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Advisor Perceptions of Technology in Academic Advising Practices in West Virginia Educator Preparation Programs

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ADVISOR PERCEPTIONS OF TECHNOLOGY IN ACADEMIC ADVISING PRACTICES IN WEST VIRGINIA EDUCATOR PREPARATION PROGRAMS

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APPROVAL OF DISSERTATION

We, the faculty supervising the work of **Kandice Kaye Rowe**, affirm that the dissertation, **Advisor Perceptions of Technology in Academic Advising Practices in West Virginia Educator Preparation Programs** meets the high academic standards for original scholarship and creative work established by the EdD Program in **Leadership Studies** and the College of Education and Professional Development. This work also conforms to the editorial standards of our discipline and the Graduate College of Marshall University. With our signatures, we approve the manuscript for publication.

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DEDICATION

This work is dedicated to my amazing children, Amanda and Tony. As a first-generation college student, nothing makes Momma prouder than knowing both of my children are Marshall University alumni. What a difference one generation makes! To my children, no matter where life takes you, never forget your roots. I am beyond proud of your accomplishments, and I love you, forever.

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To my Bugsy dog, thank you for the nightly comic relief. You always make me smile.

I can do all things through Christ who strengthens me – Philippians 4:13

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ABSTRACT

The purpose of this research was to gain, from the academic advisor's perspective, an understanding of what technologies are being used in advising practices, the effectiveness of these technologies, and advisors' perceptions of quality advising set forth by the Council for the Advancement of Standards in Higher Education. A qualitative phenomenological approach was utilized to connect academic advisors' perceptions of the usage of technology while participating in the advising experiences. Through a combination of purposeful and snowballing sampling techniques, academic advisors from fourteen educator preparation programs in West Virginia were chosen to participate in this study. One-on-one, semi-structured interviews were conducted with 21 academic advisors. The application of the thematic approach provided an understanding of the similarities and differences in participants' lived experiences and allowed themes to emerge organically. It was discovered that technologies such as videoconferencing tools, degree-auditing platforms, and Microsoft Office (Word, Excel, PowerPoint) were those most commonly utilized during the academic advising process. Technology training and support for both advisors and students provided a foundation for the effective management of technology-based systems. Technology issues, lack of internet access, lack of human connection, and level of understanding were most frequently identified as challenges faced by advisors when using technology. Academic advisors had mixed emotions about the integration of technology in the academic advising process. Findings suggest academic advisors supported the use of technology claiming it was more efficient for both advisors and students, less time-consuming, and provided a fail-safe; however, they were concerned with the lack of connectedness.

CHAPTER 1

INTRODUCTION

Academic advising, while viewed as a unique contribution to university life since the 1970s, is now crucial if institutions are to achieve goals of persistence and timely graduation (Thomas, 2017). Though the status of academic advising has been debated over the years, it is now considered a "profession" based on its growing literature base, graduate-level preparation programs, and documentable theory-based strategies to improve student learning (Aiken-Wisniewski et al., 2015; Schulenberg & Lindhorst, 2008; Shaffer, Zalewski, & Leveille, 2010). The number of full-time professional academic advisors has grown significantly over the last few decades (Self, 2013). An academic advisor is usually one of the first contacts for students after the admission process and the advisor often remains a consistent advocate throughout the students' academic tenure. Because of the important role they play on campus, full-time academic advisors are a critical aspect of higher education (Morgan, 2017).

In today's climate of declining revenues and higher enrollment standards, institutions must exert extra efforts to retain the students they have worked so hard to recruit (Gardner, 1986). Quality academic advising, as a profession, is touted as a tool used to encourage recruitment and increase retention. Academic advisors provide students with a personal connection to the various services available on campus. Any retention effort must clearly recognize the value of academic advising to the success of students and the necessity that advising become a central part of a collaborative campus-wide focus on student success (Nutt, 2003). Historically, the role of the traditional academic advisor is to ensure students enroll for, and are aware of, their program requirements; however, the profession has evolved into much more.

A medium to large four-year university recently posted a job description for a Director of Undergraduate Advising. The skills and abilities required include demonstrated knowledge of best practices in the application of technology, predictive analytics, and the factors affecting student retention, success, satisfaction, and graduation rates. The job description also calls for a willingness to embrace new technologies. The increase in responsibilities given to professional academic advisors has caused institutions of higher education to look toward technology in ensuring students' needs are met. Sally Shankland, president of McGraw-Hill's Higher Education group noted "While college enrollment has climbed in recent decades, graduation rates remain low, and educators across the country continue to work to identify new ways to increase student success," (Reed, 2016). Technology in higher education has proven to be a component of student success. It is extremely encouraging to see students recognize the innovative benefits of new technologies.

The surge in advising and planning technologies over the past ten years has opened an opportunity to reimagine the possibilities for advising, both in the kinds of planning conversations advisors can have with students and in the ability to monitor students' progress (Ireland, 2018). With the creation of advising platforms such as Navigate, today's institutions of higher education have the capacity to change how advisors interact with certain student populations and also meet institutional goals and needs. There is an increased understanding that the academic advising relationship and student learning have to be balanced with technology decision-making and implementation (Ireland, 2018).

Based on the National Academic Advising Association's (NACADA) 2011 National Survey of Academic Advising, the median case load of advisees per full-time professional academic advisor is 296 (Robbins, 2013). Advising a large number of students without

technological assistance can be a particularly overwhelming task. Whether meeting students face-to-face or virtually, advisors must approach each session with the same methodology ensuring each student, when their session is concluded, has all their questions answered and feel valued and understood.

Framework for Academic Advising Core Competencies

Students rely on advisors for academic information, assistance in navigating the university, locating, and understanding policies and procedures, and problem-solving and decision-making (Smith & Allen, 2014). Understanding the development of matriculating students is essential to those seeking to make a difference in these students' lives (Bigger, 2005). At the request of NACADA's leadership, the Academic Advising Core Competencies Model was developed. The purpose of this framework is to identify the broad range of understanding, knowledge, and skills that support academic advising, guide professional development, and promote the contributions of advising to student development, progress, and success (NACADA, 2017).

The framework consists of three broad core competency areas with more specific competencies identified in each area:

Conceptual Component - Concepts academic advisors must understand:

- The history and role of academic advising in higher education.
- NACADA's Core Value of Academic Advising.
- Theory relevant to academic advising.
- Academic advising approaches and strategies.
- Expected outcomes of academic advising.
- How equitable and inclusive environments are created and maintained.

Informational Component - Knowledge academic advisors must master:

- Institution specific history, mission, vision, values, and culture.
- Curriculum, degree programs, and other academic requirements and options.
- Institution specific policies, procedures, rules, and regulations.
- Legal guidelines of advising practice, including privacy regulations and confidentiality.
- The characteristics, needs, and experiences of major and emerging student populations.
- Campus and community resources that support student success.
- Information technology applicable to relevant advising roles.

Relational Component - Skills academic advisors must demonstrate:

- Articulate a personal philosophy of academic advising.
- Create rapport and build academic advising relationships.
- Communicate in an inclusive and respectful manner.
- Plan and conduct successful advising interactions.
- Promote student understanding of the logic and purpose of the curriculum.
- Facilitate problem-solving, decision-making, meaning-making, planning, and goal setting.
- Engage in ongoing assessment and development of the advising practice.

To achieve excellence in their work, regardless of the specifics of their individual campus' advising mission, all advisors must understand all three components and be able to synthesize and apply them as needed in advising interactions (NACADA, 2017). No two advising sessions

are the same. Academic advisors must understand and consistently apply these foundational elements for effective advising.

Technology in Academic Advising

Technology plays an important role in helping students successfully navigate through their university or college experience (Potts, 2018). Technology has influenced nearly every aspect of society in the past twenty years and higher education is no exception. The roles of teachers and learners have been expanded by technology. Likewise, technology has changed most of the admission, registration, and tuition payment administrative processes in higher education. Similarly, academic advising has also been transformed by the implementation of various technology platforms. When used appropriately, technology can enhance the advisor-advisee relationship, "especially when it raises the discourse of advising to a level beyond information giving by expediting, simplifying, or increasing access to information" (Leonard, 2008, p. 293).

Technological change is key to adapting modern advising practices that lead to a series of positive changes: personal and professional growth for advisors, enhanced student success practices and policies to service the mission of the college or university, and, ultimately, better support for students (Underwood & Anderson, 2018). Effective use of technology in advising contributes positively to the student experience, supporting goals toward increased retention and improving learners' academic success (Pasquini, 2011, para. 19).

Changes in technology to support advising practices may feel cumbersome or trivial, but they are often put in place to increase efficiency or productivity (Underwood & Anderson, 2018). If advisors are going to connect with their students, they must also be able to navigate the technologies the students use. The integration of technology has tremendously changed the way

in which information is distributed to faculty, staff, and students. These technological solutions include the use of asynchronous communication tools such as email and learning management system messages, and synchronous communication tools such as instant messaging, video conferencing, and social networking (Gordon, 2006; Habley, 2004).

The unexpected COVID-19 pandemic of 2020 challenged many colleges and universities as they were required to either cancel classes or modify their delivery to online or virtual options. The pandemic changed the way in which classes were delivered and altered the academic advising experience. During the times of uncertainties amid the COVID-19 pandemic, academic advisors were quick to respond with alternative advising modalities to ensure students' needs were met. Given the social distancing expectations, academic advising using technology has been more relevant than ever (Wicks, 2020).

From a technology-agnostic perspective, the technology itself is of little importance; it is what the technology allows the advisor to do that is important (Heiberger & Harper, 2008). Millennials interact with technology like no other generation before them and this behavior is affecting how they want to be taught in higher education and how they want to lead and expect to be led (Au-Yong-Oliveira, Goncalves, Martins, & Branco, 2018). If academic advisors want to reach their advisees, and their advisees are living in a digital world, then advisors need to become part of that world as well (Leonard, 2008). Education is constantly changing at all levels. Advisors must be able to adapt to changes that will enhance their job performance, in addition to championing their students.

In 2018, the Council for the Advancement of Standards in Higher Education (CAS) published a set of twelve Academic Advising Program (APP) Standards. Technology is represented as one of the APP Standards and is divided into four separate sections: 11.1 Systems

Management, 11.2 User Engagement, 11.3 Compliance and Information Security, and 11.4 Communication. The standards are provided in Appendix A.

The NACADA Academic Advising Core Competencies (2017a) together with the CAS Standards serve as a framework all academic advisors can use to examine their professional practice (cas.edu). The evolving manner by which students complete college degrees, including the blending of courses offered on a variety of campuses and online, places new challenges on academic advisors who must possess the tools needed to meet the demands of students in virtual space and across multiple institutions (Complete College America, 2013).

PROBLEM STATEMENT

A confluence of factors from widespread developments in higher education technology, to institutional accountability, has led to a broader debate about the role and legitimacy of technology-mediated approaches for advising in the 21st Century (Kalamkarian & Karp, 2015; Pasquini & Steele, 2016, Tyton Partners, 2017a, 2017b). Technology adoption at institutions of higher education is a particularly complex process involving multiple stakeholders. The Council for the Advancement of Standards in Higher Education (CAS), including NACADA, has developed a set of guiding principles for academic advising, including the use of technology in academic advising. Little research is available on how academic advisors should incorporate and include these practices into their day-to-day activities (Schultz, 2019). Therefore, this study will investigate the types of technology being used in advising practices, the effectiveness of these technologies as perceived by advisors, and advisors' perceptions of quality advising set forth by NACADA's Academic Advising Core Competencies and CAS's technology standard in Educator Preparation Programs in West Virginia.

RESEARCH QUESTIONS

The research questions developed to guide this study include:

1. What types of technology are academic advisors utilizing while advising students and to what extent?
2. What strategies/procedures are Academic Advising Programs (APP) using to ensure effective management of technology-based systems for delivery of academic advising programs and services?
3. How are APPs using technology to ensure effective user engagement in the academic advising process?
4. How are APPs ensuring that technology-based advising programs and services are legally compliant and secure?
5. How are APPs using technology to facilitate effective communication with all stakeholders and users?
6. How do academic advisors perceive the quality of effective advising via technology related platforms (Microsoft TEAMS, Zoom, etc.) as compared to face-to-face advising?
7. What challenges do academic advisors face when having to use technology while advising students?

SIGNIFICANCE OF STUDY

There is a paucity of research regarding the integration of technology, and the effect it has on the quality of academic advising practices. As indicated in the literature review, research on academic advising has historically focused solely on student satisfaction. There is a multitude of studies related to students' attitudes toward services rendered and the advisor/advisee relationship, in general. Subsequently, the majority of studies focusing on technology in

academic advising have investigated the broad use, applicability, and adoption of technology; not how it has changed advisors' practices. Most recently, there has been an influx of research looking at academic advising through the eyes of the professional advisor. While these studies help fill the gaps within academic advising literature by focusing on the providers rather than on the recipients of academic advising, a greater understanding is still needed (McGillen, 2000). In March 2020, many colleges and universities began working remotely due to the COVID-19 pandemic. Academic advisors, who traditionally met with students face-to-face, were suddenly forced to find new ways to reach their students. Moving forward, advisors will need to explore new methods using technology to service their students – making the mantra "meet students where they are" more relevant than ever (Wicks, 2020). This study will provide information regarding what technologies are being utilized, how they are being utilized, and by whom.

DELIMITATIONS

This study will use NACADA's Core Competencies and the Council for Advancement of Standards in Higher Education (technology standard) as a framework. Only professional academic advisors in West Virginia institutions that house an educator preparation program (EPP) that leads to a Bachelor of Arts degree in Early Childhood, Elementary, or Secondary Education were included in the population of this study.

COVID-19 PANDEMIC

Millions of people worldwide were affected by the COVID-19 pandemic which swept across our nation with a vengeance in 2020 and caused the shutdown of a multitude of businesses, restaurants, churches, and schools. Institutions of higher education were forced to close their doors and pivot to an online or virtual classroom setting. All workers, except those

deemed as essential, were required to stay home and quarantine as a means to prevent the spread of the COVID-19 virus.

NACADA recently surveyed faculty and staff advisors regarding best advising practices during the COVID-19 pandemic. Three specific themes emerged from this study: the scope of advising, technology, and training. The scope of advising has shifted since advisors began working from home. Many advisors became hyper-focused on students' well-being, instead of their academic needs. One advisor was quoted as saying, "much of my advising centered around personal issues of stress and depression rather than academic problems" (Nicklin, Shattuck, and Segool, 2022).

Technology was a major theme in the survey. Over the past years, many new technologies such as degree-auditing platforms and electronic scheduling applications, have been introduced to the advising profession, however, advisors were still systematically choosing to meet with students face-to-face. The onset of the COVID-19 pandemic allowed academic advisors to showcase their flexibility and creativity regarding online advising strategies, procedures, and keeping in touch with students. Advisors discussed both the positive and negative aspects of utilizing technology while advising. There was a clear tension between the desire for personal face-to-face interactions with the recognition that technology provided both accessibility and convenience (Nicklin, Shattuck, Segool, 2022). Technology may not always be the best avenue to develop rapport and establish trust, but advisors will need to find that balance between relationship building and accessibility options.

Both the scope of advising and the use of technology illustrates the need for training, or professional development, which is the third theme that emerged from the survey. Advisors are not professional therapists, counselors, or IT experts; therefore, knowledge and skill

development must be supported to match the scope and evolving demands of the job (Nicklin, Shattuck, Segool, 2022).

The inclusion of this statement is to facilitate the reader's awareness, both now and in the future, that the pandemic may have had an effect on the scope, direction, and presentation of the research gathered in this study.

The literature review for this study was completed prior to the onset of the COVID-19 pandemic. The pandemic caused travel restraints which in return, caused the inability to conduct face-to-face research. Additionally, participants' responses may have been impacted due to the change in work conditions and the increased use of technology while working from home. The academic standards and quality threshold remains unchanged. This study does not lack original research or intellectual rigor.

CHAPTER SUMMARY

To be effective in their roles, academic advisors have needed to hone skills, such as attending to and providing support for non-verbal cues (Hunter & White, 2004; Smith, 2005). Effective listening is a critical skill, especially in today's technological world. Traditionally, academic advising has been considered a personal, one-on-one, face-to-face process. Most recently, academic advisors are being encouraged, if not required, to become proficient in technology, in addition to remaining relevant and effective. When advisors are asked to do more with less, technological solutions are being considered to increase students' access to information and interaction with their advisors (Multari, 2004).

The implementation of technology in academic advising has grown rapidly over the past ten years. Academic advisors can be dynamic agents of change (Underwood & Anderson, 2018). More often than not, academic advisors are not responsible for or involved with, key changes to

academic policies and university procedures, however, they are responsible for laying the groundwork when it comes to implementing academic modifications. Academic advisors are also well positioned to determine how new practices and policies will influence their work with other offices as they frequently collaborate with others. (Underwood & Anderson, 2018). Advisors are not always open to change, but that is not always the case. Some advisors believe the tradition that advising must be a face-to-face profession, but as in many occupations in today's society, that it no longer the case. Advisors must be willing to do what is in the best interest of their students, regardless of their level of competence with technology.

Change in higher education is inevitable, but as students' needs change, advisors will have to adapt to new technology platforms to provide better support (Underwood & Anderson, 2018). One way to embrace this inevitable change is to focus on how advising technologies can make work more efficient (Underwood & Anderson, 2018). Technology is shifting the traditional advisor-advisee model that has been the basis of most advising administrative practice to date (Esposito et al., 2011, p. 261). Available research indicates that "academic advising quickly grasped the power of technology to free advisors from the more tedious aspect of their work" (White, McCalla-Wriggins, & Hunter, 2007). Academic advisors are entrusted to communicate accurate information to faculty, staff, administrators, and especially students, in a timely manner. Looking forward, advisors need to be aware of and open to new and different approaches to better support their students. If the implementation of new technologies improves those lines of communication and keeps all who are involved well informed, then advisors are moving in the right direction.

CHAPTER 2

LITERATURE REVIEW

Academic advising is an interactive process in which the advisor helps the student set and achieve academic goals, acquire relevant information and services, and make responsible decisions consistent with interests, goals, abilities, and degree requirements (NACADA, 2003). The history and development of academic advising in the United States parallel and reflects the history and development of higher education (Cook, 2009). In the late eighteenth century, America gave birth to its first colleges: Harvard, William and Mary, Yale, New Jersey, King's, Philadelphia, Rhode Island Queen's, and Dartmouth (Rudolph, 1990). During this time, enrollment was meager, the curriculum was limited, and the focus concentrated on the moral and intellectual advancement of the student. The proliferation of colleges throughout the nineteenth century provided a time for academic guidance to secure its place in education and advising groups began to emerge (Gordon, 1992). Because of the growth in enrollment and the expansion of programs, advising became driven by the curricula and less about personal control of the student. Record numbers of students attended college in the twentieth century thus the professionalization of the academic advisor was established. The explosion of the community college and new student populations such as more first-generation and lower-income students, underprepared students, re-entry students, disabled students, and international students required individualized academic adjustment and planning (Cook, 2009). The movement of advising throughout history has offered practitioners valuable insight into theories and issues that continue to be of relevant concern to the world of academia (Gillespie, 2003).

THE HISTORY OF ACADEMIC ADVISING

The history of U.S. higher education is a chronicle of continuing growth and diversity of higher education institutions, their curricula, and their students (Cook, 2009). In the early years, colleges catered to the education of wealthy young men who were studying to become doctors, lawyers or clergymen. The curriculum was rigid and extremely prescriptive with no opportunity for elective courses. The population was relatively small which allowed the president or a faculty member to individually attend to the needs of their students. During this time, students and faculty often shared residence providing the faculty a close, disciplinary relationship with the students both in, and out, of the classroom (Brubacher & Rudy, 1997). The American university's administration and structures are a result of the influences of the political and social structures that influenced their creation and growth from their inception (Thelin, 2004). During the colonial period, the president of the college and the faculty acted as "in loco parentis" (Bush, 1969, p. 593) overseeing "the extracurricular activities, moral life and intellectual habits" of students (Cook, 2001, p.1). Teaching and learning took place in the traditional lecture method, and the faculty knew students thoroughly because they lived on campus with the students (Thelin, 2004). Faculty members were more than academicians, as most also carried out a multitude of administrative responsibilities and clerical tasks. During this period in time, students shared a communal curriculum that resulted in little need for prescriptive academic advising, as all students took the same courses. Academic advising in higher education had not yet been well defined.

