technology in academic advising influence my interpretation of the results. Therefore, my analytic memos and notes served as a means to attend to issues of bias.

Limitations

All research studies have their limitations and this study is no exception. Since this study only focused on the use of the Student Success System at one institution the findings are limited to ASU alone. My purpose was not to generalize the findings to other institutions, as that is not the purpose of qualitative research. The value of qualitative research lies in the particularity of the findings in a specific context (Creswell, 2014). Another limitation of the study is that there were only 12 participants from four of the colleges at the institution. ASU is a large institution with 15 academic units and roughly 150 academic advisors that advise undergraduate students. Expanding the number of participants and getting representation from more academic units would allow for a deeper understanding of how the advisors perceived the SSS affected their advising practice. In hindsight, I would rethink the interview protocol I used with the participants. I would focus the inquiries more specifically on the practice of advising and ask participants to reflect on how the SSS impacted their daily work. This did not become apparent to me until I was deep into analyzing the data. Although, the interview protocol did work to get the information needed, I believe the data could have been richer if restructured a bit.

Summary

This study seeks to understand how multiple academic advisors at one institution perceive academic advising practice in the context of changing technology tools. The study employed an exploratory qualitative methodology. Participants of the study were all professional academic advisors in the core colleges and agriculture at Amey State University. The data collection strategies included one-on-one, in-depth, broad, general, and open-ended interviews so the participants could construct the meaning of the phenomenon (Creswell, 2014). A pilot study was conducted to test the interview protocol. Data analysis used Attribute Coding, Concept

Coding, Pattern Coding, and Structural Coding as coding methods along with concurrently keeping analytic memos. Several strategies including peer review, clarification of the researcher's bias and subjectivity, and prolonged time in the field were used to ensure trustworthiness of the study. I recognize my own positionality to the study and reflected on how that impacted my interpretation of the findings as the study progressed. Finally, I recognize the limitations of the study being done at only one institution and with a smaller number of representation of the academic advisors on campus.

CHAPTER 4: FINDINGS

The purpose of this dissertation is to explore academic advisors' perceptions of how the use of an academic analytics tool, the Student Success System (SSS), impacted the Conceptual (understanding), Informational (knowledge), and Relational (skills) components of academic advising practice at Amey State University (ASU), a large, four-year, public, research one institution with a high population of undergraduate students (Carnegie Classification, 2018; NACADA, 2017a). The study uses an exploratory qualitative methodology since there is little other research that seeks to understand practice of academic advising from the advisors' perspective. A total of 12 professional academic advisors were interviewed with a semi-structured interview guide (see Appendix E). The interview questions centered on their direct experiences with the practice of academic advising, which consists of the roles and job responsibilities advisors perform on a daily basis, and how their practice was impacted by the integration of the Student Success System (SSS).

The following research questions guided the study:

- How do academic advisors' perceive their practice of academic advising?
- What is the academic advisors' perceived impact of the Student Success System (SSS) at Amey State University (ASU) on the way they practice academic advising?
    - What is the academic advisors' perceived impact of the SSS at ASU on what they need to understand to meet advising objectives?
    - What is the academic advisors' perceived impact of the SSS at ASU on what they need to know in order to guide advisees?
    - What is the academic advisors' perceived impact of the SSS at ASU on the skills they need to have to convey concepts and information to their advisees?

Several themes appeared during data analysis pertaining to the implementation, training, and use of the Student Success System (SSS) at Amey State University (ASU). The main theme that emerged was that the SSS did not or could not perform the functions that were promised by upper administration and therefore, the academic advisors expressed frustration with being required to use it in addition to all of the other technology tools they already use that are more helpful to their advising practice. Because of this, the implementation of the SSS at ASU created only negligible changes in academic advising practice. The SSS was promised to improve completion outcomes of students by allowing academic advisors to be able to triage using early alerts, risk identifiers, and advanced search; to assess by using student profiles that show GPA trend, student performance, and credit accumulation; and to intervene through communicating, setting reminders, and scheduling appointments. However, the unreliable data in the SSS negated the usefulness of the tool. All 12 participants expressed that they only use the SSS for one function and that is as a scheduling system for their advising appointments and walk-in advising times. This particular function in the SSS was intended as a bonus feature to the academic analytics functions of the system, not the primary use.

The findings of this study are informed by the conceptual framework, the NACADA (2017a) Academic Advising Core Competencies. The findings are structured around the three content components of the framework (Conceptual, Informational, and Relational) that serve as the foundational elements for effective advising practice (NACADA, 2017a). Themes from the study are matched to the core competencies within the components in order to demonstrate how the advisors perceived the impact the SSS had on their advising practice.

Conceptual Component

The Conceptual (understanding) component of the NACADA (2017a) Academic Advising Core Competencies provides the context for the delivery of academic advising. In other words, it includes the ideas and theories that advisors must understand to successfully practice advising. These ideas and theories include understanding advising philosophy, theories adapted to advising from student development and other fields, the NACADA seven core values that are most important in guiding advising practice, and legal and ethical issues in higher education (Folsom, 2015; NACADA, 2017a). The Conceptual component has six core competencies (see Figure 5). Themes from the study matched two of the core competencies within the Conceptual component: Academic Advising Approaches and Strategies, and Expected Outcomes of Academic Advising.

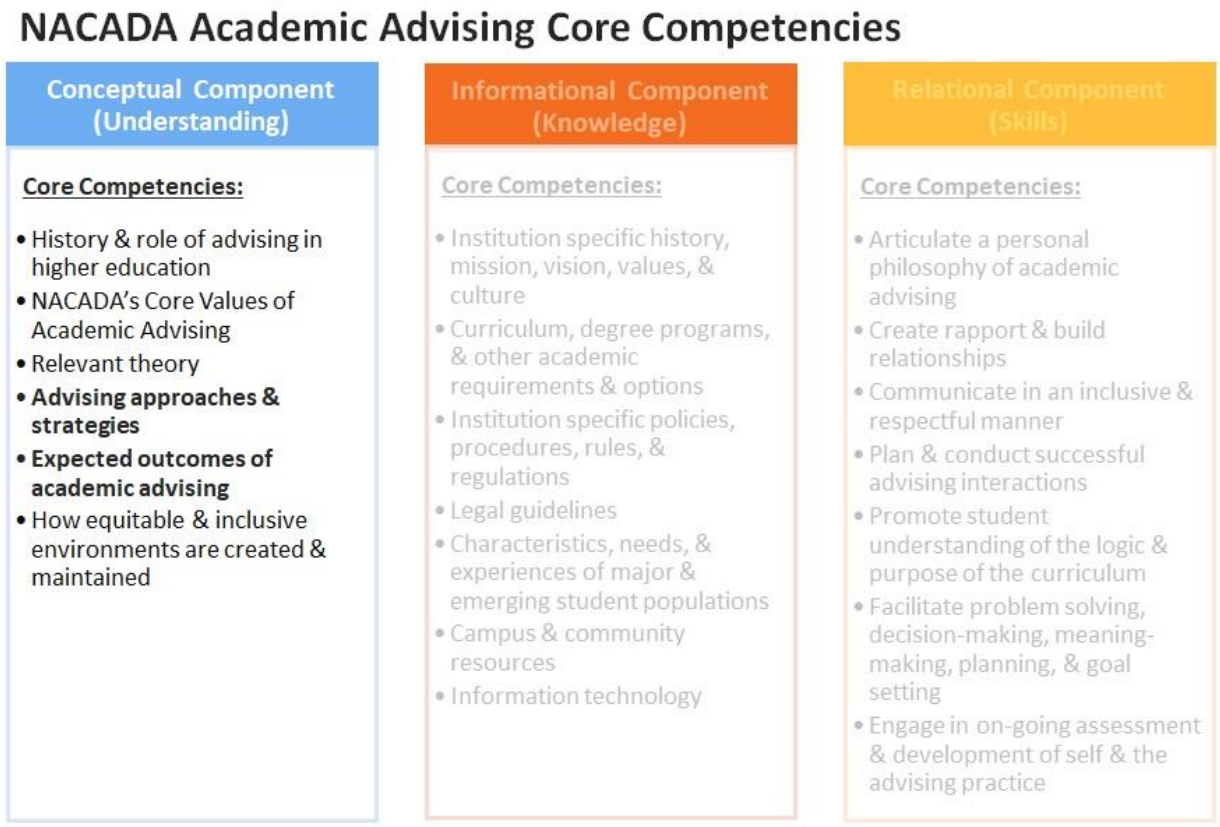

Figure 5. **Academic Advising Core Competencies Model.** The Conceptual component includes the ideas and theories advisors must understand to practice advising. NACADA: The Global Community for Academic Advising. (2017a). *Academic Advising Core Competencies Guide* (Pocket Guide, PG23). ISBN# 978-939213-31-0.

Academic Advising Approaches and Strategies

According to the conceptual framework, there are many different approaches and strategies to advising students. Each approach attempts to provide an organized, positive technique to working with students. There is not one best approach to conducting academic advising since every student is unique and no one approach will work with every student. Academic advisors need to understand the different approaches and strategies available in order to determine which is the most appropriate for a given situation and student need (NACADA, 2017a). The theme that emerged from the study that matched the Academic Advising

Approaches and Strategies core competency within the Conceptual component is that the academic advisors expressed a strong focus on student success with different approaches to meet their students' needs and is discussed next.

Academic Advisors' Focus on Student Success

Each advising approach has a slightly different method of how an advisor interacts with a student, the types and style of questions they ask, the goals of the meeting, and how the advising session is structured. All participants spoke about their dedication to student success and how that guides their practice of advising. They talked about student success as woven into all aspects of the work they do. As "Jane" stated, "what I'm doing in my other functions, it's all connected to student success, so I'm happy to do it, and I think it all, each aspect of what I'm doing helps inform the other aspects of what I'm doing." Although, every advisor had a slightly different take on how to best support student success none of them mentioned using the Student Success System (SSS) for this purpose, yet it is important to know how the advisors perceive student success as a part of their practice.

The advisors saw their role in supporting student success in different ways. "Melissa" stated, "I view part of my job as helping them get to the right place, not just being a…[discipline] advisor," while "Rose" said, "pretty quickly I decided that my role was to advocate, get the students' voice." For others it was equipping students with the tools and skills they need to navigate the university:

> Give students the awareness of information, the empowerment to advocate for themselves, and whatever other skillsets and knowledge bases they need to figure out how to navigate the university system more broadly, so whether it is enrollment [or] finding resources for any personal or social concerns that they might have….I think the

> outcome would be students being able to navigate the university environment on their own ("Trent").

Rose talked about demystifying the university for students:

> Doing more intrusive outreach and recruiting. Trying to get more students in our program, but also to help support them so they can graduate. Just really teasing out their questions and confusion and trying to anticipate where they might, you know, run into some issues. And guiding them to resources all kind of fit into that demystifying this confusing place.

Yet, other advisors focused on the success of the most vulnerable students and saw their role as guiding them towards the right path even if it meant the student must leave that major. The advisors' dedication was truly to the success of all students, not just the ones in the majors they advise. As Rose stated, "what's most important is helping the student find, you know, what's the best fit for them here, and what best meets their goals. And it may not be in my department." Melissa stated a similar sentiment, "look, what's your goal in the end? Right? The goal is not a…[discipline] degree, right? The goal is whatever you want to do with your life. And now we'll figure out how many different ways we can get you there." "Debbie" also spoke about success no matter what major or program they pursue:

> I would say to guide individual students to be successful in whatever educational program that they are in, and to help ensure their success and that would mean, I mean really it's about grades for a lot of students, but it's also about, we really encourage students being well rounded.

