The Technology Acceptance Model (TAM): Exploring School Counselors' Acceptance and Use of Naviance

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This study utilized a qualitative dominant crossover mixed analysis that examined why school counselors (*N* = 38) choose or do not choose to use Naviance—an online college, career, and financial planning tool. The study further explored whether school counselors' acceptance and use of Naviance enhances counseling practices, job productivity, and efficiency. The Technology Acceptance Model (TAM) was used for the theoretical framework. TAM is comprised of four constructs: perceived ease of use, perceived usefulness, attitudes, and actual behaviors. Bandwidth, training, and connectivity influenced some counselors' attitudes toward usage and productivity; however, overall attitudes toward Naviance were positive. Future research should explore the connection between counselor usage and the number of hours trained on Naviance.

Keywords: school counselors, Technology Acceptance Model, TAM, Naviance, qualitative dominant crossover mixed analysis

New technologies are pervasive in the counseling profession. School counselors are experiencing a growing field of technologies that include virtual counseling platforms, smartphone applications, and learning management systems that provide the ability to see students face-to-face, quickly access information through an application, and offer high school students resources and information, ultimately assisting in the school-to-work transition. Additionally, the value of integrating new technologies into practice to support counselor growth as well as student outcomes is recognized in the education field. Many researchers believe that online technologies are effective educational tools (Serdyukov, 2017; Sung, Chang, & Liu, 2016; Tarhini, Hone, & Liu, 2015; Teo, 2011).

According to the Condition of Education 2017 report, in 2013–2014, K–12 schools spent $634 billion integrating technology to support academic achievement (National Center for Education Statistics, 2017). The bulk of the cost has been on purchasing equipment, integrating hardware and software, and training staff personnel. Despite the promise and financials spent, the lack of user acceptance is a barrier to the success of integrating new technologies (Blanchard, Prior, Barton, & Dawson, 2016; Davis, 1993; Tarhini et al., 2015; Teo, 2011). Without user acceptance, the value of the technology diminishes. Alternatively, increased technology acceptance can enable educators, including school counselors, to become effective with transferring knowledge, preparing and advancing student outcomes (Hu, Clark, & Ma, 2003), and enhancing counseling practices (Hayden, Poynton, & Sabella, 2008; Steele, Jacokes, & Stone, 2014).

Numerous theoretical models have been developed to investigate users' acceptance of new technologies. The most widely researched model on user acceptance that investigates why a user chooses to use or not to use technology is the Technology Acceptance Model (TAM; Davis, 1993; Nair & Das, 2011; Tarhini et al., 2015; Teo, 2011). TAM predicts the level of technology acceptance and usage. Few studies exist on TAM within the context of K–12 schools and even fewer on the school

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counseling profession (Tri Anni, Sunawan, & Haryono, 2018). Utilizing TAM as a guiding framework, this research extends and advances knowledge on factors that influence school counselors' acceptance and use of technologies, specifically Naviance, an online college, career, and financial planning counseling platform.

School Counselors' Technology Acceptance

Perceived Ease of Use

Research has indicated that individuals are more likely to accept and use new technology if they perceive the technology as easy to use (Davis, 1993; Nair & Das, 2011; Saade & Bahli, 2005). Perceived ease of use is determined when a user believes that using a system is free of effort (Nair & Das, 2011; Tarhini et al., 2015). Previous studies reveal common themes of perceived ease of use of certain technologies in the school counseling profession. For example, many school counselors perceive that sending email communication, creating multimedia presentations and webpages, developing newsletters, and retrieving information from schools' student information systems are relatively easy functions (Carey & Dimmitt, 2004; Carlson, Portman, & Bartlett, 2006; Kozlowski, Mikesina, & Genova, 2015; Loague, Alexander, & Reynolds, 2010; Steele et al., 2014; Van Horn & Myrick, 2001). Today, many school counselors find it easy to retrieve counseling-related information from the internet and create targeted presentations for students. Further, school counselors perceive that delivering counseling curriculum, disseminating information, and administering needs and career assessments require minimal effort (Hayden et al., 2008; Holcomb-McCoy, Gonzalez, & Johnston, 2009; Loague et al., 2010; Millsom & Bryant, 2006; Steele et al., 2014).

School counselors have found certain types of technology easier to use. For example, in a quantitative study, Carlson et al. (2006) investigated how school counselors use technology and their comfort level. The results indicated that counselors felt comfortable or somewhat comfortable (92.7%) utilizing certain types of technology and software, such as desktop computers, VCRs and monitors, overhead projectors to create visual presentations, and Microsoft Word and Microsoft PowerPoint, as additional resources. However, most school counselors (76.9%) experienced low comfort levels and felt anxious or somewhat anxious using new software.