Higher Education Before Academic Advising Was Defined

New training, jobs, and attitudes drove a change in higher education in America after the Revolutionary War (Frost, 2000). The politics of the day influenced a shift toward greater

individualism and the accomplishment of personal goals and drifted away from service to the community through the church, law, and medicine (Frost, 2000). The mission of the college was modernized and the opportunity to earn an education was amended to include those who were not just wealthy young men. In addition to the changing mission, the curriculum also expanded and changed to equip citizens with better skills and knowledge necessary for the growth of the newly formed country (Frost, 2000; Potts, 1971). The paternalism that had once been the norm in the classes and dormitories was disappearing (Gillespie, 2003). Faculty in America became less involved and less concerned with their students' extracurricular activities and morality and began to treat their students as freethinkers who were responsible for their own academic choices. Several national developments continued to change colleges and universities, as well as shape the need for academic advising (Moore, 2014). After the Morrill Acts of 1863 and 1869 motivated the founding of land grant institutions and Black colleges and universities, the inclusion of practical subjects into the curriculum made higher education available to more students (Cook, 2009). The outcome of the land grant movement was a change in the social structure and led to the idea of going to college being "liberated from the class-bound, classical-bound traditions which for so long had defined the American collegiate experience" (Rudolph, 1990, p. 263). The land grant institutions of the nineteenth century loosely mirrors the vocational-technical schools of today. The curricular emphasis in the land grant colleges was on the "the useful arts, such as agriculture, mechanics, mining and military instruction" as well as the liberal arts (Thelin, 2004, p. 76).

Higher education in the United States was progressing. Updates to the mission of colleges and expansion of the curriculum were just the beginning of this academic evolution. Some institutions began admitting women, and in 1840, Catherine Brewer became the first woman in

the United States to graduate with a bachelor's degree. By the 1860s, it was commonplace to see a woman studying on campus, as many institutions of higher education began offering collegiate degrees to women. As this diversification of students, curricula, and institutions continued, the need for more specialized services for students also grew (Cook, 2009).

Academic Advising As A Defined And Unexamined Activity

The period between the late nineteenth century and the early 1970s is known as the time when advising was a defined, yet unexamined activity, mostly still the responsibility of the faculty member. While academic advising was being practiced, no systematic process had been developed or perfected. A plethora of changes occurred in higher education over the next several decades that affected, shaped, and influenced the development and implementation of academic advising for both students and faculty.

Charles William Eliot served as President of Harvard University for a record-breaking forty years. During his reign, President Eliot transformed Harvard into a modern-research university and had a far-reaching impact on higher education in the United States. One of Eliot's most influential reforms was the development of a system of "spontaneous diversity of choice" in which undergraduates selected most of their own courses. This system, better known as the elective system, changed the idea of what it meant to be "educated". The elective system brought a "new spirit of inquiry" (Rudolph, 1990, p. 294) and allowed students to pursue their own individual interests based on what Eliot called their "natural preferences and inborn aptitudes" (Rudolph, 1990, pp. 293-294). The changes in curricula and the implementation of various courses triggered the increased need of faculty advising to ensure student success.

Also important during this time in history was the influence of the booming economy that produced numerous millionaires who invested in institutions of higher learning and who had

great interest in potential benefits that could be gained from research and invention in higher education (Frost, 2000). Research opportunities and funding became extremely attractive to faculty members. The "formation of academic departments, the development of research-oriented graduate schools and the emergence of reward systems tied to research efforts, altered the values of faculty" toward research over advising and in some cases teaching (Daller, 1997, p. 7). Faculty members conducting research contributed to the distance between faculty and students.

The period following World War II was one of tremendous demand for higher education (Morgan, 2017). This demand was fueled in large part by to the Serviceman's Readjustment Act of 1944, more commonly known as the GI Bill (Geiger, 2005). The GI Bill offered different types of benefits including new hospitals and low-interest mortgages; however, perhaps the most prevalent benefit was the distribution of stipends, which covered tuition and expenses for veterans attending college or trade schools. The GI Bill opened the door of higher education to the working class in a way never done before and as a result, almost 49 percent of college admissions in 1947 were veterans (2010). Despite the impact, the GI Bill of Rights had on transforming American higher education and its students, college and university stakeholders feared it would negatively change campus life, as they knew it (Cook, 2009). "The inconveniences to all have been many. Colleges have had to admit many more students than they wished. The faculty teaching load has been greatly increased" (Strom, 1949, p. 159). Faculty are experts in their field and are obligated to teach. The upsurge in faculty research and intensification of the teaching load, in addition to an amplified enrollment, did not leave much time for supplemental responsibilities such as academic advising.

Academic Advising As A Defined And Examined Activity

According to Habley and his colleagues (2012), a series of events propelled academic advising to the forefront of higher education beginning in 1970. Growth of community colleges, open admissions, and federal programs of financial support brought first generation college attendees, students from lower socioeconomic circumstances, less academically prepared students, adults, those with disabilities, and other new students who required a different approach to services, including academic advising, than had been traditionally offered (Cook, 2009). These types of adjustments in higher education laid the foundation for the exploration and adaptation of academic advising. In order to legitimize and validate the academic advising profession, change had to occur. As diverse populations of students entered college, the recognition of advising as a process rather than a one-stop contact became apparent (Grites & Gordon, 2009). Seminal articles by Crookston (1972) and O'Banion (1972) helped situate the formation of the emerging discipline by offering some theoretical and philosophical groundwork, exploring what it meant to "advise." While history states designated personnel in higher education have been performing academic advising duties transitorily, it was not yet considered its own profession.

In 1972, the Carnegie Commission on Higher Education emphasized the need for academic advising, stating it was an increasingly important function in higher education (Grites & Gordon, 2009). Both faculty advisors and those performing advising duties recognized the need for a professional advising organization where various interests and needs could be researched and discussed. Thus, NACADA, the National Academic Advising Association, was conceived. Development of such an organization meant that advisors need no longer search for a place to present a professional program, wonder where to engage in discussion about roles, tasks, issues, and ideas related to academic advising, or seek venues to publish their thoughts (Grites & Gordon, 2009). By establishing goals and core values for academic advising, NACADA has

operationalized the term academic advising, allowing it to be systematically studied (Habley, 2000).

In 1977, the first national conference focusing solely on academic advising was held with approximately 275 professionals in attendance. As the number of professional advisors grew, so did the need for a professional association. NACADA's most recent national conference occurred October 2019 in Louisville, KY. Over 3,300 advisors and faculty members joined together to discuss advising at their institution, and to attend various workshops and presentations. The growing number of members and the abundance of participants at the conference solidifies the importance of the NACADA association to professional academic advisors.

NACADA not only afforded advisors the opportunity to have academically sparked conversations, and a place to present advising research, it also supported the creation of a new and improved definition of the profession. NACADA (2005) defines academic advising as a "series of intentional interactions with a curriculum, a pedagogy, and a set of learning outcomes" (Summary section, para. 1). Academic advising goes beyond reviewing graduation requirements; it considers students' individual and unique experiences, achievements, and goals in order for their learning and development to transcend the classroom and campus boundaries (NACADA, 2005).

ADVISING MODELS

Appreciative Advising

Appreciative advising is a relatively new advising model that is rooted in the appreciative inquiry business model whose goal is to actively search for the best in people and organizations (Lyons, R., Sandeford-Lyons, S., Singleton Jackson, A. E. (2010). Institutions of higher

education are continuously examining different methods in order to increase student retention and success. Appreciate advising fits perfectly into that model. Appreciative Advising is the intentional collaborative practice of asking generative, open-ended questions that help students optimize their educational experiences and achieve their dreams, goals, and potential (Bloom, J.L., Hutson, B.L., & He, Y. (2008). Academic advising continues to be an activity that supports the student experience as well as student retention because of the work of advisors who keep enhancing advising practices (Higgins, 2017). Appreciative advising focuses on the relationship between advisor and student. Dr. James Comer (1995) captured it best when he said, "No significant learning can occur without a significant relationship." Students want to feel a connection and yearn for relationships, especially first-time freshmen and those living on campus away from friends and family.

The first phase of the appreciative advising model is to disarm. Whether it is face-to-face or virtual, advisors need to ensure students feel safe and welcomed during each advising encounter. Advisors must continuously be aware of their actions and words and understand what they say, and how they say it, can affect students in either a positive or negative way. If a student has a negative experience with an advisor, the student may conclude that advising is not a valuable experience (Ohrablo, 2017). The Discover phase encourages students to express their strengths and passions and how they connect with their future goals and academic plan. By asking open-ended questions, in a positive manner, this phase provides the advisor insight into their students' background and specific characteristics and qualities. The building of relationships and trust commences in this phase. The third phase in the Appreciative Advising model is dream. This phase promotes a vision if you will. As freshmen, students may struggle to see the bigger picture. This phase allows students to imagine life after graduation and the actual

fulfillment of their dream. Advisors need to reassure students that their dream is possible and encourage them to realize there is no right or wrong answer when it comes to a dream.

The Design phase is perhaps the most significant to academic advisors, as it is the nuts and bolts of advising. Helping students create and develop concise goals, and an academic plan to help achieve those goals, are at the core of academic advising. Conversations regarding various routes to goal achievement and their pros and cons are discussed during this phase. Student responsibility and follow-through are key in the Deliver Phase. An academic plan is in place and goals are set, now it is up to the student to meet each benchmark laid out for him or her. In this phase, the advisor is easily accessible to answer questions, review progress and provide encouragement, however, the student is held accountable for his or her actions. The last phase is Don't Settle. Advisors are charged with guiding students toward continuous improvement by setting new expectations and goals to help them achieve improved performance. During this time, students and advisors work collaboratively to re-evaluate and adjust academic plans, if necessary, as they work toward achieving their goals. This is a time to reflect on the past and contemplate the future.

Prescriptive Advising

Prescriptive advising is linear communication from the advisor to the advisee and places most of the responsibility on the advisor, not the student. The model of prescriptive advising charges the academic advisor with telling the students what to do and, in return, the students do it. "Prescriptive advising is generally initiated by the student because the goal of this approach is to address immediate questions to facilitate the student's progress through his or her academic program; it is often referred to as the doctor-patient relationship model" (Crookston, 2009, p.

80). Prescriptive advising, at times, has also been referred to as the "McDonaldization of Advising" (Matheson, Moorman, & Winburn, 1997).

George Ritzer in his McDonaldization of Society addresses four basic and alluring dimensions of modern life: efficiency, predictability, quantifiable and calculated service, and control (Ritzer, 1993). Nearly every aspect of society has fallen prey to the influence of McDonaldization. The "fast food" mentality has become an integral part of life (Matheson, Moorman, Winburn, 1997). We, as a society, want instant gratification. We want what we want when we want it. This process has changed not only the restaurant industry but also banking, dieting, shopping, work, travel, family, and education (Ritzer, 1993).

Advisors increasingly focus on making the advising process as quick, efficient, and as painless as possible, while assuming the quality of student advising remains constant – if not improving, however, faster is not always better, especially when long-term benefits may be sacrificed for more immediate results (Matheson, Moorman, Winburn, 1997). While prescriptive advising has the advisor telling the student what to do, it is ultimately up to the student to follow through. Twelve major themes in advising identified by Creamer and Creamer (1994) included viewing students as partners in the advising process, recognizing the positive relationship between good advising and student persistence, and tying effective advising to positive educational outcomes and institutional effectiveness. Perhaps the most important part of any successful advisor/student relationship is a sense of shared responsibility: Students learn by taking control of their own choices and finding ways to handle the consequences of those decisions (Academic Advising in Higher Education). McDonaldization of advising may not allow students the opportunity to maximize their educational experience (Matheson, Moorman, Winburn, 1993). The prescriptive advising model is based on the student viewing the advisor as

an authority figure whose primary responsibility is to dispense information about classes and schedules and prescribe solutions for problems students may encounter (Winston & Sandor, 1984).

Intrusive Advising

Intrusive Advising involves intentional contact with students with the goal of developing a caring and beneficial relationship that leads to increased academic motivation and persistence (Varney, 2007). Traditionally, students reach out to their advisor when they are experiencing some type of difficulty. Intrusive advising, or Proactive advising, as it is referred to by many requires advisors to reach out to students, rather than waiting to see if students reach out to them. "Intrusive advisors try to anticipate and look for issues, concerns, roadblocks…anything that has or could potentially get in the way of a student interacting in the course and being successful," Varney says. "The goal is to help the student feel cared for by the institution. And, in taking a proactive approach, rather than waiting for problems to occur and reacting, advisors are able to demonstrate this care." (Varney, 2007).

The intrusive advising method is frequently applied to those students designated as at-risk populations such as student athletes, those on academic probation, and first-generation students. Often times these at-risk groups need additional assistance in order to remain academically successful. Consistent, informal advisor-initiated outreach is an effective method for providing information to students while demonstrating concern (Ohrablo, 2017).

Students who perceive that someone cares about them and that they belong to the school community are more likely to be academically successful than those who do not feel any sense of care from the institution (Heisserer & Parette, 2002). Habley (1994) tells us that academic advising is the only structured activity on the campus in which all students have the opportunity

for ongoing, one-on-one interaction with a concerned representative of the institution (p. 10). It is only natural for the advisor to step into this role and serve in these intrusive activities.

Developmental Advising

The development of the whole student – intellectually, personally, and socially – has been a stated goal of higher education long before academic advising was associated with student success. (Gordon, 1994). Many articles document the benefits of developmental advising; however, some evidence shows little to no progress has been made in implementing developmental advising consistently across campuses (Habley & Crockett, 1988). Development is essential both to the advising relationship, which develops over time, and to the students, who are developing as they move through their college experience. The needs of a first-year student are typically different from those of a senior, and developmental advising responds to those and other changing needs (University of Richmond).

While much has been written about developmental advising and its definitions, most institutions have not fully implemented this advising model. The reasons for the lack of developmental advising are complicated by multiple factors at each institution such as the size of the campus, the predominant type of student, the philosophy of and emphasis on advising, the level of administrative support for advising, the type of delivery system and who performs advising (Gordon, 1994). Perhaps, the easiest way to understand the concept of developmental advising is to compare prescriptive and developmental advising techniques using the chart below developed by Crookston:

Table 1

Prescriptive Advising Compared to Developmental Advising

Prescriptive Advising	Developmental Advising
Advisor tells student what he/she needs to know about programs and courses.	Advisor helps student learn about courses and programs and self.
Advisor knows college policies and tells students what to do.	Advisor tells student where to learn about policies and helps in understanding how they apply to him/her.
Advisor informs about deadlines and follows up behind student.	Advisor informs about deadlines, then lets student follow up.
Advisor tells student which classes to take.	Advisor presents class options; student makes own selections.
Advisor keeps informed about academic progress through files and records.	Advisor keeps informed about academic progress through records and talking to student about academic experiences.
Advisor tells student what to do in order to be advised.	Advisor and student reach agreement about nature of advising relationship.
Advisor uses grades and test results to determine courses most appropriate for student.	Advisor and student use grades, test results and self-determined interests and abilities to determine most appropriate courses.
Advisor specifies alternatives and indicates best choice when student faces difficult decisions.	Advisor assists student in identifying alternatives and weighing consequences when facing difficult decisions.
Advisor suggest what student should major in.	Advisors suggests steps students can take to help decide on major.
Advisor identifies realistic academic goals based on grades and test results.	Advisor assists student in identifying realistic academic goals based on grades, test results and self-understanding.
Advisor is concerned mainly about academic life of student.	Advisor is concerned about the personal, social and academic life of student.
Advisor provides information mainly about courses and class schedules.	Advisor provides information about workshops and seminars in areas such as career planning and study skills, in addition to courses and class schedules.

CHAPTER SUMMARY

Regardless of which academic advising model is being utilized, know one thing, it will be intertwined with various technology-related platforms. Changes in technology to support advising practices may feel cumbersome, or trivial, but they are often in place to increase efficiency or productivity (Underwood & Anderson, 2018). The use of technology will never replace the relationship between advisor and student, but there are certain places where it can enhance the connection. Advisors must choose the best possible outcome when deciding on which technology to use when working with students, whether it is in person or virtual.

CHAPTER 3

METHODS

The proposed study will survey academic advisors and their perceptions of the systematic utilization of technology. This chapter outlines the research methodology and specific procedures to be used to conduct this study, including research design, sample, instrument development and validation, data collection, data analysis, and limitations.

RESEARCH DESIGN

A qualitative research design will be employed to explore advisors' perceptions of the use and effectiveness of technology in academic advising. One of the key elements in qualitative research is "an interest in meanings, perspectives, and understandings" (Woods, 1999, p. 2), in this study as experienced by the academic advisor. Qualitative research is multi-method in focus, involving an interpretive, naturalistic approach to its subject matter; this means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them (McLoed, 2019).

Qualitative research methods provide a way to investigate in depth the phenomenon being studied, resulting in a more holistic understanding (Creswell, 1998). This design approach was selected as it allows the researcher to dig deeper into the perceptions of academic advisors and the quality and effectiveness of advising while utilizing technology. Qualitative research methods will be used to compile demographic data such as age, gender, campus role, and advisee caseload, as well as identify the various types of technologies being used.

This study will apply the phenomenological approach to connect academic advisors' perceptions to the usage of technology while participating in the advising experience. The approach was chosen as it describes the common meaning for several individuals of their lived

experiences of a concept or phenomenon (Creswell, 2013, p.76). While academic advisors appear to have similar goals associated with student success, identifying, and understanding their perceptions of how technology assists with those goals will be interpreted and clarified. Schwandt (2007) indicates that phenomenology is the study of "everyday experience from the point of view of the subject" (p. 226). Those whose primary role is advising students have daily experiences that provide information and understanding regarding the use of technology and its effectiveness while advising.

Perceptions are the primary source of knowledge in phenomenological studies derived from first-person accounts of experiences (Moustakas, 1994). Since the purpose of this study is to explore academic advisors' perception of the role of technology in academic advising, this research framework was appropriate.

POPULATION AND SAMPLE

According to the West Virginia Department of Education, there are twenty institutions of higher education, both private and public, in West Virginia that house a traditional state-approved educator preparation program. The population for this study will consist of academic advisors, such as faculty, administrators, or assistants, who perform advising duties and who are also employed by an educator preparation program that leads to a Bachelor of Arts degree in education. Deans, Associate Deans, or Program Directors within the educational unit which houses the college or school at each institution will be contacted and asked to identify those whose primary role is academic advising. Once this group has been determined, each will be individually contacted via email and asked to participate in the study. The study sample will consist of those advisors who are willing to participate in the study and be interviewed.

A combination of purposeful and snowballing sampling techniques will be used to identify participants. Purposeful sampling is often used in qualitative research as it involves the identification and selection of individuals or groups of individuals that are especially knowledgeable about or experienced with a phenomenon of interest (Creswell & Plano Clark, 2011). Snowball sampling will be used to expand the identification of potential study subjects. In sociology, "snowball sampling" refers to a non-probability sampling technique (which includes purposive sampling) in which a researcher begins with a small population of known individuals and expands the sample by asking those initial participants to identify others that should participate in the study (Crossman, 2019). Information regarding academic advisors in a particular program is not readily available. Snowball sampling will provide the information necessary to identify additional participants. A sample of at least 20 academic advisors would be appropriate for this type of study.