"Brittany" talked about being a liaison to the university as a whole not just to the major she advises:

> Making sure we don't have students fall through the cracks. I think that's a good general way. Like both, both in terms of their time to graduation but also if they're failing, if they don't seem to [be] doing well mental health-wise….I think of it as I'm like the liaison. I'm the one that makes the university, big universities feel smaller.

Other academic advisors spoke about taking a personal interest in the success of their students. "I have a personal sense of wanting my students to have a good experience. You know, having a good college experience? And so, that's what drives me, [my] practice as an advisor ("Angela")." "Tom" stated, "I wanna [*sic*] show a student I care about them as a person as well as about their program. I wanna [*sic*] be knowledgeable and I want them to have a good experience overall and not miss something." The advisors' strong focus on student success at times requires them to make sacrifices to needed office time or lunch hours in order to best meet the needs of students. As Jane stated:

> I could be more in control of my time if I did block off, like, Mondays are for my work, but I think what's best for the students is for them to have as much availability to my schedule as they can, because Monday might be their easy day. And so if I blocked that off and didn't allow appointments, I'm hindering certain students.

The academic advisors clearly expressed a strong dedication to student success though they viewed their approach and strategy towards it differently based on what they perceived were their students' needs. Although the advisors spoke about student success in broad terms they did not elaborate on the specific techniques they use with students and therefore it cannot be determined what role, if any, the Student Success System (SSS) played in the advisors' approaches to student success.

Expected Outcomes of Academic Advising

The NACADA (2017a) Academic Advising Core Competencies describe the expected outcomes of academic advising specifically as student learning outcomes. According to NACADA (2017a) student learning outcome indicators (what students are expected to demonstrate they know, do, and value) define student success, enhance teaching and learning, and guide institutional policies. Academic advising outcomes for student learning differ based on an institution's educational mission, culture, curriculum, and other characteristics. Students must know and understand the learning objectives for academic advising. NACADA (2017a) states that academic advisors can communicate the learning objectives through an advising syllabus or through less formal ways. The theme that emerged from the study that matched the Expected Outcomes of Academic Advising core competency within the Conceptual component is that the academic advisors understand the expected outcome of academic advising at ASU is student success but they had difficulty expressing it clearly and is discussed next.

Amey State University's Focus on Student Success

When the academic advisors were asked about their understanding of the expected outcomes for academic advising at ASU a few of them struggled to answer the question claiming they did not have a clear understanding of it. Melissa said:

> [I'm] not sure I have a really good understanding if there is one. I mean I don't know that I've, I mean I know that we're looking to increase graduation rates and decrease time to a degree, right? So like, overarching time to degree I know is a really big thing.

Angela also said:

> I don't know if I have a clear understanding of what to expect in outcomes for advising. Because I do what I do. But, it's not because anybody, it's because of what I want my students to have. But, I don't think I have, like, clear guidelines for what that should be.

Although the advisors claimed to not have a clear understanding of the outcomes for academic advising they were able to identify and discuss several student success outcomes identified by ASU such as increasing graduation rates and decreasing time to degree. Rose claimed the term "student success" was not even discussed as an outcome but she knew the goals for achieving it:

> [It] comes back to student success. I wouldn't say that was necessarily the word used over the years, but it ends up being one. So you know, helping students with their time to degree. Keeping them off probation. So looking at our probation, you know, keeping them in good standing, retaining students, getting them in a timely way to their degree.

Some of the advisors expressed frustration with the specific initiatives implemented by the university to directly affect the desired outcomes. "Anne" discussed frustration with an initiative to encourage students to take 15 credits per semester in order to decrease time to degree and increase retention, recognizing that it might not work for every student:

> I think if we're talking about students, if we're all working towards student success, then yes I am 100 percent on board. If we're talking about only, the only way to achieve [it] is by having a student [take] 15 credits than I deviate from that. So, I work with the student in front of me.

The academic advisors also expressed frustrations with what they perceived to be the institution's promotion of the latest trends in student success while not focusing on the students' needs at ASU:

> Total student success. Yeah, I mean everything's couched in this idea of student [success]. And I mean, I guess I have my own idea of what I wanna [*sic*] do with all my advising, you know? I don't know that it is different but I have to separate myself from the latest and greatest and focus on, you know, how can I really be effective with my students (Anne).

"Jeff" also stated:

> I wish we, I wish we paid more attention to what our students really need. I think we put a lot of attention to, I know that as an institution, we always have to keep up with the latest trends in research and if not, it's difficult to, I don't know, to compete as an institution. And things like that. And I hope, I would hope that we paid more attention to what our students are telling us.

Brittany expressed dissatisfaction with the institution stating that ASU cares less about student success and more about making money:

> I think, the last few meetings that I've gone to with advisors, I've walked out of there like, I am not happy with this institution right now and the fact that they don't seem to care about student success anymore where it used to be so focused on it. It's now [she made the money hand gesture by rubbing her thumb over the tip of her index finger and middle finger].

Most of the advisors spoke about academic advising objectives from a personal and individual perspective and not as part of the collective whole. Tom said:

> So that to me the most important outcome is that they graduate, they've made good choices, they've got a lot of good experience while they're here, and they feel prepared to

> go out in the working world. And they feel better, more educated as a person about society, about life.

The academic advisors see their work as separate from the broader goals of the institution, yet, when comparing what the advisors said to the actual advising objectives at ASU, they are aligned.

Informational Component

The Informational (knowledge) component of the NACADA (2017a) Academic Advising Core Competencies provides the substance of academic advising. In other words, it includes the knowledge advisors must comprehend to effectively advise students at their institution. This knowledge includes awareness of institutional policies and procedures, academic programs, and campus resources; awareness of college student characteristics and emerging student populations; awareness of legal concerns and the boundaries of their responsibility; and awareness of the application of advising at their institution (Folsom, 2015; NACADA, 2017a). The Informational component has seven core competencies (see Figure 6). Themes from the study matched two of the core competencies within the Informational component: Institution Specific History, Mission, Vision, Values and Culture, and Information Technology Applicable to Relevant Advising Roles.

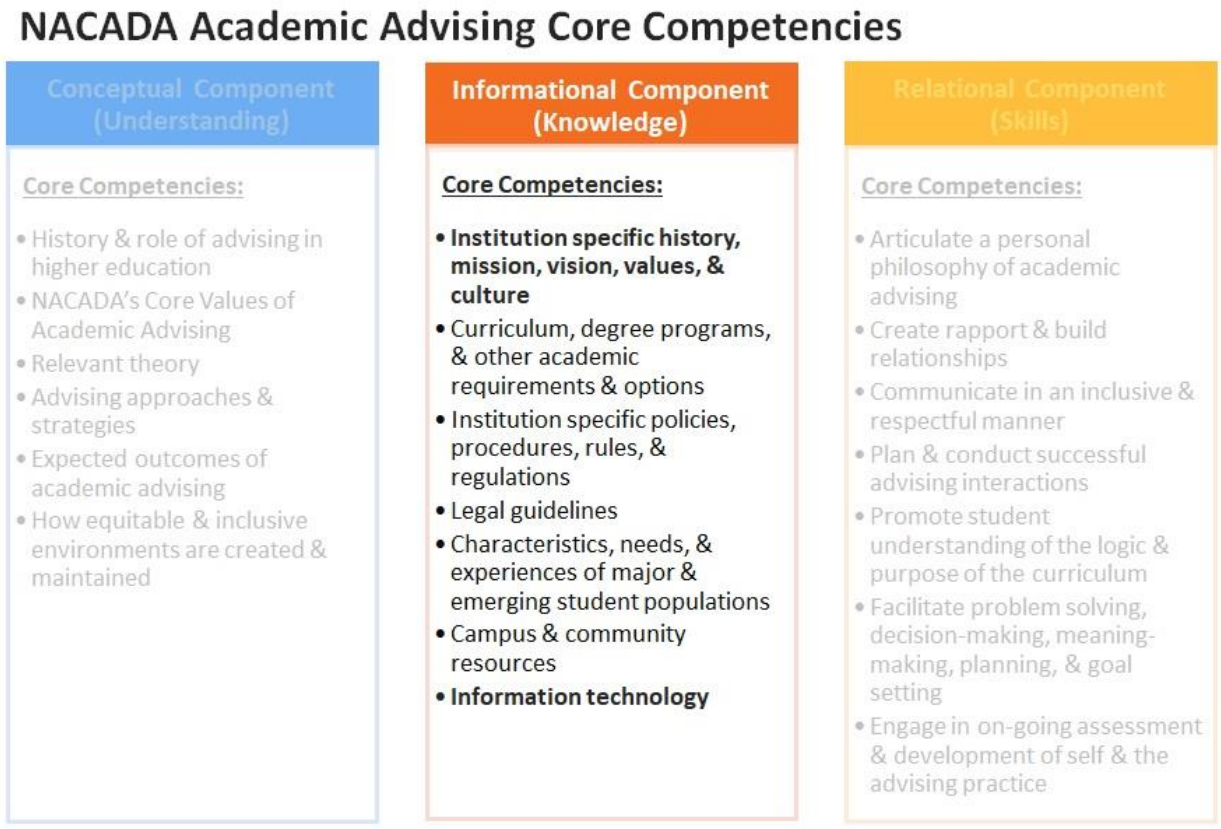

Figure 6. **Academic Advising Core Competencies Model.** The Informational component includes the knowledge advisors must comprehend to advise students. NACADA: The Global Community for Academic Advising. (2017a). *Academic Advising Core Competencies Guide* (Pocket Guide, PG23). ISBN# 978-939213-31-0.

Institution Specific History, Mission, Vision, Values, and Culture

The NACADA (2017a) Academic Advising Core Competencies express the importance of academic advisors comprehending the history, mission, vision, values, and culture of the institution. This knowledge of the culture helps advisors understand institutional decision-making and curriculum development. Academic advisors reinforce institutional goals through advising activities that emphasize requirements, policies, and the importance of short and long-term decision-making. Knowledge of the institutional mission provides the information essential to respond to difficult situations that may arise at the institution. It is crucial for advisors to

determine the definitions and measures of student success at their institutions and how they affect their work with students. Advisors must learn to manage competing interests that may cause inner conflict (NACADA, 2017a). The theme that emerged from the study that matched the Institution Specific History, Mission, Vision, Values, and Culture core competency within the Informational component is that the academic advisors expressed concern and a lack of trust regarding decision-making from leadership and is discussed next.

Lack of Trust in Leadership about Decision-Making

The academic advisors expressed concern and a lack of trust regarding decision-making that directly affects academic advising and the work of advisors. During the time the interviews were conducted for this study ASU was undergoing significant changes in leadership. It is no surprise that the advisors were skeptical about decisions impacting them as with every change in leadership came a new vision with new directives and initiatives over a very short period of time. As Rose stated:

> I mean just in the last year with the whole…[leadership changes] thing has certainly changed the way I feel about work. You know that's definitely been a struggle this whole year for me. I don't know how much it changes my work. I mean, I guess it keeps saying, you know, you can do what you can do to try to change the culture here, but you know, you got this one student in front of you, you still give them 100%. Even with the chaos going [on] out here. You know, you're in my chair right now, you know. How can I still try to remove barriers and help you achieve your goals?