DATA COLLECTION

As is customary in a qualitative research study, the researcher acts as the primary instrument for data collection. Advantages of this model are the ability to explore unexpected responses for clarity and check with participants for accuracy of interpretation (Merriam, 2002). One-on-one, in-depth, semi-structured interviews will be conducted by the co-investigator (Glesne, 2006; Spradley, 1979). Interviews will be guided by the interview protocol and will take place via Microsoft TEAMS, Zoom, the telephone, or in-person, whichever is most convenient for the participant. Request to record the interview will be made prior to the actual meeting. Written transcripts will be developed and transcribed verbatim with very little commentary added to illustrate the actions of the interview including pauses in speech and to include any additional explanations. Study subjects will be given the opportunity to share their perspective

about the types of technologies they use, the effectiveness of these technologies, the quality of advising while using technology, and the challenges they have encountered.

INSTRUMENT DEVELOPMENT AND VALIDATION

The purpose of this study is to understand how academic advisors in higher education use technology and explore their perceptions of the usage of technology. Interviewing the participants was a clear choice, as the process allows the researcher to prose advisors' perceptions regarding technology and provides the opportunity for clarification and explanation, if needed. When conducting phenomenological interviews, asking appropriate questions, and relying on participants to discuss the meaning of their experiences require patience and skill on the part of the researcher (Creswell, 2013). The CAS Technology Standards and the NACADA Academic Advising Core Competencies, in addition to the literature review, guided the development of the interview protocol. Interview protocol questions mirror the technology standards in an effort to determine whether the academic advisor (or the program) is following the standards and technology guidelines provided.

The interview protocol consists of general demographic inquiries and eleven open-ended questions directed at exploring advisors' perceptions' of integrating technology into quality academic advising. A pilot study designed to validate the interview protocol will be conducted prior to scheduling the formal interviews. A description of the study's purpose and an explanation of the research questions will be provided to interviewees prior to the interview. Feedback from the pilot study will contribute to the validity of the interview protocol and provide the opportunity to improve questions and address formatting issues. The pilot study provides validation and helps to ensure questions are presented clearly and concisely so the

researcher is able to petition the collection of the necessary information for the purpose of the study.

DATA ANALYSIS

Once the interviews have been completed and data have been collected, organized, and prepared for analysis, coding can begin. According to Bogdan and Biklen (2007) in order to find codes, the researcher must analyze the data for patterns and topics and then record words and phrases to represent these topics and patterns (pg. 173). Development of codes must be completed before creating coding categories. After the codes have been identified, thematic analysis can begin. Themes in qualitative research (also called categories) are broad units of information that consist of several codes aggregated to form a common idea (Creswell, 2013, p. 186).

Creswell's steps for data analysis in a qualitative research study (2014, p. 196-200) will be applied to ensure validity. Interpretation in qualitative research is a process that begins with the development of codes, the formation of themes from the codes, and then the organization of themes into larger units of abstraction to make sense of the data (Creswell, 2013). The final step of thematic analysis is the synthesizing of the data to allow themes to emerge organically. The application of a thematic approach will provide an understanding of the similarities and differences in their lived experiences.

LIMITATIONS

The limitations to this study are those that are found in almost all qualitative research studies, including the researcher's personal biases and characteristics. Personal biases can cause skewed data and distorted findings. Limitations should be kept at a minimum by strictly

following the guidelines for semi-structured interviews, authentic dictation of recordings, and accurate, word-for-word transcription. To validate the accuracy of the transcripts, member checking will be implemented once the entire written narrative is complete. Member checking is the process in which interview participants are asked to review the narrative for accuracy and exact interpretation. This technique is considered by Lincoln and Guba (1985) to be "the most critical technique for establishing credibility" (p. 314). In addition to member checking, triangulation will be used to validate findings. This process involves corroborating evidence from different sources to shed light on a theme or perspective (Creswell, 2013). When researchers utilize data to create a code or theme from various suppliers of data, they are triangulating information and providing validity.

CHAPTER SUMMARY

In summary, this study is exploratory and will provide information about the perceptions of technology among academic advisors to help understand the experiences higher education institutions encounter with technology and academic advising. The participants were selected from the twenty institutions of higher education in West Virginia with a traditional state-approved educator preparation program. Participants were academic advisors or those whose role is academic advising, in the college or school of education at each institution. An interview protocol was validated and followed for each interview, whether it was online or in-person. Thematic analysis of data provided thoughts for conclusions, implications, and recommendations regarding technology usage in academic advising.

CHAPTER 4

FINDINGS

This chapter provides study findings and is organized into sections including data collection, characteristics of participants, organization of advising services, typical advising sessions, and themes created for each research question. A final section of this chapter provides a summary of the major findings.

DATA COLLECTION

Twenty-one interviews were conducted for this study. Academic advisors, or those individuals who identified as advising students currently enrolled in an undergraduate educator preparation program in West Virginia, constituted the study sample. Additionally, all interviewees have experience advising both in-person and via technological platforms.

The West Virginia Department of Education's website identifies each school in the state which offers an educator preparation program. An email was sent to the Dean of each school or college of education requesting their assistance in identifying the best interview candidates at their institutions. These emails included the letter of intent, the study abstract, survey consent, and a copy of the survey instrument (See Appendices E, F, G, and H).

While each university was asked to identify at least one person to interview, five EPPs provided more than one name. Four advisors from West Virginia University at Parkersburg were interviewed and two advisors from each of the following institutions were interviewed: Davis and Elkins College, Marshall University, West Virginia State University, and West Virginia University. The remaining institutions provided one name for interview: Alderson-Broaddus University, Bluefield State College, Concord University, Fairmont State College, Glenville State College, Shepherd University, University of Charleston, West Liberty University, and Wheeling

Jesuit University. Fourteen out of fifteen universities responded to the request for an interview. Various potential interviewees at one educator preparation program were contacted multiple times but never responded.

Once potential interviewees were identified, emails were sent to each individual requesting their participation. An email response indicating interest in participating in an interview served as consent. A follow-up email expressing thanks for their willingness to be interviewed and scheduling a time to complete the interview was then sent. This process was completed in one to two business days. Most interviews were completed within one week of initial contact with the participant. Twenty-one interviews were completed with advisors at fourteen different educator preparation programs.

The snowball sampling method was also implemented. At the close of each interview, the participant was asked to recommend any other qualified individuals that should be interviewed. This process led to another qualified advisor from West Virginia University completing an interview. The interview process began on September 15, 2021, and concluded on November 11, 2021. Each interview took 60 minutes to complete.

Twenty of the 21 interviews were completed using the Microsoft TEAMS Videoconferencing Platform. One participant could not connect with Microsoft TEAMS; therefore, the interview was completed over the telephone. The Microsoft TEAMS Videoconferencing platform has a built-in option to both video record and transcribes meetings. All participants were asked ahead of time and then confirmed during the actual interview if recording and transcribing were permitted. All interviewees granted permission for both video and audio recording and transcription. Extensive written field notes were also taken during each interview and transcribed by hand.

CHARACTERISTICS OF PARTICIPANTS

Sixteen (76%) of the 21 participants identified as female and five (23%) as male. The age groups ranged from one (5%) participant between the age of 20 and 29, two (10%) participants between the age of 30 and 39, seven (33%) participants between the age of 40 and 49, nine (42%) participants between the age of 50 and 59, and two (10%) participants 60 plus years of age. While academic advisors were interviewed for this study, only two (10%) participants are full-time advisors; all other respondents are in various positions in higher education and academic advising is not their only responsibility. One (5%) participant serves as the Certification Officer for their institution but also advises students. All other participants (85%) are faculty members, with several also holding positions of leadership such as Education Department Chair (four – 19%), one (5%) Program Director, and one (5%) Clinical Placement Director.

The two full-time academic advisors have several students assigned to them; advisor one is assigned approximately 150 students; advisor two is assigned approximately 325 students. The Certification Officer has 70 students assigned. All other faculty advisors have a range (R=9-50; M=31) of students assigned to them each semester. Of the twenty-one participants interviewed, six (28%) have been advising for one year or less, two (10%) have been advising for two years, three (14%) for three years, four (19%) have been advising for four years, two (10%) for nine years, one (5%) for seven years, one (5%) for thirteen years and two (10%) for fifteen years.

Interview findings were collected, classified, and central themes identified. To protect participants' confidentially, responses were not labeled by number as some institutions had a smaller number of respondents than others. Participant quotes were used to support the emerging themes.

MAJOR FINDINGS

This section of Chapter Four presents the organization of advising services at various institutions and typical advising sessions, in addition to, a comprehensive summary of participant interview responses organized by the seven research questions.

Organization Of Advising Services

Of the fourteen educator preparation programs represented in this study, no two institutions currently have a similar infrastructure for advising. All but two of the academic advisors interviewed are either faculty members or university personnel who have other work-related obligations. For instance, one of the medium-sized educator preparation programs has an advising system in place which houses all students until they have completed thirty credit hours and have earned sophomore status. This particular advising center is not limited to education majors only, as it includes all freshmen for the institution. Once a student achieves thirty credit hours, he or she will declare a major and then be reassigned to a faculty member within that department. There is no specific position of academic advisor for the institution. According to one interviewee, “advising is just part of our responsibility as a faculty member.”

In one of the smaller institutions, all education majors are advised by the three faculty members within the department. New freshmen advisees are assigned by the Director of Teacher Education whenever they officially declare a major. Once assigned, the Admissions Office is notified, and the student’s curriculum is entered into a ‘self-service portal’. Students can view their transcripts, ACT/SAT scores, Praxis test scores, and required course lists in the self-service portal. Students can also create a four-year plan within the portal and select which courses they must take each semester to graduate. Students are not required to meet with their assigned academic advisor each semester, however, they cannot register for courses until an advisor

approves their proposed schedule through the self-service portal. Students must enter their schedule in the self-service portal and email their advisor for approval. Once approval is received, then they are eligible to register. According to one participant, "so even though they (students) may not come in for a one-on-one appointment, they still have to send us an email that says that they are ready to register and then we go in and approve their course schedule." At this time, the advisor would double-check that each student is taking the necessary courses for that semester; if the schedule needs adjusting, the advisor then requests the student attend an in-person meeting to correct the schedule.

In another smaller educator preparation program, all advising is completed by the Education Department Program Director. There is a required course, Introduction to Education, which all education majors must complete before being fully admitted into the program. The Program Director wears many hats as a faculty member, the academic advisor, and instructor of this specific course. As such, the Director will see all education majors at one point in their tenure. This facilitates the advisor/advisee relationship development and creates a comfort level that allows students to ask questions and stay informed.

One interviewee from a medium-sized institution described how they advise a large student population:

> Advising is run through the department chair in our educator preparation program. There are so many students to advise, we divide them up just by using the alphabet. For example, I am assigned students whose last name begins with the letter A and the letter B.

The advising process can also be complicated by other factors. For example, if the students are earning a secondary certification, like math education, they will have two advisors assigned to them: one in the education department and one in the math department.

The two largest educator preparation programs in the state employ an actual academic advisor. These two programs are the most similar in this framework as all students in the program are assigned to someone whose sole responsibility is advising. One participant explains:

> We have three academic advisors in the college of education, and we are all assigned to a specific program. I specifically advise elementary education majors. We have one advisor who is specific to the mental health and addiction studies program, and another does our child development and family studies program.

The interviewee describes her position as being embedded into the department as she works closely with faculty, other programs, and the support staff.

The other educator preparation program assigns all students an academic advisor whose sole responsibility is advising and a faculty mentor who teaches in the student's selected program. These students will have the same academic advisor for their entire time in the program. Students are required to meet with their assigned academic advisor each semester as a freshman and sophomore and once as a junior and once as a senior; therefore, a relationship is built between student and advisor. This advisor explained:

> One of my favorite days of the year is graduation, because I know I had a small role in the student's success. The best feeling in the world is a thank you from a student, parent, or friend for guiding their academic career.

Typical Advising Sessions

According to NACADA, “typical” depends on dynamic elements of a campus that are, often by design, not typical. Academic advisors work inductively—one student at a time. Each student brings situational context to the moment of interaction, which varies not only by their personal, academic, successes, and challenges, but also by structural constraints and parameters (Troxel, W. G., & Kyei-Blankson, L., 2020). While each educator preparation program has an advisor to assist students with class registration and ensure they meet certain benchmarks, there is no typical session as each institution manages the advising process differently. Each advisor, whether they are meeting students in-person or virtually, expressed they like to begin an advising session by asking questions such as:

- How is your semester going?
- Do you have any clinical experiences this semester? If yes, where are you placed?
- Are you working? If yes, how are you managing both your workload and schoolwork?
- Are you living on campus?
- Are there days or times you are unable to attend class this semester?
- Do you have any questions for me before we begin building your schedule?

These types of questions break the ice and employ the appreciative advising model. Appreciative Advising is the intentional collaborative practice of asking generative, open-ended questions that help students optimize their educational experiences and achieve their dreams, goals, and potential (Bloom, J.L., Hutson, B.L., & He, Y., 2008).

A mid-sized educator preparation program has academic advising condensed to four days per semester. The advisors reserve a resource room which is housed in the building where most

of the education courses are taught. Faculty advisors organize sessions in this room from 8:30 a.m. to sometimes 7:00 p.m. to assist students in selecting courses for the upcoming semester. The instructors have been told to plan for advising during these four days. Instructors dismiss their students one at a time to visit the resource room to work with one of the education faculty advisors to prepare a schedule for the upcoming semester. When this format is utilized, the student may, or may not, see their assigned academic advisor. Students work with the faculty advisor available at the time. This format was used pre-COVID. Since the pandemic and social distancing, all advising at this institution is now virtual. One interviewee stated:

> Pre-COVID the advisors knew that they were going to be extremely busy during the four-day advising period, so we knew not to schedule anything during this time. With virtual advising via Zoom, advising takes longer and we haven't been able to meet with all our advisees in a four-day period since.

An advisor at one of the larger institutions explained they are a TEAM'S school; therefore, she has created a link in her email signature that says if you need an appointment with me, click here. The advisor explained this type of technology has made scheduling advising appointments easier than ever. The climate in higher education is constantly changing. For example, during the COVID-19 pandemic, all advising took place via Microsoft TEAMS, before those in higher education began working remotely, all advising was in-person. Students now have an option. One participant explained:

> Students do have the option to decide whether they want to meet for advising via TEAMS or if they want to come by my office. Typically, I prefer in-person and would like to keep it that way, but with COVID we are trying to be a little more lenient.

Technology has created an environment in which advisors can advise students even when no one is permitted on campus.

An advisor at one of the smaller institutions notes “we are a very small college, and we pretty much get to know all of our students very well.” This advisor explained rarely a semester goes by without having at least one conversation, in-person or virtual, with all assigned students. Because of the small number of students enrolled, the advisor has a well-established relationship with each advisee. The advisor also takes the time to create a four-year plan for each student which provides a semester-by-semester checklist of required courses. This plan ensures students meet specific benchmarks, take required pre-requisites, and finish the coursework required to graduate in four years. This four-year plan can be entered into the student’s self-portal and the student knows what to take and expect each upcoming semester and can plan accordingly. Another advisor at this same institution declared, “I try to have the students be proactive. I want them to be responsible for their academic career. As freshmen, we emphasize to the students to ensure they know and understand their requirements which are set in the academic catalog.” Another advisor described a slightly different approach:

> I prefer to work entirely electronically. It helps my executive functions because I always know where my sign-in sheet is; I don’t have to go look at my door. I can pop it up on my computer when I need to look at it. I am much better organized digitally than I am analog wise.

Of the advisors interviewed for this study, only one participant (5%) does not use technology to plan advising sessions. The interviewee described their approach in the following manner, “I post a calendar on my office door. I’m kinda old school. I still do it, but I think it’s helpful because the students know where to find me.”

Technologies Used By Academic Advisors While Advising

Research Question One examined what specific technologies academic advisors use while advising their students. The interviewees were asked to reflect holistically on the entire advising process to identify each technology. Responses were categorized into four different themes: interactive communication, one-way communication, social media, and specific institutional technologies. Table 2 provides an overview of interviewee responses.

Table 2

Participants identified technologies according to emergent themes

Technology Themes	Technologies Utilized
Interactive Communication	Email, telephone, mobile phone, text messaging, online chat, Zoom, Microsoft TEAMS
One-Way Communication	Word, Excel, PowerPoint,
Social Media	Twitter, Facebook, Instagram, YouTube, Podcasts, Webinars
Specific Institutional Technologies	DegreeWorks, Navigate, Starfish, Bookings, Self-Service, Banner

Interactive Communication

The COVID-19 pandemic drastically changed the way academic advising is conducted. Historically seen as a face-to-face profession, academic advisors had to adjust their procedures to fit the needs of their students once college and university employees were sent home to work during the lockdown. Sixteen (76.1%) of interviewees indicated they always use email when advising. While the pandemic forced academic advisors to rely on technology to serve students, some believe this is a step in the right direction. One interviewee stated, “we always had face-to-

face meetings, now we are having Zoom meetings, either way, I use email as a way to get them (students) to a meeting and it's a way to follow-up that meeting once it is concluded."

Another advisor provided a somewhat different perspective on email use:

> Emails are problematic. They (emails) are very good for creating a document trail and I use that to my advantage; but I find that they (students) will not read things closely and so I end up having to go through the same thing all over again in person, sometimes multiple times.

While all 21 interviewees reported using email to interact with their advisees, it is not always the perfect solution. According to one interviewee, utilizing a landline telephone or a mobile phone is a thing of the past when it comes to academic advising. Eleven (52%) participants reported rarely using the telephone when advising students and one (5%) participant reported never using the telephone. One participant (5%) stated, "I sometimes call students, but usually I'm making phone calls only because they (students) have not responded to an email. Seventeen (81%) of the interviewees stated they rarely, or never, reach out to students via text. Another participant provided an alternate perspective on the role of texting in advising:

> The university does not provide me with a cell phone, and I do not feel comfortable handing out my personal cell phone number to students. If the university wants me to text my students, I will need to be provided a work cell phone and number.

One participant did describe using text messages in the following manner:

> We have a very small program, therefore; we get to know our students well. I give my cell phone number out to my advisees and tell them they can text me if needed. I often text them reminders such as the last day to drop a class, registration is coming up, or sometimes I just want to do a quick check-in on them.

The online chat option is extremely similar in context. One participant (5%) reported always using an online chat platform, and another participant (5%) reported using it very often. The university for which these two advisors are employed has an "online chat" option on their program webpage which directs students immediately to an advisor. Eight participants (38%) reported rarely using online chat and nine participants (43%) have never utilized it. One interviewee explained, "we (the university) have so many outlets for communication that I have personally opted not to add another one (online chat) to my list. I don't believe we are missing out on much by not using this option."

Zoom, Microsoft TEAMS, and other related interactive videoconferencing tools have become the mainstay in academic advising since the emergence of the COVID-19 pandemic. All but one advisor reported using some type of videoconferencing technology to stay in touch with their students during the lockdown. Now that colleges are returning to normal, students have the option of meeting either in-person with their advisor or via Zoom, Microsoft TEAMS, etc. Twelve interviewees (57%) noted even after the pandemic, they have always or very often continued to use some type of videoconferencing technology.

One-Way Communication

All 21 participants indicated they have some type of document which lists the required courses for their advisees. These documents exist under a variety of labels: curriculum sheet, progression sheet, curriculum guide, plan of study, program information sheet, check off sheet, four-year plan, four-year map, or program of study. These types of documents are created and saved in Word and can be shared online and/or via email. Fourteen participants (67%) state they always or very often utilize the Microsoft Office suite (Word, Excel, PowerPoint) applications when advising students.

Only one participant (5%) stated they never use the Microsoft office suite while advising. This advisor only uses DegreeWorks, a web-based tool that tracks students' progress toward degree. While you can save and print a report in DegreeWorks, its purpose is to be viewed as a paperless, online, electronic curriculum sheet.

Three participants (14%) explained they sometimes use Excel when preparing for an advising session. One participant said:

> I have an Excel spreadsheet where every student that I advise is in a column and I have a page for each of the different programs, but my students never see this spreadsheet. I pull a list of all my advisees before meeting with them. I use Excel when compiling this list so I can sort by name or other data if need be. I also use this Excel spreadsheet to determine who I have met with already and who I still need to see.