The advisors expressed frustration with lack of communication regarding decisions and changes. Anne stated:

> They know they're gonna [*sic*] make these changes. Why is it always, why are we told afterwards? Why aren't we told, 'Hey these changes are coming down. This is how it's gonna [*sic*] impact you.' I'm so confused that that's the approach, right? I think for me a lot of it has just been reacting and it seems like, I mean, we've had so much change in leadership, and everyone that comes in has a different plan of how they're gonna [*sic*] make it all better, and at this university it's been a lot of reacting to what's happening.

The advisors expressed that they are most frustrated that they are not consulted regarding decisions that directly affect their work. As Melissa stated, "There are times when the advisors are, ya know, nobody asked our opinion of anything right, it's a faculty-run place." Jeff expressed similar sentiments:

> I think we serve a very important function that is sometimes not appreciated by other academics. And other academics in general, it could be professors, it could be people in higher, what do you call it? Higher ranking or whatever. Because they don't see all that we see. And all that we hear with students. And I think that's unfortunate….I think we do so much for the students that I hope, I wish that the university took more into account what we do as advisors.

The frustration happens because oversights discovered after decisions are made and implemented could have perhaps been avoided if academic advisors were a part of the decision-making process.

> So, when I bring up things, ya know, like, 'Ah, nobody ever thought about that.' And then we say, 'If you brought us in in the process somebody could've thought about that' (Melissa).

The rapid changes in leadership, directives, and initiatives created fatigue for some advisors due to a lack of understanding regarding the reason for the rapid changes in vision or priorities most likely due to poor communication between decision-makers and the academic advisors. As Anne stated:

> I'm just gonna [*sic*] do what they tell me to do, and I'm not gonna [*sic*] put energy, cause it was a lot of like emotional energy. Like, 'Why are we doing this?'…It's coming out of nowhere, and you know everything just coming down from the top, right?… And it just feels like everything's coming down from the top anyways so I'm not gonna [*sic*] put my energy into worrying about it other than how does it impact my students, and how do I talk to my students about this and how can I best, you know, how can I best advise within this whatever this is.

Most of the academic advisors felt left out of the decision-making process but some academic advisors found ways to be included by joining committees. Brittany stated, "I'm on the validation committee now, just because I was like someone needs to be an advisor on this. Like we can't all be the administrators." The academic advisors expressed a lack of trust in the leadership regarding decision-making that directly affects academic advising and the work of advisors.

Information Technology Applicable to Relevant Advising Roles

The NACADA (2017a) Academic Advising Core Competencies stress that the use of technology in academic advising must be intentional and align with advising goals in order to assist advisors to attain better student learning outcomes and improve program assessment. According to the Intentional Use of Technology in Academic Advising Model (NACADA, 2017a; Steele, 2014), there are three categories of technologies used: service, engagement, and learning. The service category includes those tools that provide institutional services through

personalized student accounts. Technology tools that give campus-specific demographic information and predictive analytics provide advisors with knowledge of the student body and can be used to inform policy and practice. The engagement category includes tools to inform and build communities with students and others at the institution. These tools allow student service professionals to build a dialogue across all areas of campus for a particular student. This helps every student service area give the student the best support possible. Participatory and social technologies allow students to collaborate with peers and connect to communities for support. The learning category includes tools such as learning management systems (LMS), early alert systems, and interactive video conferencing. Tools such as learning management systems (LMS) can be used to help students prepare for advising appointments through exercises assigned prior to the advising meeting. The use of technology in academic advising is going to be essential in the next decade to positively impact graduation and completion rates (NACADA, 2017a). The themes that emerged from the study that matched the Information Technology Applicable to Relevant Advising Roles core competency within the Informational component are that the Student Success System (SSS) did not function in ways that were promised and that there are multiple technology tools used in academic advising practice and both are discussed next.

The Student Success System Did Not Function in Ways That Were Promised

"The best use of technology is when its capabilities align with advising goals to help advisors achieve better student learning outcomes and improve program assessment" (NACADA, 2017a). The academic advisors had very strong opinions about the Student Success System (SSS) at ASU. They were frustrated that the tool did not deliver the functions that were promoted to help ASU improve student success. All of the advisors spoke about how the only function they are able to use is the advising appointment scheduling feature. When asked to

explain the SSS to someone who knows nothing about it they all spoke about the advising appointment scheduling function being the sole use. As Jane stated, “I would call it an appointment schedule system. I'd probably say an appointment schedule system where we can also see some, I would call it *some* transcript information, because it's a little bit wonky in there.” Anne stated, “I would say it's a calendaring system.” “Carrie” also stated, “Our college advisors pretty much use it as a function to schedule appointments. That's really honestly all we use it for.” Tom too expressed the same sentiment, “It's a place to make appointments 'cause [*sic*] primarily that's really all I ever do there.” Jane talked about the time and effort she put into making the SSS usable for her students with no results:

> And so I was on board with the success markers, until I started coming up with the success markers for…[discipline] majors, and I had pulled a lot of data from the registrar's website so that I could look at, I could do some analysis and figure out the patterns that were predictors of success. So I put a bunch of time into that one summer. And then when I sent them to the person in the dean's office who was gonna [*sic*] upload these or something, she said, ‘Oh, nope, it can't do that. Oh, nope, and it can't do that.’

Melissa was eager to be able to run reports to be able to identify her students in need of intervention but was also disappointed:

> All these reports that I thought, ‘Aw, I can finally just do these on my own,’ not one of 'em [*sic*]. I cannot do one of 'em [*sic*] on my own. So I don't understand the point.

Anne expressed her displeasure with the way leadership promoted the SSS and the fact that the data are inaccurate:

> If it had just been brought in as like, ‘This is our new calendaring system,’ then I think that would've been more helpful. So it was supposed to give us more information about

> students so we could, before we met with the student, we'd have all this information about them and you actually have to disregard the information that's provided for the most part.

Several of the advisors talked about not being able to trust the data in the SSS and how leadership told them that certain functions did not work and the data were inaccurate. Angela stated, “I remember during the initial training, they said something in there was not quite accurate. Maybe it was like the GPA calculation. I'm like, well, why? Why do I need to even look at that?” Brittany said, “They were like, well, don't trust the data in there.”

Tom also stated:

> When it was first introduced we were told to just really not use all the functions right away. For the [SSS]…we were told don't use…[the block appointment intervention feature]. Don't do this. So I was basically told don't do anything but make appointments. That's all I use it for. Nothing else….So I know there's other functions but again we were told to not use them.

The implementation of the SSS required a lot of dedicated time and effort from partners across campus. In order to on-board all of the users, leadership created a train-the-trainer model where representatives from units were trained and then sent back to their units to train others. Anne talked about her experience as a trainer:

> I mean, the…[SSS] is the biggest disaster, I think, ever. Well I went through the whole training thing about how this was gonna [*sic*] just link everybody, and fortunately I was like, ‘Well, it's just coming out as a calendar first, so I'm just gonna [*sic*] talk about it as a calendar.’ And that's all we did. And so, I just, like that felt like so much time and energy

> put into something that ultimately really is not serving, I mean, we had a better calendaring system previously.

Others talked about the expense of the SSS and how it was unnecessary to spend that much money on a product that could only be used as an advising appointment scheduling system that did not need replacement. Rose stated:

> So, honestly I just don't, I don't like it. I mean, I like it, I mean it's fine for appointments. An expensive appointment system. I mean, I was happy with the last iteration of appointments. The system that we had, so. No, I mean the…[SSS] is not something I've been overly impressed with.

"Beth" also mentioned the cost of the SSS:

> So I'm sure that this was very expensive and I'm sure there's a lot of ways we could use it, but I don't know exactly until I've found best practices around the university, I don't know what can be done.

Melissa expressed annoyance with having to change appointment systems if the SSS did not function in other ways:

> So I can't run anything, ya know, and like all the…[the block appointment interventions] they all talked about we'd be able to do, that all sounded really great, and then like as soon as it started they said, 'Well you can't run any department…[appointment block interventions], 'cause [*sic*] we don't-, we don't wanna [*sic*] overlap with [what] the college or the university is doing.' And so I'm like, 'I don't know, what is it there for?' So now it's really just an appointment system. Why do I need a different new appointment system?

Tom talked about the lack of follow-up and training after the implementation of the SSS:

> And we've never had any meetings since that first meeting. It's like we were promised we would have meetings, we would start using stuff, but it's just never happened. So the…[SSS] exists, I use it for appointments. I have no more training and I have no more options that I know of.

Trent also talked about needing more training in order to interpret the data in the SSS:

> Is just some more training to better understand, you know, what, when it says like the student's a yellow risk factor, like what does that mean, or what could that mean for that student, you know, because it's really again it's just pulling together all of this data and those kinds of things.

Melissa and Angela sum up the sentiments of the academic advisors regarding the SSS: "The…[SSS] system I do not like. I find it pointless. Ya know, the things that I have felt like we were told we would be able to do in it, we cannot do in it" (Melissa). Angela added, "Well, because you have the information in…[the electronic student folder]. Maybe, except for the success markers, you know, you have everything in…[the electronic student folder]".

The academic advisors had strong opinions about the SSS at ASU. They expressed frustration because the system did not function the way it was promised, there was a lack of follow-up training after the initial implementation, the time and effort put into getting the SSS operational did not produce results, and the cost of the system was unnecessarily spent to only replace the advising appointment scheduling system that was working well.

Multiple Technology Tools Used in Academic Advising

According to NACADA (2017a) the use of technology in academic advising must be intentional and align with advising goals. The use of technology in academic advising has the power to improve the services advisors are able to provide students if the tools offer content and

service delivery for advisee-centered approaches (NACADA, 2017a). Academic advisors at ASU use multiple technology tools in addition to the Student Success System (SSS) to deliver advising services. Tom began his academic advising career at ASU in 1997 and he recollects what his advising practice was like before computers were a necessity:

> Well if you wanna [*sic*] go way back…my first job I was in a broom closet. And I had barely enough room for two of us to sit in there. With a desk and a computer. I only used the computer for word processing programs. That was it. I did have…[the student information system] on there but I didn't use it a lot. But word processing would be I'd write a letter or a document. And usually the computer just sat in the corner and I might use it an hour a day at the most. That's back in '97. And you would check email occasionally or something but not during the appointment. It wasn't part of the appointment at all. We'd have paper handouts, paper folders that had to be updated manually. So you'd use…[the student information system] to update that. And so we learned…[the student information system]. I mean that was the only system we had at that time and it wasn't a very friendly system. You had to learn, memorize all the screens you needed to go to. So how else were things different? We used the phone a lot more back then. My phone hardly ever gets used now. Well and the problem with the phone was you know, even over the years when we used it a lot, you would get a voicemail 'cause [*sic*] you couldn't answer. You'd call back and leave another voicemail. It was phone tag constantly. I would have 50 phone messages every day at the end of the day. And so email's been replacing all that. (Tom)

Today advisors spend most of their day on a computer. As Beth stated, “Well, I mean, just like anybody else, I am, you know, you're on the computer the entire day.” Throughout the interviews

the academic advisors mentioned over 30 specific computer programs and tools they use regularly in their advising practice. As Jeff stated when asked about the use of technology in advising: “That's the thing. I think it just gets too, it just gets to be too much.” The advisors happened to discuss tools that fall in all three of the categories in the Intentional Use of Technology Model (NACADA, 2017a; Steele, 2014). In the service category (tools that provide institutional services through personalized student accounts) the advisors talked about the electronic student folder, degree audit systems, the Student Success System (SSS), and the student information system. All of these tools provide advisors with knowledge of the student body and can be used to inform policy and practice (NACADA, 2017a). The advisors raved about the home-grown electronic student folder at ASU. As Rose stated:

> I love the…[ASU] built tech that's, 'cause [*sic*] it completely understands our needs. Like...[the electronic student folder], don't ever take that away from me. It's so beautiful. And they're always enhancing it, and it's always, I mean, it's just so natural to, to the work, how we approach our work at…[Amey] State.

The electronic student folder has multiple functions that are very useful to advisors and all specialized to ASU. Melissa discussed some of those functions she uses regularly for advising:

> Right so, like...[the electronic student folder] is what I use the most. Certainly for advising. Quite almost everything. I mean, the student schedule, the student report, the notes, confidential notes sometimes, degree reports, degree audits. Really archived images if I need to see what they took somewhere else. Lots of, almost every part of it, for different reasons for different people, but yeah. I use a huge, a big…[electronic student folder] user.

Brittany also described the functions she uses in the electronic student folder regularly:

> At...[ASU] we have the electronic student folder. Essentially where we put records of our advising appointments….[the electronic student folder] is for, for making notes...and gathering information…like where you can go and you can go look at a student's transcripts, transcripts so far, and you can kind of guess the story.

The academic advisors also discussed their use of the degree audit system at ASU. Brittany stated:

> ...[Degree audit system], I use the one to show the student that it exists. Because it's so helpful. But I use it mostly to check if it's later, to make sure we have everything. Nothing was missed. Early on, I usually check to see if anything has transferred in for like the...[arts and humanities], ...[social science] substitutions for their humanities or social science substitutions. Because I know they can. So I always check that. And I show the students that, too.

Tom also stated:

> Usually I look in…[the electronic student folder] and I look at...[the degree audit system]. So I look at both and I have two screens in both offices. And so I usually put...[the degree audit system] on one and…[the electronic student folder] on the other. And I look at the old notes to see what happened last time they were advised. I look at their schedule, I look in...[the degree audit system] [to] see what's missing in...[the degree audit system].

The advisors happened to discuss tools that fall in all three of the categories in the Intentional Use of Technology Model (NACADA, 2017a; Steele, 2014). In the engagement category (tools to inform and build communities with students and others at the institution) the advisors talked about static websites and electronic communication tools such as email (NACADA, 2017a; Steele, 2014). Melissa stated:

> I mean I do a lot…on the registrar's site, right, whether it's transfer course evaluations, or today like looking up what somebody submitted as a course, or so stuff that, ya know, I have to do about curriculum. And I'll go to a department's website to help a student who's like a double major…and I always say like, this is not [to] replace your advisor but we can kinda [*sic*] get a tentative schedule. I'm online, I'm always, there's probably, ya know, five tabs open all the time.

All of the academic advisors talked about the tremendous volume of email they receive and respond to daily. As Rose stated:

> You do a lot of advising as you know…over email and it takes more time because I want to be so careful that I'm being, you know, 100% accurate, as clear as I can be because I can't tell if they don't understand or, you know. So, and I don't think we get the credit for how much advising we do over email….I mean yeah you can [quantify it], I suppose you could go in and count each email sent. But nobody's ever asked us to. But they can go into…[the Student Success System] and see how many appointments we have. But that doesn't tell the whole story. It's, I think...[email is] probably 90% if not more of what advisers do during the day. I mean, it's a huge part of it. So, that can be challenging to balance.

In addition to the volume of email, the advisors talked about how challenging it is to keep caught up with it during the normal working day. Jane stated:

> And then, emails, emails, emails. Like I get enough emails that, legitimately, I could spend eight hours, and say that I was busy, and do nothing but emails. And so on those days when I have a lot of appointments, plus meetings or training or things like that, and I

> only have a half an hour for email, it really takes a long time to recover from that. It takes a lot of days to recover from that.

Carrie also stated, “I mean, I answer email constantly. All weekend. I think most of us do. You know, because otherwise, you know, these kids feel like if you don't answer them in three hours then you're being hard to reach.” Academic advisors feel a lot pressure to keep up on the amount of email they receive daily. Email itself has become a form of academic advising. As Anne stated, “So a lot of my time is spent answering emails. Actually, I think I do more email advising than actually meeting with students.” Other academic advisors talked about different ways to communicate with students. Tom spoke about implementing a listserv:

> I did start a listserv recently.....and everyone loves it. And they read it and it goes right to their email. They don't have to log in to see it. But we're really careful what we put on those messages so they don't start ignoring it, you know.

The advisors happened to discuss tools that fall in all three of the categories in the Intentional Use of Technology Model (NACADA, 2017a; Steele, 2014). In the learning category the advisors talked about the learning management system, early alert system, and interactive video conferencing (NACADA, 2017a; Steele, 2014). A couple advisors utilize ASU’s learning management system. Brittany stated, “I do use...[the learning management system] a little bit, only because we have...[an introductory course]. That's like a freshman seminar. There is an assignment in there where they come and they have to have an appointment with us.” Anne also stated, “Obviously...[the learning management system is] huge for me. I feel like I use like a ton of stuff. I really do.” At ASU instructors can submit a progress report for undergraduate students that sends an alert to the student’s advisor and the student through an early alert system. Anne talked about feeling overwhelmed by the early alert system reports.

> You know something else that's like, can be super overwhelming is those...[early alert system] reports. I think they're better now but I also think faculty aren't doing them as much, but you know, when they get like eight million messages for one...[early alert system] report. That was really bad.

Brittany also discussed the early alert system reports:

> You know, doing the, uh, we have the...[early alert system] reports, which are where our faculty put in reports for students that are in certain areas. Sometimes they do the whole class. But most of the time it's if they're at risk for failing a course.

The academic advisors also discussed different ways to meet with students besides face-to-face appointments. For example, Anne talked about communicating with students while they are abroad:

> I communicate with students abroad a lot and I'll use whatever they want. So sometimes we FaceTime, sometimes we Facebook message, sometimes we'll Skype, you know, whatever, What's App, whatever technology they're willing to use to communicate with me I just use that with them.

The list of computer technology tools the academic advisors discussed also includes programs such as shared drives, online calendars, online forms, online surveys, web portals, databases, and more.

Relational Component

The Relational (skills) component of the NACADA (2017a) Academic Advising Core Competencies provides the skills academic advisors need to communicate the concepts and information from the Conceptual and Informational components to their advisees. These skills include inclusive and respectful communication and interpersonal skills; the ability to relate to

individuals and groups; the ability to create rapport and build relationships; the ability to plan and conduct advising interactions; and the ability to facilitate problem-solving, decision-making, meaning-making, planning, and goal setting (Folsom, 2015; NACADA, 2017a). The Relational component has seven core competencies (see Figure 7). Themes from the study matched two of the core competencies within the Relational component: Plan and Conduct Successful Advising Interactions, and Engage in On-Going Assessment and Development of Self and the Advising Practice.

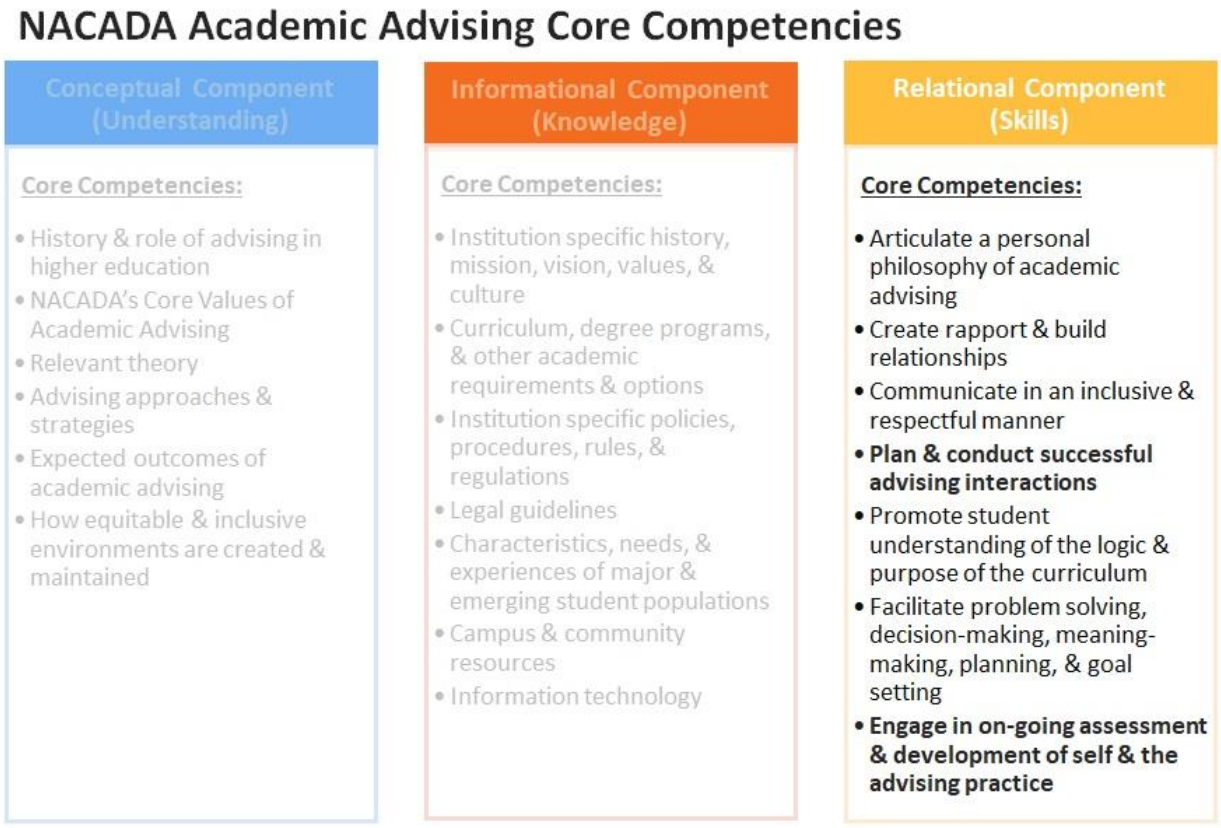

Figure 7. **Academic Advising Core Competencies Model.** The Relational component includes the skills advisors must have to communicate concepts and information. NACADA: The Global Community for Academic Advising. (2017a). *Academic Advising Core Competencies Guide* (Pocket Guide, PG23). ISBN# 978-939213-31-0.