Another participant stated:

> I keep a list in Excel of when certain courses are offered. For example, if I know that a certain course is offered fall only or another course is offered spring only, I can reiterate this information to the students I'm meeting with.

Presentations created through PowerPoint are also being utilized in advising. PowerPoint presentations can be emailed to specific classifications of students or uploaded to a college website. One interviewee described a specific use of PowerPoint to streamline the advising process:

> I got tired of explaining how to register for courses over and over again, sometimes to the same student, so I created a PowerPoint presentation demonstrating each step of the process. I can easily send this presentation to all my advisees. It can also be added to the website.

Such presentations are convenient and can be readily accessible, especially during the pandemic when students were not permitted on campus.

Social Media

Social media is a technological application that provides its users a platform to share information, opinions, and ideas virtually with others. Many millennials utilize some form of social media whether it is Facebook, Instagram, Twitter, or TikTok. Given that advisors need to meet students where they are, social media has slowly become an alternative approach to sharing academic information. Conversely, a majority (76%) of interviewees indicated they never use any type of social media outlets for advising. Only one participant (5%) reported social media was used often. The participant provided the following rationale:

> Our college of education has a strong presence on social media. We try to post something fun and something informative daily. We will use social media to advertise various advising events, often adding photos. We also use social media for simple reminders. On one occasion I was across campus working a recruitment event and one of my advisees tracked me down. I asked the student how she found me out of my office and across campus and she said she knew where I was because she saw the event posted on Instagram.

Podcasts, webinars (pre-recorded or live), and information sessions via YouTube are alternative strategies for sharing pertinent academic information with students. This approach is considered one-way communication and can be viewed as either written, verbal, or both. All 21 interviewees indicated they do not utilize Podcasts while advising students and twenty (95%) participants reported they never use YouTube. Although webinars can be pre-recorded, shared to a website, emailed, or live-streamed, nineteen participants (90%) claimed they never or rarely

use webinars while advising. Only one participant (5%) acknowledged they always use webinars when advising. This participant added, “since the pandemic, the university has talked about adding a variety of videos to post online. It will be extremely helpful to those virtual students who maybe have never stepped foot on campus.”

Specific Institutional Technologies

Other technologies being utilized in academic advising were more institutionally specific. Twelve (57.1%) interviewees indicated they always use the BANNER Student Information System while advising. BANNER is a self-contained educational platform developed specifically for institutions of higher education. BANNER maintains student records such as official transcripts, transfer credits, grade point average, personal data, and financial aid obligations. Four interviewees (19%) reported using OLSIS, The Online Student Information System. OLSIS, a platform comparable to BANNER, contains student registration information, course schedules, grades, and additional information such as financial aid and account balances.

Degree audit systems such as Degree Works, Starfish, Self-Service, and Navigate are also included in specific institutional technologies. Only three (14%) participants reported they never use specific advising technologies, while fourteen (67%) participants say they always or very often use them. One interviewee shared this perspective:

> We have self-service here. That is where all our student’s records are kept. They (students) can go in and look at their progress at any time. They can do their own audits to see what they still are required to take, but usually when they come into my office, I’ll bring it (Self-Service) up on my screen and we walk through the process.

Another interviewee provided a similar point of view:

> I use DegreeWorks daily to double students' requirements, grade point average, and hours of completion. Although DegreeWorks is not the official transcript, I use it often to double-check myself. I've caught mistakes I've made using pencil and paper when reviewing DegreeWorks.

Summary Of Technology Usage By Academic Advisors

Technology unquestionably plays a role in the process of academic advising with the most common types of technology being email, BANNER, degree-auditing systems, and Microsoft Office suite products. Advisors are avoiding the online chat option, social media outlets, podcasts, mobile phone apps, and online information sessions. Each institution has created and implemented a system to utilize technology to best fit their students' and advisors' needs. While all EPPs are producing quality, qualified teachers, there is no consistency among the usage of technology at these institutions.

Effective Management Strategies and Procedures

Research Question Two focuses on the strategies and procedures Academic Advising Programs (AAP) use to ensure effective management of technology-based systems for the delivery of academic advising programs and services. Three subsequent questions provided an extension of the overarching question. The first of the three questions addressed how AAPs ensure personnel have access to training and support for technology usage. Twenty (95%) participants stated they have received some type of training and support. For example, at one mid-sized institution, weekly TECH training is offered by their Information Technology (IT) Department. This same institution employs faculty advisors. Once hired, the faculty are required to attend two training sessions focused on the technology required to advise students before they can actually begin advising students. Another participant at a different institution explained that

each fall and spring the university hosts a "professional development week." This entire week is dedicated to an assortment of trainings, including technology. This participant stated, "Periodically the university will have specific training on technology like DegreeWorks but that hasn't happened very often. Mainly all training is done during the professional development week." She added, "We also have an IT department that is on call 24/7. We have really good support if we need it."

One interviewee explained their AAP uses a three-pronged approach to ensure all faculty advisors are well trained and accountable for using technology. The first approach consists of both faculty institute seminars and a new faculty academy. Faculty spend a weekend together at the end of each summer and are intensively trained on several different aspects of advising including technology, as well as best practices. One interviewee described this training in the following manner, "during this time, senior faculty members who are strong advisors give the new faculty members both the written as well as the unwritten practices of advising". The second prong of training includes a video library:

> We have some very skilled IT specialists and a good support team in our building. They will come to the professor, they will come to the classroom, and will assist students when needed. Just recently someone from our IT team went to a faculty member's home to set up her laptop. The level of support that we have from an actual IT team that has a very steep knowledge of advising technology is amazing. That's key.

The third prong also consists of videotapes, but these are housed in the institutional BANNER system. There is an advisor tool in BANNER that contains a list of videotapes advisors can view at any time. "It's nice to go back and watch some of the videotapes as a refresher before the big push comes and everyone is doing early registration" she concluded.

Another mid-sized institution uses a faculty mentor program for advising instruction and official technology training. This particular participant added, “Generally, new faculty are teamed up with a mentor. My mentor is the Dean of Arts and Sciences. She has walked me through the technology I use while advising. There are trainings available, but I enjoy the one-on-one aspect.” She also added the IT department is always available if an issue arises.

One (5%) faculty advisor participant indicated he is mostly self-taught. He did go through a technology training session with the Registrar’s Office, but the information provided was not college or department specific. He noted technology trainings are offered, but he often forgets about them:

> I identify as a faculty member first and sometimes I don’t feel like an advisor because I am not a full-time professional advisor. I get into my faculty rut and then all of a sudden, I’m like, oh yeah, I’m advising students, but I don’t know how to do this or that in the role of the advisor.

The second subquestion focuses on how the AAP ensures all teaching candidates have access to training support for their technology use. Eight (38%) of the participants stated they did not know if their students received training for technology use for advising. One participant explained, “I don’t know how they (students) get the training they need, but I know when COVID first started they were getting used to Zoom. They (students) didn’t need training. I think they are all pretty fluent in technology.”

One interviewee (5%) described his role as an advisor as including the responsibility to train his advisees on the technology used while advising:

> I show them (students) and go through the registration steps with them because I’ve already put together their schedules. It’s not formal training or official, it’s just my

way of ensuring they (students) know how to sign up for classes when their day comes. Another interviewee (5%) described students' training as very impersonal. "So, they (students) are provided with emails which document the steps of how to use the system, but they haven't had any other training." She continued, "sometimes they (students) will follow up with their assigned advisor to learn how to use the system."

All other participants indicated a very interactive, positive training experience for their students. One institution has implemented an advising labeled "Nuts and Bolts." This interviewee explained, "all incoming freshmen are required to attend a Nuts and Bolts advising session before their first advising appointment with their faculty advisor." During this session, the students learn how to navigate the registration portal, how to utilize their PIN, how to use DegreeWorks, and how to make a four-year plan. There are Nuts and Bolts advising sessions for faculty advisors as well as students. The faculty sessions are held before classes start and then again right before the registration window opens. This session serves as a refresher for faculty.

Five (24%) interviewees discussed student technology training that occurred during freshman orientation. The trainings vary depending on the individual institution's technology needs. One institution adopted a new process called Registration Day. Before the start of the semester, all incoming students are required to attend technology training while they are registering for the upcoming semester. This particular institution uses the "Self-Service Portal" which electronically houses all the information students need. The training encompasses how to access and understand the online academic catalog and how to register for classes. The participant interviewed from this institution noted, "We've been doing this for three years, maybe four and students rarely have issues. If they do, I am unaware."

One of the larger EPPs also provides student training during freshman orientation. The purpose of this training was described in the following manner, “Part of our new student orientation is for them (students) to go through an online module to know what resources are available and to find out how to utilize them.” Another participant at a mid-sized university also described training during freshman orientation. “I know when they (students) enroll in college there is an orientation process that they (students) have to go through that includes videos and presentations that they (students) do online, and part of that process is describing how they register for classes.”

Approximately one in four (24%) interviewees reported technology training for students as occurring in a specific class. University 101, Freshmen Seminar, and Freshman First Class are all courses designed for freshmen to acclimate them to college life. Some of the courses listed above are a full semester graded course while others might be a Credit/No Credit eight-week course. Either way, students are learning how to access and utilize technology. One interviewee explained:

> Incoming freshmen have a course called UNI 101 and it’s a first eight-week course. It goes over how to find DegreeWorks, how to use DegreeWorks, and the different features within DegreeWorks like the “what if” option. Some activities go along with the technology. They (students) have to be able to show that they know what they’re doing.

Another interviewee stated:

> We have a class named “University 104” and it is an introduction to university life. This is where they (students) learn to use E-Learn which is our online delivery system. They (students) can view their classes, syllabi, and schedule through this portal. They

(students) can also go in and request what their curriculum will look like if they choose a different program.

The third subquestion focuses on whether AAPs have a backup data cycle established in partnership with the institution's information technology department? Thirteen (62%) participants stated they did not know whether their academic advising program has a backup data cycle. One participant added, "I am not 100% sure. My assumed answer would be yes, and I know we just went through a technology audit and changes have been made so I'm sure that they're (IT) doing their job by the book." Another participant commented, "I'm not privy to that type of information. I would hope we have a backup cycle, but that's separate from what we do." Another participant said, "I believe we do because everything is in the Self-Service Portal, but I'm not sure. I know it syncs with Blackboard. But the information regarding the backup data cycle is out of my jurisdiction."

Seven (33%) participants acknowledged their academic advising program does have a backup data cycle established in partnership with their institution's information technology department. One interviewee explained, "Yes, our backup data cycle occurs every evening. I only know this because our IT department sends out emails every once in a while, reminding us. They (IT) also email us when the system might be down for maintenance or updates." Another interviewee added, "I know we have a back-up data cycle because our updates take place twice a day; once at noon and once at 4:00 p.m. If changes get entered at 11:00 a.m. we can expect to see them populate by noon." One of the participants contacted the information technology department on her campus after reading the interview question. She explained, "I made a phone call to try to find out if we have a backup data cycle and we do. According to our IT guide, we have one, but they (IT) are instituting some changes based upon the technology audit we just

completed." Only one participant (5%) reported their institution does not have a backup data cycle in conjunction with their academic advising program.

User Engagement And Effective Academic Advising

Research Question three emphasizes user engagement and focuses on how academic advising programs are using technology to ensure effective user engagement in the academic advising process. Technology use intensified since the onset of the COVID-19 pandemic. Universities that migrated to a remote learning model during the shutdown were required to redefine their technology capacity. Academic advisors quickly recognized the importance of maintaining personal connections with their students during the months they were unable to be on campus and meet face-to-face.

The first section of CAS Standard 11.2 addresses how AAPs enhance and employ appropriate and accessible technology to support the delivery of advising information. One of the participants interviewed explained:

> The students' trajectory through their degree program is as transparent as possible and user-friendly so that it expands beyond just one advisor. Technology plays a huge role in academic advising. If I am unavailable and my advisee has a question and would like to meet, one of my colleagues can access DegreeWorks and see exactly where that student is in a specific program. Anyone with accessibility can pick up the baton and provide help to the student. I can also make notes in DegreeWorks about any extenuating circumstances that need to be addressed during the next early registration period.

Technology-enhanced electronic degree-audit systems which monitor students' progress through their academic tenure have forever changed the process of academic advising. One of the participants at a smaller EPP described academic advising before technology. "Students had

to make an in-person appointment and advisors had to keep hard copies of progress sheets", she said. "If the student lost a copy of their progress sheet, they would have to make an extra visit to their advisor's office to pick up another one." The participant added, "the best thing I can say about DegreeWorks is the accessibility. Students have access to information regarding their academic program 24/7/365. As long as they (students) have internet, they can check on their progress."

Another interviewee also talked about the importance of DegreeWorks in conjunction with the BANNER Student System, "as faculty, we primarily use DegreeWorks while advising students, but I also have access to BANNER so I can double-check student information, like transfer credits, ACT scores, and Praxis scores." She went on to say:

> Our Certification Officer combines all the information necessary to complete a program sheet for each unit so there are multiple points of reference when checking students' progress. We have been able to catch so many things along the way that typically our graduation audits tend to go very smoothly.

DegreeWorks continues to be recognized as an appropriate and accessible technology that supports the delivery of advising information. A participant from one of the larger EPPs explained its importance:

> I keep going back to DegreeWorks. When I first started advising I used to give students paper copies of their curriculum sheet and then, you know, the students would lose their copy. It was a nightmare. When the university purchased DegreeWorks the accessibility to advising information increased for both myself and my students. There's a plans tab within the system which allows me to create a personalized four-year plan for each of my students. They (students) can just click on the course and see when it's offered, what

semester they need to take it, and if the course has any pre-requisites. From start to finish students can see what they need to take every single semester. DegreeWorks is the one technology that we use the most. Students have access to all the advising information they need.

Another participant described the increased contact they have had with their students with the ever-increasing utilization of technology while advising. She clarified:

> If I'm being honest advising used to consist of a one-time session per semester, but since COVID I feel like I've been doing a lot more advising. Students are constantly emailing me telling me they are having problems with a class and asking when, and if, they can drop. We are having these conversations all the time about advising.

This same participant also discussed the issue of the appropriate use of technology while advising. She said:

> I think back to when I first started advising and I attended a mandatory training session that talked about the appropriate use of data and those kinds of things like privacy issues. We have been trained to document, document, document, however, there are some things I don't feel comfortable putting in an email; therefore, some of my in-person conversations with students would vary if it was an email conversation."

Virtual meeting options have become one of the latest technologies to ensure students have accessibility to their advisors, especially during the Coronavirus pandemic. One participant had this to say:

> When we meet on TEAMS, Google Hangout, or any other virtual delivery option, we are making ourselves accessible through the use of technology. We have students who can't make it to campus, are in quarantine or have other various things that might be

> happening during our advising sessions which make it impossible for us to meet in-person. I'm not sure how we would have gotten through advising during the shutdown without TEAMS or Google Hangout. I'm afraid many students would have slipped through the cracks if advising was via email only during this time.

She included that email is an appropriate technology used for specific documentation:

> Often after a verbal conversation, I will send my student a follow-up email. This is a good practice in technology to make sure we're staying on the same page and communicating well. So, when they walk out of the door it's not like, wait, what did she say? We've got a plan in place, and we agree on it. That's what's being documented.

One interviewee had a very unique answer to the question regarding accessible technology usage while advising. This advisor explained the institution in which they work has hot spots installed in their parking lot so students with technology access issues could come to campus and have access to better internet service. This same interviewee described the appropriate use of technology, as well:

> We have a Certification Analyst who works in our department. His primary role is working with accreditation and certification making sure everything is in place for our students to get certification from the state department. Through appropriate use of technology, he also can look at enrollment and tell us which of our students have not been registered for classes yet so we, as advisors, can reach out to them to see if they are having troubles or if we can help. Whatever the situation is we can help support them (students) through it. We have a pretty close relationship with other offices on campus. Sometimes students are not able to register for classes and we can look in our

student system to see if they (students) have a hold on their account. We work together to get that cleared up by helping them (students) figure out what's going on.

The second section of Standard 11.2 is focused on how academic advising programs ensure online and technology-assisted advising includes appropriate processes for obtaining approvals, consultations, and referrals. Seventeen (80%) participants explained how the COVID-19 pandemic forced advising procedures to be integrated into a hybrid advising system including technology-assisted processes. Technology usage has streamlined how students register for courses, however, not all EPPs utilize comparable technology practices. One interviewee noted:

> So, pre-COVID students had to do a lot of running around to do certain things. If they needed an overload into a closed course, they had to get a signature. If they wanted to take a course but were having issues with pre-requisites, they needed to get a signature. If a student requested to take more than 18 credit hours in one semester, they needed to get a signature. When COVID hit, the Registrar's office began accepting our emails in place of a signed add/drop slip. So, if a professor agreed to overload a course, he or she would just send all the information to the Registrar's office, and they (students) would be added.

One participant explained, "everything was very much paper-based before the pandemic. I mean not totally, but there were forms that the students had to get signed and they (students) had to take them from here to there and back again." The participant added, "once we signed a form and gave it to the student, we didn't know where it went from there. Then we would ask the student and they wouldn't know or didn't remember." The interviewee explained that something had to be done to make the process doable for everyone involved once their office began working remotely due to the COVID-19 pandemic, "our IT Department created online add/drop

slips in the electronic portal that allows a maximum of four approval signatures. The portal will shoot you an email when you need to sign something and then it also lets you know when everything has been approved." She went on to say, "the IT department is working on developing other electronic forms, but for now, we do have the ability to use a paper form, sign it, scan it and then send it to where it needs to go."

An advisor at a smaller EPP described the importance of email, "we use email for everything. We have an email set up just for the Registrar's office and multiple people are answering the Registrar's emails. I know I get responses from multiple different people." The interviewee added:

> Typically, we copy each other on things, so if I send something to another department, say like a math professor needing to get a student into a class, I will add the student on the email, so they are following that feed together. Email is our primary form of communication.

An interviewee from one of the smaller EPPs noted the nuances of advising as such institutions, "we are such a small school that all processes are very personal." He continued by saying, "if a student needs approval for this or an exception for that, we work together and get it done. We have those face-to-face meetings and will encourage the student to go see the appropriate person and they will give you the approval."

Another interviewee shared the following experience, "the Registrar's office had to adapt to the increased use of technology when the university shut down. Our policy regarding advising didn't change, but the process in which students dealt with approvals or consultations did'." The interviewee continued:

> In the past when students had to obtain professor permission to drop a class, we (professor) had the opportunity to discuss options with the student. Now all a student needs to do is email the Registrar's office to drop a class, no signature necessary. I've had many professors complain about this process as they assume the student(s) are still enrolled.

The interviewee explained that students do not realize or understand how dropping a course could potentially affect their projected graduation date. She added, "everything looks good with their (students) schedule when they come in for advising and then we find out they (student) dropped a class they needed. So, in that way, technology is not working for us in that process."

The third section of Standard 11.2 addressed how academic advising programs ensure the technology being used addresses the needs of your teacher candidates. One interviewee had this to say, "It's standard. It's very consistent among students and advisors. It's so systematic that it runs like clockwork." The advisor went on to explain that she uses a plan of study spreadsheet that works like a contract. The plan of study provides the student with a semester-by-semester schedule which is then entered into DegreeWorks. Once the plan is entered into DegreeWorks then anyone with access can view it. This ensures everyone is on the same page. The interviewee then added, "the technology we use is very user-friendly for all our students."

One interviewee emphasized the importance of technology in advising, "we have multiple technology-related safeguards in place for our students to ensure no one is getting to the point of their last semester and realize a course has been missed along the way." The advisor added, "I think it really goes back to the Nuts-and-Bolts sessions that both students and advisors are required to attend." She explained students have access to DegreeWorks which allows all

involved in the advising process to examine the curriculum at any time. The interviewee provided the following example:

> I had a very conscientious student who earned transfer credit for a history course; however, it was not showing up in DegreeWorks. He contacted me and I was able to go through, double-check, and trace back to where the breakdown occurred. The technology allows me to meet the students' needs, but also allows our students to take the onus of their own graduation requirements through the process."