Plan and Conduct Successful Advising Interactions

The NACADA (2017a) Academic Advising Core Competencies state that it requires time and effort preparing outside the time spent meeting with the student in order to facilitate the most effective advising meeting. Planning and preparation includes organizing information so it is easily accessible during the advising meeting; planning the physical space; reviewing student transcripts and degree audit reports; reading notes from earlier advising sessions; identifying and correcting any anomalies with the student record; and noting any concerns or questions advisors may have for the student. According to NACADA (2017a), during the advising session advisors should apply communication skills and advising approaches that are appropriate to the needs of the student. As the meeting progresses, advisors should frequently check for student understanding. Academic advisors must also be prepared to recognize triggers that should initiate referrals to the appropriate professionals. After the advising session it is critical that academic advisors document the significant discussions, actions, decisions, and referrals to protect both the student and the advisor (NACADA, 2017a). The theme that emerged from the study that matched the Plan and Conduct Successful Advising Interactions core competency within the Relational component is that the Student Success System (SSS) created only negligible changes in advising practice and is discussed next.

The Student Success System Created Only Negligible Changes in Advising Practice

The integration of the Student Success System (SSS) into the academic advisors' daily practice only caused minor disruptions and little improvement to their workflow because of the inability to use most of the functions. Planning and preparation for an academic advising meeting includes organizing information; reviewing student transcripts; reading notes from earlier advising sessions; and noting any concerns or questions advisors may have for the student. The

SSS was supposed to allow academic advisors the ability to see at a glance which students are in need of intervention through risk identifiers, GPA trend, student performance, and credit accumulation. These functions would have changed the way advisors prepare for and conduct advising appointments but there was minimal change to advising practice because the SSS does not work as intended. As Jane stated:

> So, the…[SSS] just takes up more time from my perspective. There was the assumption that students are checking in somewhere, well, I'm the check in and so it's a few extra clicks for me. So once in a while there's things like that, but that's just a few extra clicks for every student….I log in when I do the notes at the end of the day…. Yeah, I'll do the note in…[the electronic student folder], and then I'll check it off in the…[SSS], and then I'll do the next note in…[the electronic student folder] and check if off on the…[SSS].

The academic advisors use the SSS to prepare for advising appointments by looking to see who is coming in and reading the reason for their visit. However, it takes little time to do that and does not seem to interrupt or change their normal advising preparation. Anne stated, "So, generally I'll look, so I first go to…[SSS], and I see if there's any notes from the student, if there's anything specifically that they're asking about me." Tom talked about using the SSS to both prepare for his advising meetings and also to record the meeting times afterwards. He stated:

> I mean daily I look to see who's coming in. Even though they load into my Outlook calendar. I still use the…[SSS] and I have to put new appointment times in. So I put my appointments about two weeks in advance….So I do submit a check out but I don't put any notes in there. It's just were they here or not, yes or no? What time are they here, 9:30

> to 10:00, check out. So we do have to do that. We're asked by our student affairs office to do that and keep it up to date.

Brittany also stated that she has the SSS always open on her computer but spends little time utilizing it causing only slight changes in her daily practice:

> I always have it up, only so I can record the times that we met. That's the biggest thing I do in it….The…[SSS] is really posting appointments and scheduling them. And then I do the report of how long they were there.

Some advisors used the system as an alternative format for emailing students. Beth stated, "I do, I have used it definitely for messaging students, and I do find it's pretty effective as opposed to email. I mean, they tend to respond and students send me emails [from it]." The biggest impact the SSS had on the academic advisors' daily practice was during the change-over from the former appointment scheduling system to the SSS. Debbie stated:

> It was a real hassle going from the other calendar to this calendar because we had just gotten used to that other calendar. 'Cause [*sic*] there was one before then. And sometimes when the university makes changes like this, they make them at the beginning of a semester....[The beginning of the semester is] the worst time. You know, it's like, don't ask me to learn a new system when we've got you know, a line out. And then that slows down my advising, so that is frustrating. I feel like that has happened a couple of times. At least a couple of times. So that's been frustrating.

The SSS only caused negligible changes to the academic advisors' daily practice. The academic advisors use the SSS primarily to create appointment times, review reasons students scheduled the appointment, and document that the appointment took place. These minor uses take little more time and do not cause any significant shift in academic advising practice.

Engage in On-going Assessment and Development of Self and the Advising Practice

The NACADA (2017a) Academic Advising Core Competencies state that continuous education and development is critical for academic advisors in the changing environment of higher education. According to NACADA (2017a), every institution committed to student success must invest in training and ongoing professional development at the institutional, college, and departmental levels to ensure advisors are fully trained on all aspects and requirements of their roles. Academic advisors must also prioritize their own professional development in order to meet changing student needs and job demands. Advisors must ask themselves, what do I need to know? what role do I play? what skills must I acquire?, to inform their progress, identify challenges, and determine their plans (NACADA, 2017a). The theme that emerged from the study that matched the Engage in On-going Assessment and Development of Self and the Advising Practice core competency within the Relational component is that academic advisors are dedicated to keeping-up-to-date on best practice and professional development and is discussed next.

Advisors Keeping Up-to-Date on Best Practices

When the academic advisors were asked how they keep up-to-date on changes that impact their work they talked about professional development external to the institution, and at the institutional, college, and departmental levels. Some of the advisors expressed regret that they do not attend professional development activities that are external to the institution such as conferences for national organizations for academic advising as often as they would like. Jane stated:

> I think I go to...[the state advising association conference] every year, although it often conflicts with our graduation reception. A couple of years in, one year it conflicted with

> our departmental retreat that I really had to be at. So in my mind, I go every year, but it's not every year. And then, I go to the [regional]...NACADA as I can. Again, it depends on the, depends on the year. So, attending everything that's offered by...[ASU] that fits into my schedule. And then...[the state advising association conference] and the regional NACADA, as I can.

Others stated that the external professional development conferences were not beneficial to them as only spectators so they decided to contribute by sharing their expertise as presenters. Rose stated:

> ...[The state advising association] started I think by Amey State. And it was my first year here. So that was fun, but I stopped really going to those. I just weren't finding them that challenging. But it might just be that, and I don't mean to be jaded, but I've been around the block, I've been to lots of conferences and different roles, but I wasn't finding that I was learning as much. So, I'm like okay, well you should do the presentations then. So, I've done a little bit of that. I used to do it more when I was full-time.

A few of the advisors expressed participation in external organizations that pertain to the majors in which they advise. Jane stated:

> So I'm in touch with the...the National Association of Advisors of...Professionals. So, they have a LISTSERV that's really active, which, in busy times of the year, I just have to ignore, but then in other times I quickly look and see if there's something new I need to know about.

Jeff attended a conference about the major he advises. He stated, “I have gone to a conference for...[major discipline]. The one that I went to was maybe a year, year and a half ago.” Debbie also talked about keeping up with current industry trends for the majors she advises. She stated,

“So I stay up to date in terms of like, we use a lot of industry representatives in our classes, and most of those are alums. Which is really cool. So, I network with them.” Several advisors talked about attending institutional level professional development specifically designed for academic advisors. Beth stated:

> Oh, I mean, I go to almost all the in-services and stuff that the university provides. I don't do much outside of university…. I'm sure there are things I could learn outside, but I've been really I've been pleased with quite a few of the things that university [offers]. I like some of the things over the years, you know, study abroad, I go to quite a few of those things obviously. The stuff focused on...[undergraduate education] and all those kind of things.

Rose stated, “I'm pretty dedicated to going to like the [in-]services and town halls and stuff like that.” A few advisors also discussed attending college-level professional development opportunities in the form of monthly academic advisor meetings. Rose discussed the structure and goals of these meetings:

> We meet as a college, advisors, we meet once a month. But we did have a retreat once a year, and at the last retreat we decided every Monday, 'cause [*sic*] we felt like we weren't getting necessarily all the information. We have this advisor huddle now on Mondays. So, every week, the idea was we'll always have like, coffee and donuts. That's kind of not been done, we've kind of fallen down on the donut part….So, we are actually seeing each other more. Which I think is good. The idea was Monday was gonna [*sic*], the Monday was like, “oh here's the heads up. Things that we don't want to wait a month to tell you”. Which is good and the idea was just more like, just being together and team building. And then we still have our longer once a month meeting where we can go deeper. I don't

> see a clear structure between the two right now, but at least we're communicating. There's a way we're having some contact.

Both Melissa and Angela talked about attending monthly advisor meetings in their colleges as well. “I go to the monthly college advisor meetings, so I kind of know what's up” (Melissa). “I go to the College... advisor's meeting. We have a monthly meeting. And then they have a...[major discipline] advisor's meeting. I think it's once a semester” (Angela). A couple of the advisors talked about department-level professional development meetings to stay up-to-date with current issues related to academic advising. Beth talked about all of the department advisors and the director of undergraduate studies meeting together, stating:

> We have twice a month organized meetings where, for years, when I was here, we did not have any meetings....Our director is invited to several of them, and then we have a director of undergrad studies, so it's a faculty member who rotates, and so she also [attends].

Tom discussed attending faculty meetings not just advisor meetings:

> I go to faculty meetings in...[major discipline] so I kind of know what's going on in their, what would you call it, in their research areas. Their signature research areas 'cause [*sic*] that's a big issue in departments. That's what I liked about...[major discipline] is it's drawn me back into faculty meetings so I know what's happening.

The academic advisors also talked about keeping up-to-date with the most current institutional information through announcements, websites, and media. Trent stated:

> But it's, it's really dedicating more time to looking at news announcements, checking websites. Even checking like local media and like reading more in like, you know,

the...[student newspaper] and to see like stuff that's coming out broader to see how it's impacting kind of a broader array of students.

The academic advisors are dedicated to on-going professional development through various means. Most of the advisors rely on internal professional development opportunities offered at the institutional, college, or department levels.

Summary

The essence of this study is that the Student Success System (SSS) did not or could not perform the functions that were promised by leadership and therefore the academic advisors expressed frustration with being required to use it in addition to all of the other technology tools they already use that are more helpful to their advising practice. The lack of use of the SSS is not due to the advisors' unwillingness to learn or implement a new system to aid with student success efforts into their advising practice but from the fact that the system could not perform the functions required. The other themes that emerged show that the academic advisors are dedicated to student success efforts and to ongoing professional development.

CHAPTER 5: DISCUSSION

The purpose of this study was to explore how academic advisors perceive their practice of academic advising through the use of an academic analytics tool, the Student Success System (SSS). As state and federal policymakers continue to emphasize the importance of increasing rates of college completion, colleges are beginning to consider the use of technological tools to support students' progress toward their educational goals. Institutions are looking to technology providers to redesign the advising experience so that it is more proactive, personalized, and holistic. The goal is to make advising and planning more efficient so that advisors are better able to serve the students most in need. Amey State University implemented the use of the Student Success System (SSS) as an effort to improve graduation rates and increase time-to-degree. The SSS is an academic analytics tool that combines technology, research, case management, and predictive analytics to help institutions positively improve retention and degree completion outcomes for students.

Using the NACADA (2017a) Academic Advising Core Competencies as the conceptual framework, the study sought to explore how the use of the SSS specifically impacted the Conceptual (understanding), Informational (knowledge), and Relational (skills) components of academic advising practice. Using an exploratory qualitative methodology, 12 professional academic advisors were interviewed for this study using a semi-structured interview guide (see Appendix E). The interview questions were developed using the conceptual framework as the guide. The questions centered on the academic advisors' direct experiences with the practice of academic advising and how their practice was impacted by the use of the Student Success System (SSS).

The following research questions for the study were also guided by the conceptual framework, the NACADA (2017a) Academic Advising Core Competencies:

- How do academic advisors' perceive their practice of academic advising?
- What is the academic advisors' perceived impact of the Student Success System (SSS) at Amey State University (ASU) on the way they practice academic advising?
    - What is the academic advisors' perceived impact of the SSS at ASU on what they need to understand to meet advising objectives?
    - What is the academic advisors' perceived impact of the SSS at ASU on what they need to know in order to guide advisees?
    - What is the academic advisors' perceived impact of the SSS at ASU on the skills they need to have to convey concepts and information to their advisees?

The primary theme that emerged from the study was that the SSS did not or could not perform the functions that were promised by upper administration and therefore, the use of the SSS at ASU created only negligible changes in academic advising practice. This chapter provides a discussion of the themes that address each of the research questions, as well as implications for practice related to the themes. Since the NACADA (2017a) Academic Advising Core Competencies are specifically intended to guide effective practice of academic advising the discussion and implications for practice are organized under the components of the conceptual framework (Conceptual, Informational, and Relational) which directly answer the research questions and show the direct relation of theory to practice. Academic advising is a discipline in which research is intended to be applied by practitioners working in the field. Recommendations for future study follow the discussion.

Conceptual Component

The Conceptual (understanding) component of the NACADA (2017a) Academic Advising Core Competencies includes the ideas and theories that advisors must understand to successfully practice advising. Two themes (academic advisors' focus on student success and ASU's focus on student success) from the findings of the study matched two of the core competencies within the Conceptual component. A discussion of those themes and implications for practice are discussed in this section. The discussion in this section responds to the first sub-question of the study, "What is the academic advisors' perceived impact of the SSS at ASU on what academic advisors need to understand to meet advising objectives?"

Academic Advisors' Focus on Student Success

The academic advisors in the study expressed a strong understanding that advising at ASU is directly connected to student success however they all approach that work differently. All of the participants spoke about their dedication to student success and how that guides their practice of advising. They talked about student success as woven into all aspects of the work they do. Although, every advisor had a slightly different take on how to best support student success none of them mentioned using the Student Success System (SSS) for this purpose. One of the advisors mentioned using the early alert system as an aide in supporting student success but overall the advisors spoke about connecting personally with students and focusing on students' individual needs as a way of building rapport and trusting relationships instead of relying on the SSS or any technology to determine student success strategies. This study highlights that technology tools alone are not going to improve student success at ASU and academic advisors understand that.

The simple fact that the SSS did not function in the ways that were promised triggered a ripple effect of confusion for the academic advisors in how they were expected to use the tool. The inconsistency of functions and expectations of use negated the potential usefulness of the SSS. In order for the SSS to have the desired impact on student success academic advisors needed a clear understanding of how the tool was expected to help improve student success, how academic advisors should use the tool properly, and what actions the advisors were expected to take with students. There is no perfect solution, program, initiative, strategy, or technology tool that will alone improve the success, retention, or persistence of students. The issues of student success are complex, complicated, and even frustrating at times (NACADA, 2017d). What works for one college at ASU may not work for another just like what works for one student population may make no difference in another population and from individual student to another. Improvement of student success must be based on careful analysis of the research in the field, the institution and students, and the changes in the student experience educators want to make on their campus (NACADA, 2017d). Technology use alone does not guarantee desired outcomes. Therefore, the integration of a new technology tool that supports student success must be intentionally chosen and applied in academic advising (Steele, 2016). Academic advisors play a critical role in the success of technology tools, such as the SSS, that use data analytics to identify the earliest hints of academic difficulty. The automated processes trigger alerts for academic advisors that notify them to circumstances that require conversations and appointments with the students. No matter the technology tool, it is critical that the interventions are theoretically grounded, intentionally designed to be responsive to the risk factors affecting students, and focused on those issues that will yield positive results (NACADA, 2017d).

Amey State University's Focus on Student Success

The academic advisors in the study struggled to clearly articulate their understanding of the institution's expected outcomes for academic advising yet were able to identify specific initiatives and metrics used as indicators of student success but did not connect the relationship between them. The advisors also expressed frustration with what they perceived to be the institution's promotion of the latest trends in student success implemented by upper administration. The academic advisors talked about their work in advising like it was separate from the broader goals of the institution, yet in reality the institution's goals and expected outcomes for academic advising are the same student success goals the academic advisors indicated were priorities. Based on what the academic advisors expressed in the study it indicates a lack of clear communication from upper administration to academic advisors regarding the direct connection between the overall student success goals of the institution and the role advisors play in reaching those goals.

Student learning outcome indicators (what students are expected to demonstrate they know, do, and value) define student success, enhance teaching and learning, and guide institutional policies (NACADA, 2017a). Research over the past several decades supports the critical role academic advising plays in connecting students with learning opportunities that encourage engagement, success, and achievement of important outcomes (NACADA, 2017a). Academic advising viewed as an educational process puts the focus on student learning outcomes and supports institutional goals for persistence towards graduation. Since learning is more effective when students have clear, reasonable, and positive goals, academic advisors must set clear objectives about what students should be able to do, understand, and value as a result of the academic advising experience (NACADA, 2017a). Because the academic advisors do not

have a clear understanding of the expected outcomes of advising they are not able to articulate to students what the learning objectives of the overall academic advising experience at ASU are for them.

Implications for Practice

The implications for practice within the Conceptual (understanding) component of the conceptual framework focus on what academic advisors must comprehend to meet their advising objectives (Miller, 2016; NACADA, 2017a). It is imperative that all areas, units, departments, and offices that play a role in student success collaborate on a shared vision of what that means at the institution. While ultimately the vision and key decisions must involve upper administrators those ideas will not be successful if important groups on campus are not actively engaged. The campus community must share the vision and promote the culture of student success in their actions, planning, and work with students (NACADA, 2017d). Within this shared vision of student success it is important to clearly define the role technology will play in meeting those objectives. Problems arise when upper administration makes technology decisions for use in student success without fully explaining the goals and how to meet those goals to academic advisors. Academic advisors need to understand the connection between the student success goals and how technology will assist in meeting them. Along with that, academic advisors need to be communicated to clearly, transparently, and frequently regarding expectations, implementation, and training of technology tools used to advance student success.

Not only does the institution need a clear vision of what student success means but it must also clearly articulate what the expected outcomes are of academic advising. Academic advisors must understand the expected outcomes of advising and be able to communicate it to

their students. The key advising outcomes will vary by an institution's educational mission, its culture, curriculum, and other characteristics but should answer these questions:

> What do we want students to know, do, and value or appreciate as a result of participating in academic advising? What should be learned? Where should this learning take place? What opportunities are there to provide this learning? When should it be learned? And how will we know that learning has occurred? (NACADA, 2017a, pp. 10).

It is imperative that students not only understand the structure and purposes of advising they also need to know the expectation for their learning through advising. Academic advisors must find ways to communicate the expected outcomes and learning objectives for academic advising to students.

Informational Component

The Informational (knowledge) component of the NACADA (2017a) Academic Advising Core Competencies includes the knowledge advisors must comprehend to effectively advise students at their institution. Three themes (lack of trust in leadership about decision-making, the SSS did not function in ways that were promised, and multiple technology tools used in academic advising) from the findings of the study matched two of the core competencies within the Informational component. A discussion of those themes and implications for practice are discussed in this section. The discussion in this section responds to the second sub-question of the study, "What is the academic advisors' perceived impact of the SSS at ASU on what academic advisors need to know in order to guide advisees?"

Lack of Trust in Leadership about Decision-Making

The academic advisors in the study expressed concern and a lack of trust regarding decision-making that directly affects academic advising and the work of advisors. During the

time the interviews were conducted for this study ASU was undergoing significant changes in leadership. It is no surprise that the advisors were skeptical about decisions impacting them as with every change in leadership came a new vision with new directives and initiatives over a very short period of time. The rapid changes in leadership, directives, and initiatives created fatigue for some advisors. This was due to a lack of understanding regarding the reason for the rapid changes in vision or priorities most likely due to poor communication between decision-makers and the academic advisors. Academic advisors must understand institutional decision-making in order to be able to explain to students how the university system functions and how students fit into it. Academic advisors must have knowledge about their institution's history, values, vision, mission, goals, and culture (Campbell & McWilliams, 2016). When academic advisors understand the culture of the institution they can understand institutional decision-making (NACADA, 2017a). That is quite a challenge to do if academic advisors lack trust in the decision-makers. Advisors must learn to manage those competing interests that may cause inner conflict in order to best support students. It is critical to include academic advisors in the decision-making process especially when tools and technologies that directly impact the work of advisors are being discussed.

It is clear that there needs to be improved communication and trust between upper administration and the academic advisors. It is in the institution's best interest to clearly communicate their vision and mission because academic advisors reinforce institutional goals with students from pre-matriculation to graduation. This breakdown of communication is concerning because if academic advisors are confused themselves about what academic advising is about on campus then most likely other campus partners do not have a good understanding of it either. Campus partners and allies need to understand the mission, expected outcomes, model

of advising, and delivery methods so everyone can provide students with the appropriate referrals (Spence, 2011).

The Student Success System Did Not Function in Ways That Were Promised

The academic advisors in the study had very strong opinions about the Student Success System (SSS) at ASU. Their biggest frustration was that the system was not able to deliver the functions that ASU promised to help improve student success. The SSS was promised to improve completion outcomes of students by allowing academic advisors to be able to triage using early alerts, risk identifiers, and advanced search; to assess by using student profiles that show GPA trend, student performance, and credit accumulation; and to intervene through communicating, setting reminders, and scheduling appointments. The primary function that worked and the only function the academic advisors talked about actually being able to use is the advising appointment scheduling feature, a tool that previously existed and performed similar functions. The SSS promised to use big data and predictive analytics to help identify academically at-risk students at the earliest hints of difficulty which would help address student retention and completion issues at the institution. These early predictors would then trigger advising interventions to promote success. Unfortunately, the functions in the SSS that would do that were not pulling accurate data and/or did not function appropriately for them to be relied upon. The academic advisors were hopeful in the early stages of the SSS implementation because of the great features advertised to them and they saw potential in being able to use the tool to help their students succeed. However, over time the academic advisors became frustrated and bitter with being required to use a tool that could not perform the functions that were promised. The best use of technology in academic advising is when its functions support advising goals to achieve better student learning outcomes (NACADA, 2017a).

Another point of frustration for the academic advisors was the amount of dedicated time and effort required to implement the SSS for it to only be useful as an advising appointment scheduling system. The leadership created a train-the-trainer model to on-board all of the users. Representatives from units across the campus, including academic advisors, were trained to use the SSS and then sent back to their units to train their colleagues. This was a fantastic model for on-boarding with many long-term benefits. The model created a culture of continuous learning around the SSS and created excitement and hope across campus for all of the features to be available for use. However, the time and effort put into getting the SSS operational did not ultimately produce results leaving those that dedicated their time and energy feeling discouraged. The advising trainers felt betrayed because they too shared the promises of functions with their colleagues that ultimately did not come to fruition. Academic advisors also felt that there was a lack of follow-up training after the initial implementation. A lack of training is understandable if the features did not function; however the academic advisors felt they lacked clear communication about the expectations for how to properly use the tool for student success. Future decisions regarding technology tools used in academic advising should take into account how academic advisors will use these tools and the impact they will have on their daily practice.