An interviewee from one of the larger EPPs discussed how technology has created a culture of urgency among her advisees. She described how students have increasingly become more anxious and demanding when wanting information. All students have access to DegreeWorks, which provides a snapshot of where a student is in the program; however, students now want instant answers when it comes to their plan of study. This advisor explained how she proactively created plans and uploaded them in DegreeWorks to allow students to view upcoming semesters without having to meet with an advisor in person or via Microsoft TEAMS. She added, "students now have consistent access to their own information whenever they need it, and they no longer have to reach out to me." The advisor also disclosed how technology was being used to alleviate the cumbersome process of making advising appointments. She commented, "I was really getting tired of students emailing asking when I was available or if they could stop by my office. I eliminated that back-and-forth discussion by implementing Microsoft Bookings",

> Through bookings, students can see when I am available throughout the day. They can schedule an appointment or just stop by with the assurance that I will be in my office. I also really like that Microsoft Bookings sends students an automatic reminder the day

before our meeting, so I don't have to. I used to do that on my own. I don't do that anymore.

Two (10%) participants mentioned they were confident the technology being used was meeting their students' needs by conversations had between students, advisors, and faculty members. One advisor said, "I feel like that comes through in our conversations with students and other faculty members." The advisor explained, "to me, the technology used in our program was meeting the needs of our students during COVID-19 when we couldn't have students on campus." Faculty, as well as advisors, had to quickly brush up on both functional and practical uses of technology during this time. The advisor added, "the technology piece met the students' needs and it all originated from conversations."

An advisor at a different EPP recently adopted a new advising technology, "We do have a lot of conversations, especially when deciding where to go next with technology." She continued, "there's a lot of benefits to the new technology that we're using, and our students seem to like it. It contains a schedule builder similar to DegreeWorks, it's efficient and very easy to use." The advisor went on to describe how the Registrar's office has also been involved in the conversation and is very open to feedback from all constituents.

One participant explained, "we have both four-year plans and progression sheets which are online. I think they have really been well received because students seem to be keeping up with everything and staying on track for the most part." The advisor added, "I feel like I have done more advising since the onset of COVID-19 and we heavily rely more and more on technology, but I feel like we've also seen how beneficial it is to our students."

Eight (38%) participants were hesitant to comment on any type of evaluation to ensure students' needs are being met. One participant said, "I really don't know that we have a formal

plan in place." Another participant explained, "I'm not sure. I know the catalog is online and that helps." One advisor commented, "I think we were responsive during COVID with technology. The university is making things more easily accessible through electronic means." Another interviewee had this to say, "I'm not sure how to answer your question. I don't know. I would say though, I get the deer in the headlights looks sometimes, so I would assume our students are not getting all their needs met." Another participant said:

> I don't know that there's really anything in place. If they (students) have problems with the technology, we do have IT people that will troubleshoot. We also have computer labs on campus and our Resource Center for all our education majors. If they (students) don't have access to technology, they have the opportunity to check out a laptop or iPad.

The last section of Standard 11.2 is focused on how Academic Advising programs employ technologies that facilitate user interaction. Five (24%) interviewees agreed video conferencing communication technologies such as Zoom, and Microsoft TEAMS are prime examples of how they are ensuring user interaction. One advisor stated, "Zoom and email kept the methods of communication open even during COVID-19. The use of these technologies increased our interaction with one another in communication." Another advisor described how Zoom was used:

> Our institution uses Zoom and we're interacting with each other. I think that has helped a lot. They (students) not only can see the computer when I share my screen, but I can also look up answers to their questions while we're talking. That helps. I think it's cut down on our advising time as well.

Four (19%) participants described how their specific institutional technologies emphasized user interaction. One participant explained, "in our system, students can actually

click a box on their end and an email is automatically sent to me letting me know a student has submitted a schedule for approval." The advisor went on to say, "once I receive the alert, I can look at what the student has put together and double-check to make sure that they're (students) going to be signing up for the right courses." Another advisor at a different institution had this to say:

> When students create their schedules, they can hit a button that says review plan. We, as advisors, receive an automatic reminder to log in to the portal and review the student's schedule. We then have two options; either approve the schedule or contact the student to rework the schedule. There is no place to click denied.

One advisor said they believe user interaction, whether it is in-person or via video conferencing, is based on the philosophy of the individual academic advisor. The participant explained:

> I think it all comes down to what the advisor will personally do for their students. For instance, I have the authority and ability to add and drop courses for my students, but I will not do it. I believe that is the student's responsibility and that's their role. I don't touch their schedules and some students find that very frustrating, but I think that they (students) need to have ownership of their schedules. Technology provides the option for students to go in and do those things on their own. So, in that way, I think that technology plays a role in communication, as well.

One participant had this to say about personal boundaries and user interaction when it comes to the use of technology and students, "some advisors may give out their personal cell phone number and allow students to call or text them. I do not do that." The advisor went on to elaborate, "I have an office telephone if a student wants to call and speak with me. Additionally,

if a student is in one of my courses, then they always have access to send messages through Blackboard."

One advisor said the institution in which they work will sometimes offer Facebook Live Broadcasts. This type of virtual communication of information can be extremely user-friendly and provide interaction between students, faculty, and advisors. The participant explained the advising center would provide the technology, the behind-the-scenes preparation, and the advertisement of the event, and all the faculty and advisors had to do was show up, either in-person or virtually. Students attend the sessions online and are allowed to ask questions regarding classes and registration.

An advisor from another EPP described the use of triangulation to ensure user interaction via technology. The participant explained that if a student wanted to drop a class, they would first email the advisor. The advisor would review the student's record and then reach out to the Registrar's office to initiate the process. Once the student has been dropped from the class by the Registrar's Office, a follow-up email is sent to both the student and advisor, so all parties involved are on the same page.

One participant explained, "one of the reasons I went digital for advising purposes is because my handwriting is horrible. I want to ensure students get what they need without having to call me up to ask what number I was attempting to write." The advisor added, "I know other faculty advisors will have students write their schedules. I prefer to type something up and give it to them (students) to ensure they (students) have the right information."

Another interviewee spoke about Bookings, the web-based online calendar that is used for making appointments. The advisor previously discussed how it was so very time-consuming attempting to schedule appointments with students via email, so she implemented Bookings. The

advisor explained this technology not only encourages user interaction but also puts the onus back on the student to schedule an appointment. The advisor commented, “students can use Bookings to schedule their advising appointments on their own. It’s self-motivating, which I like, and I don’t have to do the work for them (students).”

Compliance And Information Security

Research Question Four looks at compliance and information security and how AAPs ensure the technology-based advising programs and services are legally compliant and secure. To evaluate compliance, the first step is to determine whether the program has a policy that details the appropriate use of technology. The second step is to determine the clarity and ease of accessibility. If students, faculty, and staff are unable to locate the policy, the chances of them reading and understanding it are slim.

Interviewee responses were categorized into two groups. One group of advisors reported they understand their institution has a technology policy in place, but do not know much about it or where it is located. Sample responses included, “I think the university has a policy and when students first enroll, they probably have to sign something, but I don’t know for sure; therefore, the policy is not clear or accessible”, “I’m sure we have a technology policy, but I have no knowledge of where it is located. I assume it’s on the web. This is another question that is not in my silo”, “Yes, we have a technology policy. I’m sure if you searched for it, you would find it on our website”, “I think this is built into what we call the safety training that we participate in annually. That’s where we cover FERPA and some of the other required guidelines.”

One interviewee added, “the faculty handbook has a statement about technology use, but it’s just a blanket statement.” The interviewee went on to explain the faculty handbook is currently in print copy only and not accessible online. Another interviewee explained, “Most of

our policies are available on the website in terms of faculty. I know we're trained in technology and security every year. We learn how to keep things safe and protect student confidentiality."

One advisor explained, "This has become a bigger issue since COVID-19. This semester we had a session on technology security in our Professional Development. We had to complete modules online which discussed the protection of information." Another participant elaborated:

> We all obviously know that advising files are confidential in general. That applies to technology as well as paper copies in the office. I don't know that we've ever had anything specifically rollout about confidentiality or FERPA when using technology. We get reminders not to talk to parents unless they've signed a waiver, but it's not driven as a specific technology concern.

Another advisor added:

> I know we have a whole lot of securities in place. I even had a pop-up blocker come up as I tried to log on TEAMS today because I've never used it before. I honestly don't know a whole lot about the security of the system, just that there are a lot of pop-ups when we try to get on things we're not supposed to.

The second group of participants was much more confident in their answers regarding policies on the use of technology. An interviewee at one of the mid-sized EPPs explained they have begun adding the technology policy to their syllabus. "Appendices to the syllabi are supposed to include our policies. I'm not sure it covers everything, but there is a technology component." Another interviewee detailed their institution's policy regarding password protection, "All the technology we use is password protected. You are required to use your school email account. If you try to access it from home, you may receive an error code. We have several of these types of security precautions in place." Another participant replied with a

confident yes, “Yes, with the College of Education website, you will find our Student Services link. This is where you will find the technology criteria. It also talks about the use of social media, what’s good and what’s not.” One of the participants explained their program was recently audited and some changes were made for security purposes,

> I know our department is very on top of this because we just got audited. Now there is a very small number of individuals on this campus who have access to things like social security numbers. We had to do a training seminar recently where we attended an hour and a half presentation with a test at the end which covered procedures on technology and how not to get hacked.

One interviewee said technology information can be found in the policy manual of the school and is easily accessible. This is something covered in the freshmen course and students must sign off on a copy of the technology policy. The advisor reported, “students have to sign a paper that says they know how to access their course catalog and all the related advising policies so there is that accountability piece with them signing off. Then it goes into their student file.”

The second section of Standard 11.3 incorporates how Academic Advising programs provide a secure platform when conducting financial transactions, in accordance with industry best practices. The entire sample of participants felt they have no accessibility to any type of financial transactions. Eighteen (86%) interviewees simply answered in the following ways, “I have no idea”, “I don’t know because I don’t have anything to do with financial transactions”, “I don’t deal with financial transactions”, “we don’t do anything”, “I have no clue”, “that’s entirely out of my silo”, “I’ve never done a financial transaction, so I don’t know”, “as far as I’m aware, as an advisor, we don’t deal with finances at all”, “I’m not really knowledgeable. I’m not going

to lie. That's out of my wheelhouse", and "I have no idea because I don't have anything to do finances."

Three (14%) participants, while agreeing they do not conduct financial transactions, further discussed the subject. One interviewee said, "I do not have much access to that information. Even as a Program Director, my access to financial information is relatively limited. I only have permissions to a certain point." Another interviewee reported:

> Regarding advising, we are not involved in that at all. I believe as far as the university goes, all those financial type transactions are done through the Business Office and so the students have to go there to make payments or do those types of things.

One interviewee explained her role as an advisor when it comes to financial transactions. Another advisor does not have any hands-on experiences with financial transactions, but was able to delve a little deeper into the subject matter:

> The financial part is completely out of my hands. I have some cursory knowledge as far as the federal policies for financial aid. I know that as of last summer, for any education students to have their courses covered by financial aid they must be present on the plan of study. For example, if a student didn't pass the Praxis Core or the Praxis II Content exam and was in a holding pattern or maybe they have run out of classes to take, we would put them in an 'easy A' class like Strength Training or Walking for Fitness. We can't do that anymore. Ninety percent of our community is receiving federal funding, so every course has to count. That's pretty much the scope of my knowledge. I also know that at the institution in which I work, if a student takes more than fifteen credit hours then they are filled for each individual hour at a different rate. That is when I refer them

to financial aid or the business office on campus. It has nothing to do with technology, that's just my cursory knowledge.

Evaluating Effective Communication When Using Technology

Research Question five addresses evaluating communication and how Academic Advising Programs are using technology to facilitate effective communication with all stakeholders and users. Specifically, the standard wants to know if the website providing information to all constituents is up-to-date and easily accessible. Three (14%) participants did not know if their institution's website was up-to-date and simply answered, "I'm not sure" and "I don't know." Two (10%) participants did not give a definitive yes or no answer but had this to say, "They're (IT) actually doing some new updates to the website now and they're putting all the new forms and so forth online, so it's in the process of being updated." Another interviewee clarified:

> The College of Education has a website and then the Education Department has its own website where we break down information. We are in the process of updating that with the new academic maps because we've had some programmatic changes with the year-long residency and some other things that have happened in response to state policy. So, I would say our website is a work in progress.

Four (19%) interview participants noted the website at their institution was either not current or easily accessible. One interviewee responded in the following manner, "I would say no. It is definitely not easy to find things on our website." Another participant added, "Our website is supposed to be up-to-date, but it's not; even though for our CAEP accreditation it has to be." One advisor explained their website was easily accessible; however, the information is not current. The advisor said, "I think that this is one thing that we sort of lack in our college.

Our website is fairly out of date." When asked the question regarding the website and whether it's up-to-date and easily accessible, one interviewee simply said, "no."

Twelve (57%) participants felt their website is current and easily accessible. One advisor had this to say, "Yes, absolutely. We have a wonderful administrative assistant who keeps everything on our website up to date. We went through CAEP accreditation a couple of years so, of course, it had to be, but it's always up to date." Another advisor explained:

> Yes, our website is easily accessible and current. We have a tab for the education division itself and under that tab has all the paperwork needed for our students. I'd say most of our communication, at least through COVID, has been Zoom-related or via email, but we do meet with our stakeholders, students, and cooperating teachers regularly, we just have to do it via Zoom.

Other responses include, "The registrar's part of the website regarding advising is definitely updated. It tells them where they go to get their transcripts, where to find the college catalog, and where all the policies are located", "our website seems to be pretty user-friendly. We have our graduate assistants set it up and keep it current", "As far as the website, it is up to date. We have a group that does that all the time", "Yes, our website is up to date. It's useful for the students to find things like DegreeWorks and the other things that they need to schedule their classes. It seems to work really well", "the website for advising is constantly updated." One interviewee said, "Our website is absolutely up to date. It is fluid, constantly changing, and we keep it as current as we possibly can."

Another participant commented, "all the important information is on our website; current catalogs, past catalogs, program checklists, check sheets, everything is available online." An interviewee from one of the larger EPPs described their website in the following manner:

> Our website is up to date, and we put all of our education documents, everything students would need for advising on there. I would say it's accessible. To me, it doesn't make a whole lot of sense, but to a lot of other people, it does. For example, I think it's hard for our external stakeholders to find anything because it's sort of buried underneath other things. But the website, as it was explained to me, is not for those people. It's primarily for our students and prospective students, so they can find what they need.

The next two subquestions focused on key elements of the website; is your website mobile device friendly and does your website have any broken links? Sixteen (76%) participants agreed the website at their institution is, in fact, mobile-friendly. One of the interviewees said, "students can access the website from their cell phone; however, I'm not sure how easily accessible the forms are sometimes they become hard to read when viewed on a phone." Another advisor commented, "students can view the website on their phones, at least they tell me they can when they're on their phone in my class." Five (24%) participants were unsure if their institution's website was mobile device friendly. None of the participants answered no.

Fourteen (66%) participants reported they were unaware of any broken links on their institution's website. Other interviewees commented, "we have a great team. If we do have a broken link, we reach out and it usually gets taken care of pretty quickly by our administrative assistant", "I'm not aware of any broken links, but I'm sure those things happen on occasion. We always try to keep very up to date on our links", "inevitably there is going to be a few broken links, but it's definitely not the norm", "I will say that if we do have a broken link, we can go in and make instantaneous changes in the platform and immediately make the repair", "we actually had one of our administrative assistants go through our website a while back and there aren't any broken link that I know of. That's one reason why our website is a little bit bare bone."

Five (24%) interviewees claimed the website at their institution had no broken links. No further information was given. Two (10%) interviewees declared the website at their institution, indeed, has broken links. One interviewee explained that the link to the scholarship page was broken and has been for a while. The other interviewee simply answered yes when asked the question and did not expound.

The next section of Standard 11.4 deals with advising students who may need accommodations due to a disability or providing multiple modes of communication including telephone, text messaging, email, and webchat. Fifteen (71%) of the participants were either unsure if there was a policy in place for advising students with disabilities or claimed they have never had the experience. Three (14%) advisors had this to say, “In my experience, I have not had any students who had any type of disability that needed accommodations”, “I have not had to experience any of that” and “I can’t honestly answer that question because I haven’t had that experience.”

The other twelve (57%) participants had similar answers. One participant answered, “I know we have a department that students consult with for accommodations because we sometimes receive that information for accommodations we need to make in class, but I’m not sure the accommodations are made for advising.” Another advisor said, “Right now I don’t have any students with disabilities, but those type of accommodations would come from our admissions office. I would then be notified of any necessary accommodations I would need to make.” Similarly, another participant said, “I don’t have any students with disabilities in my advising load. If accommodations were needed, though, they would be made across campus.” A few other of the participants were able to delve deeper into the subject. An advisor at one of the larger EPPs explained what occurred:

> All of a sudden, several more resources were made available, so the university has purchased items to help with these types of issues and to make things more accessible. None of my students right now have any issues, but I know that it must be happening across campus because since we've gone virtual there has been an influx of trainings on how to deal with students with disabilities. Our institution recently bought an extension file for Blackboard that is supposed to evaluate all our courses and determine what we can do to make them more accessible to everyone.

An advisor at one of the smaller EPPs explained their process in the following manner:

> We have a center for students with any kind of disability. These students are assigned both a program advisor and an advisor from the Office of Disabilities. Again, we are a very small institution, when we have a student with a disability, we will often coordinate because they will need to go see their disability advisor two to three weeks before they would see their program advisor for scheduling. So, if there's anything needed, whether that is vision, hearing, mental development, or whatever, they are meeting with them face-to-face, in-person, or over a portal, before they even make contact with us.

A different participant said, "Once we are notified that a student has a disability, there are things we can do. There is a chat option within Zoom if we are meeting with someone who is hearing impaired. Zoom also can transcribe conversations or classes." One participant explained how accessibility was addressed at their institution:

> Technology is getting helpful when it comes to differentiation. I know this is just a little bit off-topic, but Blackboard is our official delivery of instruction platform. It now grades

us on accessibility. We are moving in the direction of making things as accessible as possible. That applies not only to the classroom but also to advising.

Six (29%) participants reported their AAP currently has accommodations in place for those students with disabilities. One advisor said "students with disabilities can benefit from our Office of Accessibility Services. These students have priority registration and a secondary advisor who works in the Office of Accessibility. They (students) receive additional advising services to meet their specific needs." Another participant declared, "we have various types of accommodations for any student that has a documented disability. They (students) are actually given a special advisor that works with their academic advisor to make sure they are getting what they need."

Another interviewee reported, "We have a disability services department that provides support regardless of the nature of the student's disability. If it's a learning disability, visual disability or hearing impairment, the department provides them with whatever is needed for them to be successful."

One of the smaller EPPs has a Student Learning Center which is housed outside of the College of Education. The Student Learning Center employs three to four full-time counselors who assist those who need accommodations. The interviewee who works at this institution describes how the center operates, "If someone needs accommodations to be Zoom only in a classroom then they will reach out to the folks in the Student Learning Center and they will help to get it set up."

The last section of Standard 11.4 addresses how academic advising programs ensure sensitive student data are kept both confidential and FERPA compliant when communicating through the use of technology. FERPA, the Family Educational Rights and Privacy Act, protects

the privacy of post-secondary students by restricting access to their personal records including grades, attendance, and financial aid. Eleven (52%) participants agreed their institution and academic advising program are aware of and abide by the FERPA law(s). Utilizing Microsoft TEAMS, or any other videoconferencing product, while advising can sometimes be challenging when trying to ensure sensitive data is kept confidential. For example, one advisor explained:

> I will let the student decide if they want to meet in person or via TEAMS. I will often be meeting with students virtually and I can hear a parent in the background or someone else in the background, but it was the student's choice to go that direction. I do try to tread a little more lightly, I guess, and not say certain things that I would say openly or if someone was sitting in my office.