Multiple Technology Tools Used in Academic Advising

Academic advisors at ASU use multiple technology tools in addition to the Student Success System (SSS) to deliver advising services. Throughout the interviews the academic advisors mentioned over 30 specific computer programs and tools they use regularly in their advising practice. The advisors discussed utilizing tools that fall in all three of the categories in the Intentional Use of Technology Model (NACADA, 2017a; Steele, 2014). In the service category (tools that provide institutional services through personalized student accounts) the

advisors talked about the electronic student folder, degree audit systems, the Student Success System (SSS) for scheduling, and the student information system. All of these tools provide advisors with knowledge of the student body and can be used to inform policy and practice (NACADA, 2017a). The academic advisors raved specifically about the home-grown electronic student folder which has multiple functions that are very useful to advisors and all specialized to ASU. In the engagement category (tools to inform and build communities with students and others at the institution) the advisors talked about static websites and electronic communication tools such as email (NACADA, 2017a; Steele, 2014). All of the academic advisors talked about the tremendous volume of email they receive and respond to daily. In addition to the volume of email, the advisors talked about how challenging it is to keep caught up with it during the normal working day. In the learning category the advisors talked about the learning management system, early alert system, and interactive video conferencing (NACADA, 2017a; Steele, 2014). At ASU instructors can submit a progress report for undergraduate students that sends an alert to the student's advisor and the student through an early alert system. The academic advisors talked about using the early alert system as a student success tool but feeling overwhelmed by the number of notifications received, messages sent, and time required for follow-up.

Academic advisors can utilize technology in many ways, and the uses that advisors collectively choose will wield a long-lasting impact on practice (Steele, 2016). The use of technology in advising has its advantages and in many instances frees up valuable time for advisors to focus on the student-advisor relationship; however institutions should be thoughtful about implementing new technologies to ensure they improve processes and not just add to an already overwhelming list of tools that must be used. The academic advisors overall spoke favorably about using technology tools in academic advising and expressed the value they bring

to assisting with student success. So, it is not that academic advisors are against new technology tools, they just were specifically frustrated and disappointed in the Student Success System and its inability to function properly. At the time of writing this section for this dissertation ASU is actually in the process of ending its use of the Student Success System and moving to a new advising scheduling system that comes with the new student information system they are implementing. It is important to note that ASU is moving not just to a new platform but also not attempting to use another system that promises predictive analytics like the SSS did.

Implications for Practice

The implications for practice within the Informational (knowledge) component of the conceptual framework include knowledge of the institution and programs that advisors must comprehend to effectively advise students at their institution (Miller, 2016; NACADA, 2017a). Academic advisors must have knowledge of the mission of academic advising because it provides the foundation of their work. When advisors know the mission of academic advising they can then share that with students and clearly identify what the expected outcomes are for advising (White, 2000). The institution needs to clearly communicate their vision and mission consistently over time. Communication is the key to getting academic advisors to have knowledge about institutional decision-making and its effects on academic advising. Including representatives from academic advising in the decision-making process when it directly effects academic advisors is the best approach. Those representatives must then be intentional about sharing information and asking for input from the broader academic advising community at the institution in order for all perspectives and voices to be heard.

Academic advisors should also be included in the decision-making process about introducing new technology tools to be used in academic advising. Including the actual users in

the decision-making process can help prevent oversights or mistakes after implementation. New technology tools intended for use in academic advising must have the investigation on outcomes done way before implementation occurs. The tools must also be fully functional with established expectations and well developed processes for use upon implementation. Organized professional development opportunities are the best way to ensure academic advisors have access to the knowledge they need about new technologies, new advising strategies, or updates on working with new student populations (NACADA, 2017d). At the point of implementation of a new technology tool a calendar of training opportunities should be presented to the academic advisors so they know the expectations and can plan around those times.

Relational Component

The Relational (skills) component of the NACADA (2017a) Academic Advising Core Competencies provides the skills academic advisors need to communicate the concepts and information from the Conceptual and Informational components to their advisees. Two themes (the SSS created only negligible changes in advising practice and advisors keeping up-to-date on best practices) from the findings of the study matched two of the core competencies within the Relational component. A discussion of those themes and implications for practice are discussed in this section. The discussion in this section responds to the third sub-question of the study, "What is the academic advisors' perceived impact of the SSS at ASU on the skills academic advisors need to have to convey concepts and information to their advisees?"

The Student Success System Created Only Negligible Changes in Advising Practice

The integration of the Student Success System (SSS) into the academic advisors' daily practice only caused minor disruptions and little improvement to their workflow because of the inability to use most of the functions. Planning and preparation for an academic advising meeting

includes organizing information; reviewing student transcripts; reading notes from earlier advising sessions; and noting any concerns or questions advisors may have for the student (NACADA, 2017a). The SSS was supposed to allow academic advisors the ability to see at a glance which students are in need of intervention through risk identifiers, GPA trend, student performance, and credit accumulation. These functions would have changed the way advisors prepare for and conduct advising appointments but there was minimal change to advising practice because the SSS did not work as intended. The academic advisors use the SSS to prepare for advising appointments by looking to see who is coming in and reading the reason for their visit. It takes little time to do that and does not seem to interrupt or change their normal advising preparation. The biggest impact the SSS had on the academic advisors' daily practice was during the change-over from the former appointment scheduling system to the SSS. The academic advisors use the SSS primarily to create appointment times, review reasons students scheduled the appointment, and document that the appointment took place. These minor uses take little more time and do not cause any significant shift in academic advising practice.

Advisors Keeping Up-to-Date on Best Practices

The academic advisors in the study are dedicated to on-going professional development through various means. When the academic advisors were asked how they keep up-to-date on changes that impact their work they talked about professional development external to the institution, and at the institutional, college, and departmental levels. The advisors also talked about keeping up-to-date with the most current institutional information through announcements, websites, and media. Some of the advisors expressed regret that they do not attend professional development activities that are external to the institution such as conferences for national organizations for academic advising as often as they would like. Most of the advisors rely on

internal professional development opportunities offered at the institutional, college, or department levels. The academic advisors in the study felt that there was a lack of follow-up training at ASU after the initial implementation of the SSS. Professional development sessions about the use of technology in academic advising and student success would be beneficial to the advisors and the institution. Academic advisors must commit to their own professional development even if the institution, colleges, or programs do not make a comprehensive commitment to it. The changing climate of higher education requires that academic advisors continuously seek education and development to remain current in the field. Understanding that the academic advising role constantly changes due to new external demands or internal changes such as the implementation of advising technologies requires institutions to design professional development programs to stay up-to-date with trends and constantly address gaps in Conceptual, Informational, and Relational skills (NACADA, 2017a).

Implications for Practice

The implications for practice within the Relational (skills) component of the conceptual framework include the skills advisors need to have in order to effectively connect and communicate the concepts and information from the Conceptual and Informational components to their advisees (Miller, 2016; NACADA, 2017a). Facilitating effective academic advising appointments requires time and effort beyond the time spent meeting face-to-face with the student. Successful advising interactions include planning and preparation, deciding on content, session processes, and documentation (NACADA, 2017a). Institutions should invest in technology tools for academic advising that can perform multiple functions instead of having multiple tools that perform single functions. Technology tools that perform multiple functions,

like ASU's electronic student folder, enhance effectiveness and efficiency and frees up valuable time for advisors to focus on building relationships with students.

As higher education continues to change so too must academic advisors continuously seek growth and stay well-informed on the current trends and best practices. Institutions committed to student success must invest in training and ongoing professional development of academic advisors. Training should include institutional, college, and department levels to guarantee advisors are fully trained on all aspects and requirements of their role (NACADA, 2017a). According to NACADA (2017a), professional development programs for academic advisors must address these three components: what the advising role requires, the skills of the advisor(s) hired, and the best way to bridge the gap between the role and the skills of the advisor. It is also crucial that academic advisors prioritize their individual professional development in order to meet changing student needs and job demands. Academic advisors should ask themselves three questions for self-development: What do I need to know? What role do I play? What skills must I acquire? (NACADA, 2017a).

Recommendations for Future Research

As an emerging practitioner-scholar it is exciting to think about the ways in which this study can influence future research that will be useful in shaping the practice of academic advising. Ideas for future research are:

- *Research the impact of the Student Success System on academic advising practice at one or more institutions that also use it, focusing on different types of institutions.*

This study focused solely on Amey State University, a large, four-year, public, research one institution with a high population of undergraduate students. Expanding the research to one or more institutions that also implemented the SSS would allow for better insight into how, if

any, its use impacted advising practice. This is especially important since the SSS did not fully function at ASU and the results may be very different at an institution where the SSS functions as intended.

- *Research the impact of the Student Success System on academic advising practice through a different conceptual framework, such as the Council for the Advancement of Standards in Higher Education (CAS) Standards and Guidelines for Academic Advising Programs (CAS, 2019).*

This study used the NACADA Academic Advising Core Competencies (NACADA, 2017a) as the conceptual framework. The framework clearly outlines the vast range of understanding, knowledge, and skills academic advisors must have to perform their role effectively. The model with its three main component areas (Conceptual, Informational, and Relational) and core competencies within each component provided an in-depth understanding of what academic advising practice entails for this study. The Academic Advising Core Competencies Model is the most comprehensive theory of academic advising describing the unique nature of advising that sets it apart as a distinctive area of practice. Completing a similar study using the CAS Standards for Academic Advising Programs (CAS, 2019) would allow examination as to whether the Student Success System implementation and usage at ASU meets the standards and guidelines for technology use in academic advising. It would also provide a different perspective on the practice of academic advising and self-assessment guides that would be useful for comparing and improving standards.

- *Research the impact of frequently changing technology tools on the (a) role of academic advising, (b) practice of academic advising, and (c) interpersonal relationship between academic advisors and students.*

The Student Success System was implemented at ASU in May of 2016. As of November 2020 a new advising appointment scheduling system has taken the place of the SSS. Academic advising will need to find ways to deal with the rapid changes in technology tools and seek best practices in transitioning from one tool to another. Advancements in technology for academic advising may bring about great enhancements and strategies for student success; however it will be important to understand the impact those changes have on the role of academic advising, the practice of academic advising, and the interpersonal relationship between advisor and students.

- *Research the impact of the use of data analytics for student success on the interpersonal relationship between academic advisors and students.*

One gap of this study is that it did not explore the use of data analytics in academic advising or in student success. One reason for that is because the SSS's data analytics functions did not work properly. However, it is important to know how the use of technology tools with data analytics capabilities impact academic advising particularly the interpersonal relationship between advisors and students.

Technology will play a significant role in the future of academic advising practice as it moves into a new era. Additional research in these areas might fill gaps in the literature and advance understanding of what academic advising practice entails especially as advances in technology move at a rapid rate.

Conclusion

The purpose of this study was to investigate how academic advisors perceive their practice of academic advising through the use of an academic analytics tool, the Student Success System (SSS). The SSS is an academic analytics tool that combines technology, research, case management, and predictive analytics to help institutions positively improve retention and degree

completion outcomes for students. Using the NACADA (2017a) Academic Advising Core Competencies as the conceptual framework, the study sought to explore how the use of the SSS specifically impacted the Conceptual (understanding), Informational (knowledge), and Relational (skills) components of academic advising practice. The study used an exploratory qualitative methodology and 12 professional academic advisors were interviewed using a semi-structured interview guide (see Appendix E).

The findings of this study reveal that the academic advisors have a strong focus on student success yet do not identify or connect with the broader student success goals of the institution. There is a lack of trust from the advisors in upper administration in regards to decision-making and a need for clear, transparent, and frequent communication between leaders and academic advisors regarding the student success mission and goals. The integration of the Student Success System (SSS) into the academic advisors' daily practice only caused minor disruptions and little improvement to their practice of advising because of the inability to use most of the functions. The academic advisors overall spoke favorably about using technology tools in academic advising and expressed the value they bring to assisting with student success. So, it is not that academic advisors are against new technology tools, they just were specifically frustrated and disappointed in the Student Success System and its inability to function properly. The broken promises regarding the SSS and the rapid changes in leadership, directives, and initiatives caused a lack of trust in decision-making from upper administration.

This study concludes that academic advising practice is constantly changing and evolving due to internal and external forces. The increased attention to retention, completion, and persistence along with the rapid advancements in technology tools to assist these efforts will mark the next era of academic advising practice. Academic advising will need to find ways to

deal with the rapid changes in technology tools and seek best practices in transitioning from one tool to another in order to keep pace with the changes.

APPENDICES

APPENDIX A:

INITIAL SCREENING TOOL EMAIL

Dear Advising Colleague,

My name is Kristy Dumont and I am a doctoral student in the Higher, Adult, and Lifelong Education program at ASU, as well as the Director of Undergraduate Student Affairs in the College of Education. I am writing to ask if you would be interested in being a participant in my dissertation research about the practice of academic advising, which consists of the roles and job responsibilities academic advisors perform on a daily basis. I am seeking participants who are professional academic advisors that have been academic advisors at ASU for at least five years. For the purpose of this study, professional academic advisors are those individuals whose primary responsibility is academic advising for undergraduate students (i.e., academic specialists with the advising functional area designation who spend 50% or more of their time advising). I am interested in learning about your experiences of your work as an academic advisor at ASU.

I am seeking a group of fourteen to sixteen academic advisors who are willing to be interviewed once, potentially twice. Each interview will last approximately 60-90 minutes depending on the length of your responses. The interview questions will focus on your work as a professional academic advisor.

There are no anticipated risks associated with the study. You will not incur any costs other than your time commitment for participating in the study. If you choose to participate, you will not be paid for being a part of the study. The direct benefit of your participation in this study will be that it may contribute to the understanding of the practice of academic advising.

If you are interested in participating in this study, please take a few minutes to complete a brief questionnaire. The questionnaire can be accessed at:
https://ASU.co1.qualtrics.com/jfe/form/SV_3QoTn4YSpp3oesB

The questionnaire contains 16 questions and will take five to ten minutes to complete. The questionnaire will be open during November and December 2018. Interviews will take place in November and December 2018.

Participation in this study is voluntary and all answers will be kept confidential. The results of this study will be published in my dissertation and may be published in academic journals or presented at professional meetings, but the identities of all research participants will remain confidential.

Professional academic advisors who meet the study criteria and have completed the questionnaire will be contacted by me and will be invited to participate in the study. If you have any questions or concerns about this study, please do not hesitate to email me at

kdumont@msu.edu, or call me at (517) 353-9684. You may also contact my advisor and committee chair, Dr. Marilyn Amey (amey@msu.edu).

Thank you for your consideration to participate in this research study. I look forward to learning more about your experiences as an academic advisor.

Sincerely,
Kristy Dumont

APPENDIX B:

INITIAL SCREENING TOOL QUESTIONNAIRE

1. Name
2. Email
3. Phone Number
4. What is your advising role at ASU?
    a. Professional Academic Advisor
    b. Faculty Advisor
    c. Advising Administrator
    d. Other:
5. What is your appointment at ASU?
    a. 9 month part-time
    b. 9 month full-time
    c. 12 month full-time
    d. Other:
6. What percentage of your job is academic advising?
    a. 0%
    b. 1-25%
    c. 26-50%
    d. 51-75%
    e. 76-90%
    f. 91-100%

7. When did you begin in your advising role at ASU? (month/year)
8. What college do you currently advise for at ASU?
    a. College of Agriculture and Natural Resources
    b. College of Arts and Letters
    c. Eli Broad College of Business
    d. College of Communication Arts and Sciences
    e. College of Education
    f. College of Engineering
    g. James Madison College
    h. Lyman Briggs College
    i. College of Music
    j. College of Natural Science
    k. College of Nursing
    l. Residential College in the Arts and Humanities
    m. College of Social Science
    n. College of Veterinary Medicine
    o. Neighborhood Student Success Collaborative
9. What majors do you currently advise for at ASU?
10. What is the number of undergraduate students you advised during the last academic year?
11. Have you advised at other institutions besides ASU? If so, where and for how long?
12. What is your highest level of education?
    a. Associate Degree
    b. Bachelor's Degree

c. Master’s Degree

d. Doctoral Degree

13. What is the degree and discipline of your highest level of education?

14. Gender?

15. Ethnicity/Race? Check all that apply

a. Hispanic or Latino

b. American Indian or Alaskan Native

c. Asian

d. Black or African American

e. Hawaiian or Other Pacific Islander

f. White

16. Age?

APPENDIX C:

EMAIL TO THOSE SELECTED FOR INTERVIEW

Hi \FirstName\,

Thank you for your interest in participating in this research study and for taking the time to complete the initial questionnaire. The study seeks to understand the practice of academic advising at ASU, which consists of the roles and job responsibilities academic advisors perform on a daily basis.

You are invited to participate in this research. You are being asked to complete one, approximately 60-90 minute, one-on-one audio-taped interview. Please go to this link (https://doodle.com/poll/w2chmqgxk88n4sda) to schedule your interview time. The interview can take place at your office or at another location convenient to you. Let me know what works best for you. I will then send a confirmation email with the day, time, and location of your interview.

Please thoroughly read the attached Research Participant Information and Consent Form before we meet for your interview. I will bring copies of the form with me for you to sign the day of your interview.

If you have any questions or concerns about this study, please do not hesitate to email me at kdumont@msu.edu, or call me at (517) 353-9684. You may also contact my advisor and committee chair, Dr. Marilyn Amey (amey@msu.edu).

Thank you again for your interest in participating in this study. I look forward to learning more about your experiences as an academic advisor.

Best Wishes,
Kristy

APPENDIX D:

RESEARCH PARTICIPANT INFORMATION AND CONSENT FORM

Research Participant Information and Consent Form

You are being asked to participate in a research study. Researchers are required to provide a consent form to inform you about the research study, to convey that participation is voluntary, to explain risks and benefits of participation, and to empower you to make an informed decision. You should feel free to ask the researchers any questions you may have.

PURPOSE OF RESEARCH
You are being asked to participate in a research study about the practice of academic advising, which consists of the roles and job responsibilities academic advisors perform on a daily basis. You have been selected as a participant in this study because you are a current professional academic advisor at ASU. I am interested in learning about your experiences of your work as an academic advisor at ASU.

WHAT YOU WILL DO
Your participation in this project will require one approximately 60-90 minute, one-on-one audio-taped, interview during the Fall semester 2018. You might also be asked to respond to additional questions that are developed during data analysis subsequent to the interview via phone, via email, or in person during Spring and Summer semesters 2019. The interview will take place at your office or at another location convenient to you. The interview protocol is open-ended, meaning that I have a list of questions that I will ask and there are no right or wrong answers. I am interested in your honest answers to questions about your experience as an academic advisor. Additional participation time through a second interview might vary depending upon the questions added, if any, but will not exceed one hour.

POTENTIAL BENEFITS
You will not directly benefit from your participation in this study. However, your participation in this study may contribute to the understanding of the practice of academic advising.

POTENTIAL RISKS
There are no foreseeable risks associated with participation in this study.

PRIVACY AND CONFIDENTIALITY
The data for this project will be kept confidential. That means that your name will not be associated with any audio recording, transcript, or notes from the interview. A code number will be assigned to your interview and the codes will be kept in a separate location from the data. Information about you will be kept confidential to the maximum extent allowable by law. Data will be stored on a password-protected computer, with no identifying information attached to the data for three years after the study closes. I will have access to the data, as will the ASU Institutional Review Board. The results of this study will be published in my dissertation and

may be published in academic journals or presented at professional meetings, but the identities of all research participants will remain confidential. If you would like to see results of this study, they will be made available to you upon request.

YOUR RIGHTS TO PARTICIPATE, SAY NO, OR WITHDRAW

Participation is voluntary. Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled. You have the right to say no. You may change your mind at any time and withdraw. You may choose not to answer specific questions or to stop participating at any time.

COSTS AND COMPENSATION FOR BEING IN THE STUDY

There are no costs to you for participating in the study and you will not receive money or any other form of compensation for participating in this study.

CONTACT INFORMATION

If you have concerns or questions about this study, such as scientific issues, how to do any part of it, or to report an injury, please contact the researcher (Kristy Dumont; 620 Farm Lane, Room 134 Erickson Hall, East Lansing, MI 48824; kdumont@msu.edu; 517-353-9684).

If you have questions or concerns about your role and rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about this study, you may contact, anonymously if you wish, the ASU's Human Research Protection Program at 517-355-2180, Fax 517-432-4503, or email irb@msu.edu or regular mail at 4000 Collins Rd, Suite 136, Lansing, MI 48910.

DOCUMENTATION OF INFORMED CONSENT

Your signature below means that you voluntarily agree to participate in this research study which will include an audio-taped interview.

Signature: _____ Date: _____

APPENDIX E:

INTERVIEW PROTOCOL

Introduction: We both know I also work at ASU and am familiar with common academic advising terms, lingo, and culture. For the sake of the interview please try to clarify/define abbreviations, terms, and processes as they arise in our conversation.

1. Think about a typical work day as an academic advisor. A work day that is routine and predictable to you. Describe that typical day to me.
    a. How many students do you typically see in a day?
    b. How do you structure your advising appointments?
    c. How do you plan time for other responsibilities?
2. Keep thinking about that typical day. You have an advising appointment coming soon. Describe how you prepare for that advising appointment.
    a. What information are you looking for ahead of time?
    b. What tools do you use to find that information?
3. Think about the typical student you advise. The type of student you meet with most often in an appointment. Describe the typical student to me.
    a. What are the demographics of your typical students?
    b. What are the characteristics of students (freshmen-seniors, strong students, struggling students, major changers, etc.)?
4. Now describe an advising appointment with that student.
    a. What do students come in asking about?

    b. What is the flow of the advising appointment?

5. In what ways, if any, is your practice of academic advising different then when you first started advising at MSU? If it is different, why is it different?
    a. What has changed institutionally?
    b. What change has impacted your work the most? How and why?
    c. How do you keep up-to-date on changes that impact your work?
6. What is your understanding of the expected outcomes for academic advising at MSU? How do the expected outcomes of advising connect with the work that you do?
7. Describe the role technology plays in your daily work in both academic advising and administrative responsibilities.
    a. What technology tools do you use most in your work?
    b. How do you use the tools?
    c. What is the purpose you use the tools for?
    d. What are the strengths of the tools? What are the limitations of the tools?
8. How would you explain the Student Success System to someone who knows nothing about it?
    a. How frequently do you use the SSS?
    b. What are the purposes for using it?
    c. What functions in the SSS do you use? What functions don't you use?
9. How could the Student Success System be better utilized in academic advising?
10. I've asked you a lot about your academic advising practice and the Student Success System. Is there anything else you would like to share?

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