An advisor at another institution agreed:

> I've had some meetings via Zoom where I am speaking one on one, or so I thought, to a student and then I hear someone say, 'you don't want to do that. Then I will ask, 'Is someone with you?" and the student will respond with yes, it's my dad, or it's my mom or my boyfriend.

Several participants across different institutions described their experience with FERPA training. Responses included, "we are trained on FERPA and expected to follow those rules, regulations, and guidelines when we're interacting with students, teacher candidates, schools, and stakeholders", "we do FERPA training each and every year to ensure that we are maintaining compliance with the federal guidelines", "we participate in online FERPA training", "working with technology or not, one reason why we don't do group advising is because of FERPA related issues", " we have a very thorough training seminar and our institution just limited access to sensitive information to select key individuals", "sometimes a parent will email me about their

student and I always respond with the link to the FERPA policy that's on our website. I then let the parent know, by law, I am unable to discuss certain information with them." Another interviewee described the relationship between FERPA and DegreeWorks:

> We don't put a lot of notes in DegreeWorks because of the FERPA issue. We don't want anybody that accesses a student record to see personal things; for example, if a student has COVID or if someone needs to drop out for a semester because they're pregnant or going through a divorce.

One participant added:

> We all had to attend an hour-long training in a large group and records are being kept on who was there. It (FERPA) is something we all need to work on, I think. It's just too easy to talk about things and we find ourselves having conversations that probably shouldn't be had. As far as technology is concerned, we are working on how to make that more private and compliant.

Ten (48%) participants discussed the importance of accessibility, private login accounts, and multi-factor authentication and how such tools ensure sensitive communication is kept confidential. One advisor explained that emails received from an outside source, other than the official university emails, are oftentimes returned to the sender. The student is then instructed to send another email using their official email account. This same advisor said, "I'm not sending confidential communication to anyone at cheermom@yahoo.com." Students are encouraged to use only their official university email address and to always include their student identification number in correspondence.

One interviewee explained, "our system times out pretty quickly. In fact, it's kind of annoying, but it times out and we have to log back in several different times a day. That's the

best security measure we have." Another participant said, "the only way you can get in our system is through your specific student ID and password. Unless they've (student) given their password to someone else, no one can get into that information." One advisor said their university's IT department does a great job with technology security and compliance by providing constant IT updates to keep everyone abreast of viruses and hacks. The advisor added, "they (IT) do a pretty good job of keeping out information safe."

One participant shared the importance of a secure platform, "we use Ellucian, so you have to sign in and sign out. Students can only access their own personal information. I don't keep anything on my computer besides whatever in Ellucian, which is password protected." Another advisor discussed using DegreeWorks, "when I first started working here, everything was on paper in manila folders in a filing cabinet in the main office. Then we started using DegreeWorks and that's the main space to store student information now."

Perceptions Of The Quality And Effectiveness Of Advising While Using Technology

Research Question 6 examines advisors' perceptions of effective advising via technology-related platforms compared to meeting with students face-to-face. The increased use of web-based, degree-auditing systems and videoconferencing tools such as Zoom, and Microsoft TEAMS has created a type of hybrid advising system in higher education. The emphasis on remote learning after the nationwide shutdown of schools due to the COVID-19 pandemic helped redefine functional accessibility and practical capability when utilizing technology. More than ever advisors felt compelled to use technology while struggling with the expectation to ensure student engagement via online platforms. All participants interviewed agreed they would not have been able to work with students the past two years without the intensified use of various types of blended technology. Unlike academic advising pre-COVID

when advisors used technology to enhance their practice, the expectation now is to integrate technology in most, if not all, advising tasks. Advisors had much to say on the topic of technology and the increased modifications to advising services. Table 3 provides a summary of participant's responses:

Table 3

Perceptions of effective advising via technology according to emergent themes

Flexibility	**Lack of Connectivity**	**Student Accountability**	**Advisor Organization**
-I love having the flexibility -I can work from home -Ability to meet with students anywhere -Level of security for students knowing they can meet with an advisor at anytime -Technology provide multiple fail-safes -Students also have flexibility -Students are less likely to cancel a Zoom meeting made after hours -Technology allows us to reach students at anytime, anywhere	-Personal connection is not there -Nonverbal cues are hard to read -Meeting face-to-face is more intimate -Students do not talk as much via technology platforms -Students can be distracted by various things when meeting online -It is very clear students are not active listening via Zoom -Meeting face-to-face is more valuable	-Students can make their own four-year plan -Technology provides a platform in which students can watch their progress -Advisors use the note function to send student reminders -Advising has become clearer -Students can check their academic status at anytime -Technology provides transparency in advising	-Technology keeps me organized - Everything I need is uploaded to my computer -I am much better organized digitally than analog-wise -I use Excel to break down data -I can run a report and see who still needs to register

Eight (38%) interviewees agreed the lack of connectedness with their students was the main difference between effective advising via technology-related platforms and meeting with students face-to-face. The information presented to advisees does not change whether it is an in-person meeting or Zoom call, both advisor and student come prepared; however, one advisor said, "if we are online, the connection is just not there. I'm not able to spend the extra time to

find out how they (students) are doing outside of their academic life." The advisor added, "I can see their faces, and try to read their facial expressions, but there's not as much body movement and I'm unable to read those nonverbal cues. Online advising suffices, but it is not preferred."

An advisor at one of the larger EPPs described how face-to-face advising is the better approach for their program. The interviewee had this to say, "I hate online advising. We have developmental advising approaches and those are so difficult to do via Zoom. I have a really hard time connecting with students who are just used to staring at their phones." The participant continued, "for some reason, I can make much better conversation in-person, instead of online. Maybe that's because I'm older than them (students), but online the students just don't talk as often." Another participant expressed concern with distractions while advising students online:

> In terms of advising, it's so much easier face-to-face rather than meeting on TEAMS. The information is often the same; however, I have had situations where I'm advising a student on TEAMS and they're very distracted. It's very clear they're not listening to anything I have to say. Where if I meet with them face-to-face, I have their attention. I wouldn't say anything on my end changes, I'm going to provide the students with the appropriate information and talk to them as if we were meeting in person, but it is very evident when they are not paying attention.

Access to hard copy students' records and paper files seems to have been an important aspect of the advising process pre-COVID. Before putting everything online and into electronic folders, hard copy files were the norm. One advisor explains this is why she feels face-to-face advising is more effective than using a technology platform, "I usually have the student's file right here in front of me, so we can go through and make sure everything is in there." The advisor added, "It makes a difference to look at the same document at the same time. I can email

things to the student, but I'm not sure they fully understand and if we're meeting on Zoom, they seem to always have distractions." Another participant simply said, "Face-to-face advising is better. You can read each other better and it's more effective."

Another interviewee explained the importance of face-to-face on-campus meetings and the lack of engagement that occurs when you are working with a student through a computer screen:

> Often students are dealing with sensitive situations. I can deal more effectively when the student is sitting in my office. I can take them over to counseling services or the office of accessibility and we can do that problem solving right then and there. If I'm meeting with a student virtually, sometimes I'll have to tell them I'm going to have to track down an answer to their question and get back to them. I feel that is not as effective as it is when a student is sitting in my office.

One interviewee discussed the importance of making the advising appointment and claims it is pretty significant because it puts the responsibility on the student. The interviewee went on to explain that the process is a very adult and professional expectation that advisors need to hold their students to. Being proactive is beneficial to students because it shows they are ready to self-advocate for themselves. The interviewee added, "when I meet with students face-to-face, it is much more valuable than the emails or TEAMS meetings when it comes to communication. I like helping them (students) set foundations or goals during a face-to-face meeting. It's just so worthwhile and meaningful."

Flexibility was a theme that emerged from eight interviews. When it came to the shutdown, all advisors had to utilize technology while working remotely from home; there was no other option. What used to be a 9:00 a.m. – 5:00 p.m. occupation has now become much more

accommodating to both students and advisors. One advisor demonstrated the flexibility of technology usage and how he believes it has made academic advising easier. Advising does not always have to be in person in an office on campus, “I don’t have to be in my office. I can be at home and meet with somebody at 7:00 p.m. if that’s the best time for them.” The participant added, “to be perfectly honest, I have a nicer computer at home and my internet is more secure and runs faster.” This interviewee also felt students seem to show up more often online rather than face-to-face.

One interviewee spoke about flexibility and the level of security that availability through technology brings to students, especially between semesters when most faculty are not required to be on campus, “The reality is that I love having the flexibility that technology brings. Even when we’re not on campus, I can meet with a student and help solve a problem. There is a level of security that comes with that.” One advisor spoke about flexibility and the use of technology by explaining how some of the students she advises drive an hour to get to campus. Zoom meetings have provided an opportunity to meet without having to make the drive, especially if there is inclement weather, “Zoom meetings have allowed us to reach out to students a little bit more easily. Some of our students are in situations where they are so far out it’s a burden for them to have to come to campus for advising. Moving forward we are going to have a hybrid advising model where we can advise in multiple ways.” The participant also said advising meetings via Zoom seem to go quicker and be more efficient because there is no lingering chatting.

Another participant explained how the flexibility in advising has changed for the students, but not necessarily for the advisor. The advisor continued to speak about the change within the technology being used, “the quality of advising in terms of speed and accessibility is

better. Students can get an appointment with me quicker via Zoom than in-person." The advisor went on to say, "I schedule blocks of time for advising and sometimes meet with students in unconventional locations. I have advised students before who were at work on their break." It may not be the best situation, but technology has provided students with much more flexibility. Another advisor spoke about using Google Meet and how it has made advisors much more accessible to students because they do not have to necessarily worry about getting to campus during office hours. The advisor said, "students are more likely to show up if we've scheduled a meeting after hours. I don't have as many stragglers right before the semester starts saying they need to see me to schedule. They aren't waiting for the last minute to register."

One EPP recently established a new process for advising incoming freshmen. The participant spoke about how technology and being flexible has changed how they do orientation. The technology was always there, it was just not being utilized:

> We never did summer meetings before the pandemic. Then we were able to get set up with TEAMS and now it's an expectation university-wide that we make contact with our incoming advisees in the summer just to say hi and touch base with them. We're all used to it now, but it's been a big change. The availability and the comfort level of getting on the computer are not a big deal for anybody anymore. That's a shift."

Three (14%) participants considered how utilizing technology has increased student accountability. With available advising technologies like DegreeWorks, Starfish, Banner, and OLSIS, students can take a leadership role in the ownership of their academic careers. An advisor at a smaller EPP described how technology-related degree audits have improved the quality and effectiveness of advising at their institution. Students can access the system and create their own four-year plan to follow. According to the advisor, the four-year plan can be

adjusted, “if a student needed to take ENG 102, but the class was full the semester in which they added it to their four-year plan, they can go in and switch it.” The degree audit system also displays an anticipated graduation date that allows the student to both view their progress towards degree and make future registration plans, “if a student sends me a message mid-semester requesting to drop a class, then they know the course has to go somewhere else in their four-year plan for graduation purposes.” One participant explained how student accountability has recently changed at their institution:

> By having the technology available, the students have become more accountable for their advising. This has greatly changed our process. No longer is it just a piece of paper. The technology provides a platform so students can watch their progress. For example, if a student wants to work ahead, they can. If a student wants to take a summer course, they can. The student can map out how many credit hours they have to take each semester. On the flip side, if a student decides to drop a course, they know eventually they’ll need to pick up that course again to stay on track. It’s the individual accountability piece. If nothing else, the technology helps. Advisors can do the same thing face-to-face, but I just don’t think in today’s modern era that it has the same effectiveness.

Another participant explained how before using technology students received a paper copy of their curriculum sheet and were expected to keep it and follow it for four years. The advisor said, “before we would make a photocopy of the student’s advising sheet. I’d have a copy and the student would have a copy; however, the student always lost their copy and had to physically come to the office to get another one.” Students did not see the paper copy as valuable and would oftentimes return to the advisor’s office asking what to register for semester after semester. For students to be able to access their electronic curriculum sheet at any time is much

more efficient. The advisor added, “I will go in the system and use the notes function to send reminders like ‘don’t forget to take the Praxis’ and ‘you have to be registered by this date, so I feel like that has helped communication.” The advisor finished answering the question by adding, “I think all of those technology-related tasks have changed the way I practice advising. I believe it is clearer and more transparent. Students can now interactively participate in the process.”

Two (10%) interviewees discussed the importance of organization on the part of the advisor when determining the quality and effectiveness of advising. The onus is put on the advisor to provide quality and effective advising processes for their students. One participant had this to say, “technology helps me stay organized. I have everything I need on my computer screen. I’m a technology nerd anyway, so I like to use Excel to breakdown data information and to calculate grade point averages.” The grade point average (GPA) required at this particular educator preparation program is 3.0. The advisor explained that oftentimes other faculty advisors ask for assistance when determining how many A’s a student would need to earn to bring their GPA up to the requirement. The advisor continued, “I have a spreadsheet saved where I can literally type in the grades, and it calculates what the student will have to earn in any given semester. It makes my job a lot quicker and much more accurate.” The other participant explained, “I would be a much less organized advisor if I didn’t use technology.” The advisor described his process, “I try to split the difference between face-to-face meetings. I like to chat with my students and build rapport and then add to the session with the technology enhancements that are available. So, it’s somewhat for the student, but most often for myself and organization.”

Challenges Academic Advisors Face When Using Technology While Advising

Research Question Seven addresses the challenges academic advisors face when using technology while advising students. Academic advisors will never fully go back to pen and paper advising; technology is here to stay. The four emergent themes created from the interviews are technology issues, lack of internet access, lack of human connection, and advisor and student level of understanding. Table 4 provides a synthesis of participants' responses:

Table 4

Technology challenges according to emergent themes

Technology Issues	Lack of Internet Access	Lack of Human Connection	Level of Understanding
-Unplanned upgrades which affect advising times -Testing technology before implementation -Other available options when the system is down -Updates that require shutting down the computer and restarting	-Students without internet access at all -Students who do not have access to a secure connection at home -Students who are required to travel to find internet access -Advisors who do not have access to a secure connection at home	-Non-verbal cues are hard to read -The advisor/advisee relationship is hard to foster -Difficult to develop relationships through technology -Loss of organic relationship -Uncertainty of received message -Various distractions meeting via Zoom, Microsoft TEAMS, etc. -Advisor talking to a blank screen when using Zoom, Microsoft TEAMS, etc.	-Some advisors are not tech-savvy - Pen and paper are preferred by a few advisors -Information that technology provides is only as accurate as the data being entered -Advisors ask other advisors for technology assistance -Learning new technology can be daunting -Students need to understand the technology for it to work -Technology allows for miscommunication -Setting boundaries with technology when leaving the office for the day -Hesitation to learn new technologies

	-Often technology has glitches that cause confusion

Three (14%) participants touted technology issues as one of the challenges advisors face when meeting with students online. Technology is great when it works. One advisor explained, "We rely on technology so heavily that we don't really know what to do when the system goes down." Institutions, where employees worked remotely during the COVID-19 pandemic, decided to try to continue to operate as normally as possible. Courses traditionally taught in a brick-and-mortar building were now being put into Blackboard, Banner, or any other available online learning platform. Similar to faculty members, advisors had to quickly upload all their files and documents online to keep working.

Employees can be extremely dedicated and committed to their profession, but if the technology is inadequate, outdated, or down, it simply does not work.

One advisor described the frustrations, "many times I've had to stop and start again or completely reboot my computer for a certain technology to work. Students oftentimes have this same issue. Right now, that's the biggest problem I have using technology."

One advisor spoke about the challenges and technical issues that surround upgrades and various downtimes:

> One of the biggest challenges I face when using technology is the upgrades. For instance, at the beginning of the semester, I didn't have access to my computer because IT was completing a university-wide update to our system. That ended up putting me behind a day or two. Advising times can be so tight and we all start advising the same

> week. It seems like every semester, at this exact time, we need to start using the new updated version of our system. It's like Murphy's Law. There's always going to be some type of technical issue during advising week.

Eight (38%) interviewees reported internet access was one of the major challenges for advisors and students. Sample interview quotes included, "the biggest challenge for our students in the Mid-Ohio Valley is definitely internet access", "I met with this student the other day via Zoom, and she got kicked out of the meeting three times. I had to wait for her to get logged back in and it was so frustrating for us both", "secure internet access is a challenge for students", "my service, for the most part, is good; however, I've virtually met with students when they're in their car because they had to drive somewhere to get a good connection", "I've met with students in the McDonald's parking lot because the internet access is better there than at their house." Internet access, or the lack thereof, is a big challenge that faces advisors, students, and anyone who depends on the access. EPPs do not have the resources readily available to resolve this type of specific technical challenge.

Lack of human connection is also one of the themes emerging from the interviews. Five (24%) participants stated they do not feel human connection when meeting virtually with their students. Often students will meet with their advisor via one of the many videoconferencing tools available and never turn on their camera. Advisors end up talking to a blank screen which can be very disconcerting. One interviewee noted, "when meeting with students online we miss out on the human connection between the advisor and advisee which is so very important." The advisor continued:

> I don't want to be the person the students come to see just to get their pin for registration. I want to be the person that students come to when they're having academic

challenges in their courses or having an issue with housing. I want to foster that relationship. I feel like meeting with students via video platforms and talking to a black screen is prohibitive of that connecting piece. The purpose of education, whether it's K-12 or higher education, is about relationship building.

Another advisor added, "I'm afraid without face-to-face interaction we are losing that personal touch. I think it's much harder to develop relationships through technology. I also think people are more comfortable meeting face-to-face." An advisor from one of the larger EPPs replied, "Technology poses a challenge because sometimes messages can be misconstrued. When meeting face-to-face I can make sure my message is clearly received. I don't have to worry about a student understanding what I'm trying to convey." One of the more seasoned advisors declared, "I just feel like the connection there is better face-to-face, especially when having some of those harder conversations that are difficult." This advisor went on to describe some of the distractions both students and advisors experience when they are at home, meeting virtually, compared to being in the office, "I never really know if they are listening to me or not when meeting virtually." Another interviewee simply said, "I really disliked my job through COVID-19. I really missed having that kind of connection with my students."

A limited understanding of technology for advisors and students is another challenge facing AAPs. Five (24%) interviewees discussed their concerns regarding the use of technology. One interview described the broad difference of technology expertise among advisors:

I do think there are different levels of understanding for advisors. For example, I think I'm pretty tech-savvy, or I try to be for the most part, but I have colleagues that I work with who are not. They still use the printed curriculum sheets, and everything is more pen and paper. If we're looking at the structure of advising and standardization for policy,

then technology poses a big problem. My understanding of technology is different from somebody else.

Another advisor added, “the information that technology provides is only as accurate as of the initial information that’s being put into the system.” All involved must have some level of understanding when it comes to the technology being utilized or it will simply not work for them. The advisor went on to say, “for instance, I’m working on exemptions right for the Praxis exams. I have to be extremely careful and accurate when entering this type of information or it could cost the student time or money or both.”

Six (29%) participants discussed the challenge of learning new technologies. Advisors whose personal philosophy is steeped in developmental or appreciative advising policies may struggle with moving toward technology when advising students. An interviewee at one of the larger EPPs said, “some of our seasoned advisors don’t use technology as much. We had one older faculty advisor who didn’t even use email, and no one forced him to.” Another participant said, “learning new technology is a big challenge for many advisors. I wouldn’t say the training was super hard, but you still have to learn to use it.” The participant added, “this goes for students, too. If a student is going to share something back with me, they may not know how to do it. I have to know how to explain it to them (students). The challenge of learning the technology is on both the student and the teacher.” This was the comment made by one of the interviewees, “I think it has to do with the comfort level. When we switched technologies, some people were very hesitant to go through the transition process. I jumped on board with the new technology because I am comfortable with technology, but some did not.”

Understanding and comprehension on the student side have also become a challenge. One institution requires its students to log on to their advising system and create their own four-year

plans. The advisor at this institution claims students often will say they are unable to get in or they do not know how to navigate the system. The advisor said, “I’m trying to work with my students to kind of force their hand to go ahead and create the timeline, but then they tell me they can’t access it online. I’m not sure I believe them, but there’s not much I can do.” Another advisor added, “DegreeWorks makes me nuts! There are so many little glitches. Students will sometimes log in and see their worksheet and it’s just a jumble of words. When things like this happen, the technology confuses everyone involved.” Another advisor explained the miscommunication that sometimes happens when using technology for advising purposes, “I feel like technology opens the door for miscommunication. It’s in no way intentional or deliberate by any means, but it just happens through the process of technology.”

CHAPTER SUMMARY

Chapter Four examined the organization of advising services, typical advising sessions, and provided a comprehensive narrative of participants’ responses to the research questions asked regarding advisors’ perceptions of the use of technology and the importance of the Council for the Advancement of Standards in Higher Education (CAS). Twenty-one interviews were conducted for this study. Academic advisors, or those individuals who identified as advising students currently enrolled in an undergraduate educator preparation program in West Virginia, constituted the study sample. Interview findings were collected, classified, and central themes identified.

Participants were first asked to explain how academic advising programs were organized at their institution and to describe what consists of a typical advising session. Of the fourteen educator preparation programs represented in this study, no two institutions have a similar infrastructure for advising. All but two academic advisors interviewed are either faculty

members or university personnel who have other work-related obligations. While varied, each participant was able to describe their advising program and expound on how and why it works for them. Every educator preparation program has an advisor to assist students with registration and ensure they meet certain benchmarks, however, there is no typical advising session as each institution manages the advising process differently. Even though the advising process itself may be different, interviewees expressed they like to begin each advising session by asking a few questions to break the ice and ensure students feel comfortable and welcome.

Participants were asked to reflect holistically on the entire advising process and to identify the technologies used while advising students. Interviews determined various video conferencing programs, written communication methods, and specific institutional degree auditing programs, including Microsoft TEAMS, Zoom, email, DegreeWorks, and BANNER were the most commonly identified technologies being utilized while advising. As reflected in the participants' responses, technology is being integrated into multiple advising processes such as automatically generated degree audits, class registration, and how and where academic advising meetings occur. These types of processes were based on advisor opinions such as necessity, advisor and student convenience, advisor and student organization, and preference.

A copy of the CAS Technology Standards was emailed to each of the participants prior to the interview process. Even though only three (14%) of the participants were aware of the CAS Standards beforehand, the interview protocol determined advisors act in accordance with most of the CAS Technology Standards for Academic Advising Programs (AAP). Participants questioned two of the standards and agreed they were not applicable to the duties of academic advisors at EPPs in this area.

The benefits of incorporating technology while academic advising was identified as convenience, flexibility, implementation of fail-safes, increased efficiency, student accountability, and advisor organization. The identified challenges included various technology issues, unreliable internet access, lack of human connectedness, failure to communicate, and insufficient understanding of technology.

Interviews determined that technology is an essential requirement from start to finish for those involved in the academic advising process. While students have the opportunity to use an online scheduling mechanism to make an appointment or check their progress toward degree electronically, advisors view in-person meetings along with the enhancement of various technologies work best when creating a culture of appreciative advising and cultivating the advisor/advisee relationship.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

This study sought to identify advisor perceptions of technology in academic advising practices. This chapter is organized in the following sections: (a) problem statement, (b) research questions, (c) summary of methods, (d) summary of findings, (e) conclusions, (f) discussion and implications, and (g) recommendations for further research.

PROBLEM STATEMENT

A confluence of factors from widespread developments in higher education technology, to institutional accountability, has led to a broader debate about the role and legitimacy of technology-mediated approaches for advising in the 21st Century (Kalamkarian & Karp, 2015; Pasquini & Steele, 2016, Tyton Partners, 2017a, 2017b). Technology adoption at institutions of higher education is a particularly complex process involving multiple stakeholders. The Council for the Advancement of Standards in Higher Education (CAS), including NACADA, has developed a set of guiding principles for academic advising, including the use of technology in academic advising. Little research is available on how academic advisors should incorporate and include these practices into their day-to-day activities (Schultz, 2019).

Technology is becoming a critical component of the entire advising process and in response to this increased availability and use of technology, the CAS Standards for Academic Advising Programs was created. Section 11 of the standards provide guidelines specifically related to the use of technology while advising. There is little research available on the influence of these standards on academic advisors, students, or programs. This study investigated the types of technology being used in advising practices, the effectiveness of these technologies as

perceived by advisors, and advisors' perceptions of quality advising set forth by the CAS technology standard.

RESEARCH QUESTIONS

Specific research questions developed to guide this study include:

RQ1. What types of technology are academic advisors utilizing while advising students and to what extent?

RQ2. What strategies/procedures are Academic Advising Programs (APP) using to ensure effective management of technology-based systems for the delivery of academic advising programs and services?

RQ3. How are APPs using technology to ensure effective user engagement in the academic advising process?

RQ4. How are APPs ensuring that technology-based advising programs and services are legally compliant and secure?

RQ5. How are APPs using technology to facilitate effective communication with all stakeholders and users?

RQ6. How do academic advisors perceive the quality of effective advising via technology-related platforms (TEAMS, Zoom, etc.) as compared to face-to-face advising?

RQ7. What challenges do academic advisors face when having to use technology while advising students?

SUMMARY OF METHODS

A phenomenological qualitative research design was employed in this study. The population for this study included twenty-one academic advisors who are faculty, administrators, assistants, or others who perform advising duties and are also employed by a West Virginia

educator preparation program. A combination of purposeful and snowballing sampling techniques was used to identify participants. Deans, Associate Deans, or Program Directors within the educational unit which houses the college or school at each institution were contacted and asked to identify those whose primary role is academic advising. Once this group was identified, each advisor was individually contacted via email and asked to participate in the study. A description of the study's purpose and an explanation of the research questions were provided to the interviewees prior to the interview process.

The CAS Technology Standards, the NACADA Academic Advising Core Competencies, and the literature review guided the development of the interview protocol. The interview protocol consisted of general demographic inquiries and seven open-ended questions directed at exploring advisors' perceptions of integrating technology into quality academic advising. Specific interview protocol questions mirrored the technology standards. A panel of experts was used to conduct a pilot study to validate the interview protocol.

One-on-one, in-depth, semi-structured interviews were conducted by the co-investigator. Interviews were conducted via Microsoft TEAMS, Zoom, telephone, or in-person, whichever was most convenient for the participant. A request to record the interview was made before the actual meeting. Transcripts were developed and transcribed verbatim.

SUMMARY OF FINDINGS

Interview results allowed for the identification of various technologies being used, to what extent, the challenges and benefits of using technology while advising, and whether or not academic advisors are utilizing the CAS standards to guide their technology usage during the advising process. The increased utilization of technology was seen by academic advisors as a necessary tool when required to work remotely from home during the COVID-19 pandemic,

however, most participants agreed technology should be used as a supplement and not a total replacement for face-to-face meetings.

The technologies most frequently used while advising include various video conferencing programs, written communication, and specific institutional degree auditing programs, including Microsoft TEAMS, Zoom, email, DegreeWorks, and BANNER. Advisors indicated technology is being used in a myriad of ways such as scheduling both in-person and virtual advising sessions, familiarizing students with academic policies and procedures, and monitoring students' progress toward degree.

Academic advisors are increasingly incorporating technology enhancements that aid in the delivery of advising services while also nurturing the advisor/advisee relationship. Advisors openly communicated their concerns about the implementation of additional technologies and the possibility of losing the ever-important student connection when not meeting face-to-face. While some participants were initially unaware of the CAS Technology Standards, most advisors are using the majority of the standards to guide their professional practice of advising.

As technology is being increasingly incorporated into the advising process, advisors are now having to adjust their advising model and personally decide which technology best fits their needs and their students' needs. Participant responses indicated ongoing technology-based communication and interactions between advisors and students when using technology were beneficial when delivering information but lacking when building rapport and relationships.

Participants described the significance of using technology, especially during the COVID-19 pandemic, when so many institutions of higher education sent faculty and staff home to work virtually. The integration of technology was seen by academic advisors as a necessity. While unplanned and unexpected, benefits such as advisor and student flexibility, advisor

organization, and the accountability of students are all themes that emerged from the interview data. More than one participant declared their advising practice will forever be changed by the technologies implemented over the past two years.

CONCLUSION

Data gathered from this study were sufficient to support the following conclusions:

RQ1: What types of technologies are academic advisors utilizing while advising students and to what extent?

Advisors reported the incorporation of certain technology platforms has become necessary when completing daily advising activities. Technologies such as videoconferencing tools, degree-auditing platforms, and Microsoft Office (Word, Excel, PowerPoint) were the technologies most commonly being used during the academic advising process. Though not used as frequently, advisors are also employing additional forms of technology such as appointment scheduling tools, shared document services, online chat options, and text messaging.

RQ2: What strategies/procedures are Academic Advising Programs (AAP) using to ensure effective management of technology-based systems for delivery of academic advising programs and services?

Technology training and support are the foundation of effective management of technology-based systems. Interviewees indicated technology training is presented in various formats including faculty mentoring programs, IT department workshops, and specific technology seminars. Students are also receiving specialized technology training but through alternative options such as new student orientation or courses developed for incoming freshmen or transfer students. Technology-based platforms such as DegreeWorks or BANNER require maintenance that includes an established backup data cycle. Web-based planning tools which

monitor students' progress toward degree completion refresh each night and changes can be seen the next business day, a process that provides both the student and advisor with up-to-date, current academic information.

RQ3: How are AAPs using technology to ensure effective user engagement in the academic advising process?

Academic advisors felt they were able to consistently provide continuous communication and advising services to students by utilizing technology. Videoconferencing platforms such as Microsoft TEAMS and Zoom provided a space for students and advisors to meet virtually and allow for user interaction. Advisors explained they have had to adapt to the increased use of technology while advising, and that they quickly became dependent upon it more than ever before. Additionally, the interviewees spoke highly of the various technology-based planning tools such as DegreeWorks and how it provided them with a fail-safe when checking grade point averages, admission to program, and graduation requirements.

RQ4: How are AAPs ensuring that technology-based advising programs and services are legally compliant and secure?

While participant answers were mixed, most advisors, whether they knew where it was located or not, felt their institution had a technology policy in place. Advisors indicated the recent increase in the utilization of technology prompted IHEs to provide faculty and staff with Professional Development training regarding compliance, security, and the protection of student information. Section 11.3 of the CAS technology standard states an academic advising program must provide a secure platform when conducting financial transactions in accordance with industry best practices. Collectively, the entire pool of participants interviewed felt they have no

accessibility or accountability to conduct any type of financial transactions and ultimately questioned the relevance of the standard.

RQ5: How are AAPs using technology to facilitate effective communication with all stakeholders and users?

The importance of an up-to-date, easily accessible, and mobile-friendly website, the significance of communicating with students with disabilities, and the awareness of FERPA were the most frequently identified factors in facilitating effective communication. More than half of the participants felt their institution's website was current and easily accessible and 76% of the participants agreed their institution's website was mobile-friendly. Interviewees agreed most stakeholders would visit an institution's website to search for answers to questions rather than make a telephone call. Nearly two-thirds of the participants interviewed stated they were unsure if there was a technology policy in place for students with visual or hearing impairments; however, several participants reported the arrangements for accommodations are in place but housed in a separate office outside of the college. More than half of the participants agreed their AAP is aware of and abides by the FERPA law(s).

RQ6: How do academic advisors perceive the quality of effective advising via technology-related platforms (Microsoft TEAMS, Zoom, etc.) as compared to face-to-face advising?

All participants interviewed agreed they would not have been able to work with students over the past two years during the COVID-19 pandemic without the intensified use of various types of blended technology. Interviewees indicated they were unprepared to work from home but found the integration of technology provided some positive aspects to the academic advising process. Advisors felt that flexibility, student accountability, and advisor organization are best accomplished when advising via technology platforms. Participants explained that when

advising face-to-face they felt as if they have a better personal connection with their students. Advisors felt the quality and effectiveness of the academic advising process have not changed with the increased incorporation of technology; however, the manner in which information is delivered has.

RQ7: What challenges do academic advisors face when having to use technology while advising students?

Technology issues, lack of internet access, lack of human connection, and level of understanding were most frequently identified as challenges faced by advisors when using technology. Interviewees explained they were not surprised when faced with technological difficulties. For some, addressing the technology issue became a challenge; therefore, academic advising programs became very innovative when identifying and implementing solutions. The lack of a secure internet connection in rural areas of West Virginia was identified as one of the biggest challenges. Advisors explained that often times meeting with students virtually created human connectivity issues. Students who could not access their camera or microphone made it difficult for advisors to discern if students were listening or understanding what they had to say.

DISCUSSION AND IMPLICATIONS

Academic advisors had mixed emotions about the integration of technology in the academic advising process. Advisors supported the use of technology claiming it was more efficient for both advisors and students, less time-consuming, and provided a fail-safe; however, they were concerned with the lack of connectedness. Changes in technology to support advising practices may feel cumbersome or trivial, but they are often put in place to increase efficiency or productivity (Underwood & Anderson, 2018). On the other hand, advisors believed the lack of face-to-face meetings diminished the advisor/advisee relationship. As stated by Comer (1995),

"no significant learning can occur without a significant relationship." Students who perceive that someone cares about them and that they belong to the school community are more likely to be academically successful than those who do not feel any sense of care from the institution (Heisserer & Parette, 2002). Academic advisor interviews addressed both points and the results of this study concluded the integration of technology-based programs, including video conferencing tools, degree-auditing platforms, and Microsoft Word Suite (Word, Excel, PowerPoint) is a necessity for today's academic advising programs.

Interviewees regarded the incorporation of technology as a step in the right direction and suggested a hybrid advising model that supports both the advisor/advisee relationship and provides current information efficiently. As stated by Leonard (2008), "when used appropriately, technology can enhance the advisor/advisee relationship, especially when it raises the discourse of advising to a level beyond information giving by expediting, simplifying, or increasing access to information" (p. 293). The data from this study can be used by academic advisors and EPPs to help create or revise training manuals that include best practices when using technology while advising. The development of best practices for academic advising would include identifying what advising processes require an in-person meeting and which advising activities can be handled electronically. The appreciative advising model focuses on the relationship between advisor and student. Further investigation regarding the advisor and student relationship when meeting virtually needs to be studied in-depth and compared to face-to-face advising sessions.

The increased use of technology in advising has caused advisors and students to scramble to learn new processes. Advisors discussed the importance of the management of technology-based services and how training and support play a huge role in its success. Recently, there has been a shift in university administrative processes. Transactions that were previously in-person

are being relocated to electronic-only options at a rapid pace. This is also true with licensure and certification at the state department level. Processes that required original copies of paperwork have been transformed into online documents that include electronic signatures. Universities are pushing for paperless campuses and expect all who are involved to comply. The past two years have shown those in education that changes are constant and fluid. It is nearly impossible to keep track of the abundance of changes without the assistance of technology. The creation of training videos that could be posted online, viewed by both advisors and students, and quickly updated when changes occur would be beneficial to all during these times of ever-evolving technological modifications.

Online accessibility to advising information is extremely important, however, advisor accessibility needs to be defined. The increased use of technology has contributed to the perception that advisors are continuously available. Advisors can become overwhelmed and struggle with creating boundaries when it comes to their students. Expectations of rapid response have increased demands on education professionals, who are required to evolve with their students and "meet them where they are" whenever possible (Karner, J., Patente, S., & Ramsey, S., n.d.). Just because online information is accessible at all times, advisors should not feel they need to be. Advisors who were accustomed to seeing and meeting with their students regularly in person, felt somewhat disconnected when they began remotely working from home during the COVID-19 pandemic. Participants felt they needed to be available around the clock and found it extremely difficult to draw the line between work and home. Consistent with the literature review and interview data, students want what they want, when they want it. This "fast food" mentality has become an integral part of life (Matheson, Moorman, Winburn, 1997).

Advisors expressed the increased use of technology has caused them to feel as if they are 'always on the clock'. While today's college students grew up in the digital age, academic advising remained face-to-face prior to the COVID-19 pandemic. Advisors explained that they are responding to emails at all hours of the day and night and are now struggling with finding an appropriate balance between work life and home. Drawing clear lines regarding normal work hours while operating from home has triggered stress and anxiety for some. Understanding how to apply technology to enrich work and home life balance should be considered. Students would not visit their advisor's on-campus office at midnight; therefore, they should not expect to be provided with virtual academic advising services at that time. Moving forward, administrators at institutions of higher education may need to adjust their office policies to encourage advisor/advisee boundaries when utilizing technology during the advising process.

Some of the technology-related challenges facing academic advisors in West Virginia are somewhat out of their control. During the COVID-19 pandemic, students, faculty, and staff were asked to depart campus in an effort to slow the spread of the virus. Participants explained some of their students who live in rural areas do not have access to a secure internet connection. According to a report recently released by the Federal Communications Commission, the percentage of West Virginia residents with a high-speed internet connection to their homes fell over the last year to 82.2%. West Virginia currently ranks 38th in the nation and is one of only five states that are sliding backward when it comes to internet accessibility (Manfield, 2021). Advisors felt they were unprepared to work from home. Academic advising programs began identifying technology issues and implementing innovative solutions. For example, one institution held a drive-through advising event for those students without internet access. Students drove to the parking lot of the institution and were able to create or modify their

schedules, order their textbooks, receive financial aid assistance, and get their student identification badges made, all from the convenience of their personal vehicles. The employees were masked and observed social distancing. This type of innovative thinking regarding technology must be considered when conducting academic advising services.

Advisors also discussed challenges such as lack of professionalism and confidentiality when using technology for advising. Participants commented on the difficulty of having a significant conversation with a student while speaking to a black screen or while others were present in the room. Violations of FERPA laws could easily occur when advisors meet virtually with students and are unaware of who may also be privy to the conversation. If virtual advising becomes a permanent meeting option for students, then academic advising programs will need to create a set of professional guidelines which students must follow. Professionalism while using technology is somewhat a new concept. While some academic advising programs have a technology policy in place, most do not cover the importance of professionalism, in addition to security, when meeting online.

The results of this study can be used in several different aspects. Academic advising programs can use the findings from this study when creating training manuals for both professional and faculty advisors. Additionally, academic advising programs can use the information gathered in this study to redesign and revamp their website to reflect the ongoing technology updates. For example, one advisor explained their academic advising program recently created a new website that lists a myriad of dynamic forms. The students at this institution can simply visit this website, click a link, and change their major. Students are no longer required to run from office to office to collect signatures to adjust their academic student records.

To meet students' changing expectations, academic advisors must update their communication practices to include alternative methods such as social media. Interview data show that 76% of participants never use social media of any kind to aid in the academic advising process. More and more academic advising programs are incorporating various types of social media platforms. The University of South Carolina is now active on both Twitter and Instagram. While these social media platforms are managed by the University Advising Center, the aim is to promote academic advising themes, trends, dates, and deadlines in all colleges/schools on the USC-Columbia campus. Consistent with both the literature review and interview data, advisors will need to explore new methods using technology to service their students – making the mantra "meet students where they are" more relevant than ever (Wicks, 2020).

The future of higher education has forever been changed due to the COVID-19 pandemic. When classes shifted to virtual instruction, so did the services of academic advising. While the challenge to go online was daunting, academic advising programs were one of the first departments in higher education to incorporate technology into their day-to-day activities.

Academic advisors' perception of technology was seen as both positive and negative. Participants felt torn between wanting the personal connection of a face-to-face meeting with the understanding that technology provided both flexibility, accessibility, and convenience for both advisors and students. Academic advisors were able to communicate with students beyond face-to-face meetings while utilizing different videoconferencing technologies. As both students and advisors became more comfortable with these changes, the use of technology during advising sessions became routine.

The information gathered from this study would provide academic advising programs with a deeper understanding of how technology can become a positive addition to advising

services, as well as both the benefits and challenges that occur when utilizing certain technologies. Evidence obtained from this study can inform students, advisors, and administrators of the identified challenges and assist with addressing those issues. Data gleaned from the interviews can support academic advisors with the development of specific training sessions which need to include setting advising boundaries, professionalism, and confidentiality when utilizing technology, the creation of dynamic forms to complete administrative processes, incorporating social media into advising, and how to address internet accessibility issues.

Participants agreed that the process of academic advising over the past couple of years has been both difficult and demanding; however, they also felt the technologies used during this time of working virtually have made them better advisors and improved their approach to advising. Most all interviewees said they would rather meet with students face-to-face for advising sessions; however, it was determined they would also continue to offer students virtual advising options. Advisors and students need to continue to work together and communicate with each other to establish which advising process provides them with both an efficient and effective advising session.

RECOMMENDATION FOR FURTHER RESEARCH

Recommendations for additional research include:

- There is very little research regarding the application of the CAS Technology standards to guide the academic advising process. Higher education administration could benefit from these study findings by taking into consideration advisors' perspectives regarding the utilization of technology while advising to establish policies and procedures for best practices.
- This study examined only those academic advisors who are employed by West Virginia institutions. A similar research study should be conducted at educator preparation programs outside of West Virginia as states greatly vary in their breadth of technological knowledge.
- Future research should be conducted to gain the perspective of education students and how they currently view the influence technology has on them now, as well as technological expectations in their future classroom.
- Educator preparation programs are using a multitude of different, institutional-specific technologies, therefore research on which particular degree-auditing program works best for education students would be helpful.
- Advisors are concerned about the development of the advisor/advisee relationship and lack of connectivity when using technology to advise. Additional research exploring the student's perceptions regarding this type of advising would prove beneficial.
- Research exploring the technologies being utilized during advising sessions should be conducted to determine and create a training manual for best practices among faculty and professional advisors.

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APPENDIX A: IRB APPROVAL

IRBNet message from Anna Robinson
Anna Robinson <no-reply@irbnet.org>
To: Bethel, Charles <bethel3@marshall.edu>; Rowe, Kandice <kbrumfie@marshall.edu>

Message from Anna Robinson:

Re: [1800676-1] Advisors Perceptions of Technology in Academic Advising Practices in West Virginia Educator Preparation Programs

In accordance with 45CFR46.104(d)(2), the above study was granted Exempted approval today by the Marshall University Institutional Review Board #2 (Social/Behavioral) Designee. No further submission (or closure) is required for an Exempt study unless there is an amendment to the study. All amendments must be submitted and approved by the IRB Chair/Designee.

Regards,
Anna Robinson

APPENDIX B:

ALIGNMENT OF RESEARCH QUESTIONS (RQ)

TO ACADEMIC ADVISING CORE COMPENTENCIES

Academic Advising Core Competency	RQ1	RQ2	RQ3	RQ4	RQ5	RQ6	RQ7
Conceptual (Theory/Advising Strategies)	X	X	X	X			X
Informational (Curriculum/Policies)				X	X		
Relational (Communication/Relationship)	X			X	X	X	X

APPENDIX C:

ALIGNMENT OF RESEARCH QUESTIONS (RQ)

TO CAS TECHNOLOGY STANDARDS

Part 11: TECHNOLOGY	RQ 1	RQ 2	RQ 3	RQ 4	RQ 5	RQ 6	RQ 7	RQ 8
11.1 Systems Management								
Academic Advising Programs (AAP) must have current technology to support the achievement of its missions and goals.	X	X	X	X			X	X
AAP must incorporate accessibility features into technology-based programs and services.	X		X					X
AAP must ensure that personnel and constituents have access to training and support for technology use.	X	X	X					X
AAP must back up data on a cycle established in partnership with the institution's information technology department.								
AAP must implement a replacement plan and cycle for all technology with attention to sustainability.								
11.2 User Engagement								
AAP must use technology to enhance the delivery of programs and services for all constituents.	X	X	X	X				X
AAP must employ appropriate and accessible technology to support the delivery of advising information.	X	X	X	X				X
AAP must ensure that online and technology-assisted advising includes appropriate processes for obtaining approvals, consultations, and referrals.	X	X	X	X				
AAP must ensure that technology addresses constituents needs.	X	X	X	X		X		X
AAP must employ technologies that facilitate user interaction.	X	X		X		X		
AAP must provide secure remote access.	X		X			X		
11.3 Compliance and Information Security								
AAP must have policies on the appropriate use of technology that are clear and easily accessible.	X		X	X	X			

AAP must comply with governmental codes and laws and with institutional technology policies and procedures.					X			
AAP must provide a secure platform when conducting financial transactions, in accordance with industry best practices.					X			
11.4 Communication								
AAP must have updated websites that provide information to all constituents in accessible formats.	X		X	X				
AAP must use technology that allows users to communicate sensitive information in a secure format.		X	X			X	X	
AAP must evaluate relevant social media platforms and techniques for communication and implement those that best meet constituent needs.	X		X	X		X	X	
AAP must evaluate multiple modes of communication including, but not limited to, phone, text, and web chat.	X			X	X	X	X	

APPENDIX D:

TECHNOLOGY USED WHILE ADVISING

Technology Used While Advising (N=21)	Always	Very Often	Sometimes	Rarely	Never
Email	16 (76%)	4 (19%)	1 (5%)	0	0
Microsoft Office (Word, Excel, PowerPoint)	9 (43%)	5 (24%)	4 (19%)	2 (10%)	1 (5%)
Telephone	1 (5%)	2 (10%)	6 (29%)	11 (52%)	1 (5%)
Online chat	1 (5%)	1 (5%)	1 (5%)	6 (29%)	12 (57%)
Text messaging	0	2 (10%)	2 (10%)	8 (38%)	9 (43%)
Degree audit-system (DegreeWorks, Starfish, etc.)	9 (43%)	5 (24%)	3 (14%)	1 (5%)	3 (14%)
YouTube – Informative Session	0	0	1 (5%)	0	20 (95%)
Social Media – Twitter, Facebook, Instagram	0	1 (5%)	2 (10%)	2 (10%)	16 (76%)
Appointment Scheduling (i.e. Bookings)	7 (33%)	6 (29%)	4 (1%)	1 (5%)	3 (14%)
Zoom, TEAMS, etc.	6 (29%)	6 (29%)	6 (29%)	2 (10%)	1 (5%)
Podcasts	0	0	0	0	21 (100%)
Electronic advising notes system (Navigate)	3 (14%)	7 (33%)	2 (10%)	2 (10%)	7 (33%)
Banner	12 (57%)	5 (24%)	1 (5%)	0	3 (14%)
Mobile/Phone Apps	1 (5%)	1 (5%)	1 (5%)	1 (5%)	17 (80%)
Shared Document Services (Google Doc)	3 (14%)	3 (14%)	9 (43%)	1 (5%)	5 (24%)
Webinars (Pre-recorded and/or live)	1 (5%)	0	1 (5%)	5 (24%)	14 (66%)

APPENDIX E:

COUNCIL FOR THE ADVANCEMENT OF STANDARD IN HIGHER EDUCATION

TECHNOLOGY STANDARDS

Part 11: TECHNOLOGY
11.1 Systems Management
Academic Advising Programs (AAP) must have current technology to support the achievement of its missions and goals.
AAP must incorporate accessibility features into technology-based programs and services.
AAP must ensure that personnel and constituents have access to training and support for technology use.
AAP must back up data on a cycle established in partnership with the institution's information technology department.
AAP must implement a replacement plan and cycle for all technology with attention to sustainability.
11.2 User Engagement
AAP must use technology to enhance the delivery of programs and services for all constituents.
AAP must employ appropriate and accessible technology to support the delivery of advising information.
AAP must ensure that online and technology-assisted advising includes appropriate processes for obtaining approvals, consultations, and referrals.
AAP must ensure that technology addresses constituents needs.
AAP must employ technologies that facilitate user interaction.
AAP must provide secure remote access.
11.3 Compliance and Information Security
AAP must have policies on the appropriate use of technology that are clear and easily accessible.
AAP must comply with governmental codes and laws and with institutional technology policies and procedures.
AAP must provide a secure platform when conducting financial transactions, in accordance with industry best practices.
11.4 Communication
AAP must have updated websites that provide information to all constituents in accessible formats.
AAP must use technology that allows users to communicate sensitive information in a secure format.
AAP must evaluate relevant social media platforms and techniques for communication and implement those that best meet constituent needs.
AAP must evaluate multiple modes of communication including, but not limited to, phone, text, and web chat.

APPENDIX F: INFORMED CONSENT FOR PARTICIPATION

Dear (participant),

My name is Kandice Rowe, and I am the Director of SCOPES (Student Center of Professional Education Services) and the Certification Officer in the College of Education and Professional Development at Marshall University. I am also a doctoral student in the Leadership Studies EdD Program at Marshall University and am contacting you to request your participation in a research study to explore advisors' perceptions of the use of technology in academic advising practices in educator preparation programs in West Virginia. Study findings will be used in my dissertation.

You were selected for inclusion in the study based on your role as either an academic advisor or someone whose role is performing academic advising for an educator preparation program at the undergraduate level. This study has been approved by the Marshall University Institutional Review Board.

Specifically, I am requesting your participation in a semi-structured interview. The interview will focus on the use of technology in academic advising practices and advisors' perceptions of effectiveness and quality of advising while using technology based on the Council for the Advancement of Standards in Higher Education (specifically Standard 11: Technology). The interview process should last approximately 45-60 minutes. The success of this study is dependent on the willingness of professionals such as yourself to share their experiences and insights.

The information you supply is confidential, and no individual or institution will be identified by name or other identifying information. If you agree to participate in this study, please respond to this email or call me and indicate your willingness to do so. You can expect to be contacted within a week of your response to schedule a date and time for your interview.

For questions about this study, you may contact either Dr. Charles Bethel at (304) 746-8952 or bethel3@marshall.edu or myself at (304) 696-6842 or kandice.napier@marshall.edu. If you have any questions regarding your rights as a research participant, you may contact the Marshall University Office of Research Integrity at (304) 696-4303.

Thank you in advance for your willingness to consider participating in this study.

Kandice K. Rowe

Kandice K. Rowe, ABD
(304) 696-6842
kandice.napier@marshall.edu

APPENDIX G: INTERVIEW PROTOCOL

ADVISOR PERCEPTIONS OF TECHNOLOGY IN ACADEMIC ADVISING

Kandice K. Rowe, ABD, Interviewer

Pre-Interview Script:

Hello, my name is Kandice Rowe, and I am the Director of SCOPES (Student Center of Professional Education Services) and the Certification Officer in the College of Education and Professional Development at Marshall University. I am also a doctoral student in the Leadership Studies EdD Program at Marshall University and am contacting you to request your participation in a research study to explore advisors' perceptions of the use of technology in academic advising practices in educator preparation programs in West Virginia. Study findings will be used in my dissertation.

You were selected for this interview based on your role as an academic advisor and the information you share with me will remain confidential. Neither you, nor your institution, will be identified by name or other identifying information.

The interview will take approximately 45 minutes of your time.

General Demographics

1. Age
    a. 20-29
    b. 30-39
    c. 40-49
    d. 50-59
    e. 60+

2. Gender
    a. Male
    b. Female
    c. Other

3. What is your campus role/job title? _____

4. How long have you held this position? _____

5. What is your estimated advisee load? _____

6. How are advising services organized at your institution? _____

_____

7. Can you describe what you would consider a typical advising session? _____

_____

a. Are there differences in advising sessions depending on whether you are meeting with the student face-to-face, talking over the phone, communicating through email, or meeting via Microsoft TEAMS or Zoom? If yes, how?

_____

_____

8. To what extent do you use the following technologies when advising students?

Technology Used While Advising	**Always**	**Very Often**	**Sometimes**	**Rarely**	**Never**
Email					
Microsoft Office (Word, Excel, PowerPoint, etc.)					
Telephone					
Online chat					
Text messaging					
Degree audit-system (DegreeWorks, Starfish, etc.)					
YouTube – Informative Session					
Social Media – Twitter, Facebook, Instagram					
Appointment Scheduling					

(i.e. Bookings)					
Zoom, Microsoft TEAMS, etc.					
Podcasts					
Electronic advising notes system (Navigate)					
Banner					
Mobile/Phone Apps					
Shared Document Services (Google Doc)					
Webinars (Pre-recorded and/or live)					

Interview Questions based on CAS Technology Standard for Academic Advising Programs

1. Standard 11.1 – Systems Management - What strategies/procedures are Academic Advising Programs (AAP) using to ensure effective management of technology-based systems for delivery of academic advising programs and services?

    a. How does your Academic Advising Program (AAP) ensure that personnel have access to training and support for technology use?

    b. How does your AAP ensure that all constituents have access to training and support for technology use?

    c. Does your AAP have a back-up data cycle established in partnerships with the institution's information technology department?

2. Standard 11.2 – User Engagement - How are AAPs using technology to ensure effective user engagement in the academic advising process?

a. How does your AAP employ appropriate and accessible technology to support the delivery of advising information?

b. How does your AAP ensure that online and technology-assisted advising includes appropriate processes for obtaining approvals, consultations, and referrals?

c. How does your AAP ensure that the technology being used addresses constituents needs?

e. How does your AAP employ technologies that facilitate user interaction?

3. Standard 11.3 – Compliance and Information Security - How are AAPs ensuring that technology-based advising programs and services are legally compliant and secure?

a. Does your AAP have policies on the appropriate use of technology that are clear and easily accessible?

b. How does your AAP provide a secure platform when conducting financial transactions, in accordance with industry best practices?

4. Standard 11.4 – Communication - How are AAPs using technology to facilitate effective communication with all stakeholders and users?

a. Is your AAP website up to date and easily accessible?

i. Is your website mobile device friendly

ii. Does your website have any broken links?

c. Do you have accommodations for students with disabilities?

d. How does your AAP ensure user's sensitive communication is kept confidential and FERPA compliant when using technology?

Additional Interview Questions

5. How do you perceive the quality of effective advising via technology-related platforms (Microsoft TEAMS, Zoom, etc.) as compared to face-to-face advising?

a. Does technology make a difference?

b. In what way, if any, has technology changed the way you provide quality academic advising?

c. Can you provide an example?

6. What challenges do academic advisors face when using technology while advising students?

Additional Comments:

_____

_____

_____

_____

_____

_____

_____

_____

Appendix H: Curriculum Vitae

Kandice K. Rowe

121 Township Road 1213
Chesapeake, OH 45619
Phone: (740) 550-6663
Email: kandice.napier@marshall.edu

EDUCATION

Marshall University, Huntington, WV — Graduated August 2022
EdD, Leadership Studies

Marshall University, Huntington, WV — Graduated May 2011
MS, Adult and Technical Education
Concentration in Interdisciplinary Studies

Marshall University, Huntington, WV — Graduated May 2006
RBA, Regents' Bachelor of Arts

Marshall University Community and Technical College — Graduated May 2005

TEACHING EXPERIENCE

Marshall University – ACE 603: Intro to Adult Education and Adult Learners — Fall 2018
Co-Teacher

Marshall University – UNI 100: Freshman First Class — Fall 2018
Facilitator

Marshall University – UNI 100: Freshman First Class — Fall 2017
Facilitator

Marshall University – UNI 100: Freshman First Class — Fall 2016
Facilitator

Marshall University – UNI 100: Freshman First Class — Fall 2006
Co- Facilitator

AWARDS

NACADA Region 3 Excellence in Advising – Advising Administrator — March 2019

Marshall University, Employee of the Month — February 2009

PRESENTATIONS AND CONFERENCES

Marshall University Student Research and Creativity Symposium — April 2022
Poster Presentation – "Measuring Success by the Seeds We Plant" — Huntington, WV
One Institution's Experience with Alumni Tracking

Eastern Education Research Association (EERA) — February 2022
Presenter – "Advisor Perceptions of Technology in Academic Advising" — Clearwater, FL

Eastern Education Research Association (EERA) — February 2022
Presenter – "Answering the Call: Student Teachers Fill Critical Shortage During the Pandemic" — Clearwater, FL

iPED Regional Conference on Teaching and Learning — May 2021
Conference Attendee — Virtual

Eastern Education Research Association (EERA) — February 2021
Presenter – "Measuring Success by the Seeds We Plant" – Robert Louis Stevenson — Virtual
One Institution's Experience with Alumni Tracking

CONNECTED20 EAB Conference — December 2020
Attendee – Representing Marshall University — Virtual

Eastern Education Research Association (EERA) — February 2020
Presenter – "The Most Certain Way to Succeed is Always to Try Just One More Time" Finding Praxis Success through the POST Tutoring Center — Orlando, FL

NACADA 43rd Annual Conference — October 2019
Attendee – Representing Marshall University — Louisville, KY

NACADA Region 3 Conference — March 2019
Presenter – Moving Forward: Using Technology to Track Clinical Placements — Charleston, WV

Eastern Education Research Association (EERA) — February 2019
Presenter – "I am not what happened to me, I am what I choose to become" Training Teacher Candidates to work with Children of Trauma" — Myrtle Beach, SC

Eastern Education Research Association (EERA) — February 2018
Presenter – "Communication Works for Those Who Work at It" — Clearwater, FL
One Institution's Experience with Creating and Implementing an Online OLC to Improve Communication

Eastern Education Research Association (EERA) — February 2017
Presenter – You Can Not Communicate: One Institution's Experience with Creating an Online PLC to Improve Communication — Richmond, VA

Council for the Accreditation of Educator Preparation (CAEP) Conference — March 2017
Attendee – Representing Marshall University COEPD — St. Louis, MO

Eastern Education Research Association (EERA) — February 2016
Presenter – If Winning Isn't Everything, Why Do They Keep Score? — Hilton Head, SC
What is the Relationship between the scores on the Praxis Performance Assessment for Teacher (PPAT) scored by National Scorers versus scores by University Scorers?

Council for the Accreditation of Educator Preparation (CAEP) Conference — September 2015
Attendee – Representing Marshall University COEPD — Washington, DC

LiveText Conference — July 2015
Attendee – Representing Marshall University COEPD — Nashville, TN

Council for the Accreditation of Educator Preparation (CAEP) Conference — April 2015
Attendee – Representing Marshall University COEPD — Denver, CO

COMMITTEES

Council for the Accreditation of Educator Preparation (CAEP) Steering Committee – Standard 2

College of Education and Professional Development Scholarship Committee - Chair

College of Education and Professional Development Quality Assurance Work Group - Member

College of Education and Professional Development Leadership Team – Member

College of Education and Professional Development Recruitment and Marketing – Member

College of Education and Professional Development Teacher Education Standards -Ex-Officio Member

Content Specialization Liaison Committee for Initial Teacher Education (CSLCITE) – Member

Educational Personnel Preparation Advisor Committee (EPPAC) - Member

Marshall University Academic Advising Council – College Representative

Marshall University Career Education Campus Committee – Member

Undergraduate Sharing Day Committee – Member

TRAINING

CAEP Site Visitor Training – Currently serving as a 2-year appointment as an evaluator

Total Withdrawal Counseling Training – Currently serving as a Total Withdrawal Counselor

WORKSHOPS

West Virginia's Climb Advisor Workshop	Stonewall Resort	September 2019
Mental Health First Aid USA	Huntington, WV	August 2019
QPR Suicide Prevention Gatekeeper Program	Huntington, WV	November 2018

COMMUNITY SERVICE

West Virginia State Social Studies Fair – Judge	Charleston, WV	April 2022

PROFESSIONAL AFFILIATIONS

National Academic Advising Association (NACADA), Member

Kappa Kappa Psi, Honorary Member