Perceived Technology Usefulness

Technology acceptance also is influenced by perceived usefulness. Perceived usefulness is determined by a user's belief that a type of technology enhances job performance (Tarhini et al., 2015). Although a reasonable amount of literature exists on how school counselors use technology in the counseling profession (Carlson et al., 2006; Hayden et al., 2008; Steele et al., 2014), little exists on perceived usefulness (Tri Anni et al., 2018). Tri Anni et al. (2018) surveyed school counselors in Indonesia and found that counselors who perceived that technology was easy to use were more likely to determine that the technology was useful. However, Tri Anni et al.'s study did not focus on a specific type of technology such as Naviance to determine whether such a tool enhances job effectiveness.

In another study, Steele et al. (2014) surveyed school counselors and found that many (45%) remained neutral when asked whether the advantages of online communication in their counseling practice outweighed the disadvantages. Furthermore, 61% felt slightly or not comfortable at all using online technology to perform counseling duties. When asked specifically about using Skype and other synchronous online communication technologies, researchers found a positive correlation among counselors' level of training and comfort.

Attitudes Toward Technology Use

Guzman and Nussbaum (2009) argued that merely acquiring the hardware or software is insufficient to integrate technologies and therefore stressed the importance of the user's attitude. The more positive the attitude about technology, the higher the actual usage (Teo, 2011). Several researchers have found school counselors' attitudes toward the use of technology to be mostly positive, but lower when new technologies are introduced (Carlson et al., 2006; Rainey, Mcglothlin, & Miller, 2008; Steele et al., 2014).

It is important to note that there are external forces that shape a person's perceived ease of use and usefulness of technology, and these forces may negatively affect attitudes. Such barriers include limited training on new software, age of the user, bandwidth challenges, slow data access, time delays in downloading content, and limited equipment (Carlson et al., 2006; Guzman & Nussbaum, 2009; Hu et al., 2003; Lederer, Maupin, Sena, & Zhuang, 2000; Steele et al., 2014). Moreover, large counselor caseloads might be a barrier to perceived ease of use and usefulness. For example, counselors working in states with higher caseloads may perceive that learning new technological software while managing higher caseloads and trying to capture large amounts of student information can be difficult.

Naviance: An Online College Career and Financial Planning Tool

Although many school counselors and students have used Naviance for more than a decade, a Google Scholar search revealed only one study in which the authors explored the relationship between the number of times that students visit Naviance and increased college application rates (Christian, Lawrence, & Dampman, 2017). Naviance is an online college and career readiness tool developed by Hobsons (Hobsons, 2017). According to Hobsons' website, "more than 10 million students rely on Naviance to achieve key readiness milestones and answer critical questions such as: Who am I? What do I want to be? How will I get there? and Will I be successful?" (Hobsons, 2017). From a college and career counseling perspective, Naviance is used by middle and high school counselors and personnel to support and track student progress. Some of the features in Naviance include course planning; postsecondary planning; career inventories; career and college searches; college majors; college applications; test preparation (SAT, ACT, and Advanced Placement); college enrollment; and 28 curriculum lessons in college, career, and financial planning.

TAM

Technology acceptance and adoption is well documented in the literature. Although several factors influence the acceptance and use of technologies, TAM, grounded in Fishbein and Ajzen's (1975) research on beliefs, attitudes, and behaviors, indicates that perceived usefulness and perceived ease of use predict attitudes and actual behaviors (Davis, 1993; Nair & Das, 2011). Essentially, TAM captures the user's overall attitude toward online technologies.

Davis (1993) hypothesized that one's attitude toward using technology is a function of two beliefs: perceived ease of use and perceived usefulness. Perceived ease of use is the degree to which a person believes that using the system would require minimal effort, whereas perceived usefulness is the extent to which the information system enhances job performance (Lederer et al., 2000). Two other constructs of TAM are a person's attitude toward the use of the system (which is the user's desire to employ the system) and behavioral intention (which is the likelihood that a person will use the system; Davis, 1993; Lederer et al., 2000). Scholars have argued that perceived ease of use of the technology and perceived usefulness determines one's attitude toward a *new* technology (Davis, 1993; Padmavathi, 2016; Teo, 2011), such as Naviance.

Purpose of the Study

The purpose of this study was two-fold. First we sought to investigate if school counselors utilized Naviance. Second, we examined how Naviance usage enhances middle and high school counselors' practices, productivity, and efficiency. Although many school counselors integrate technology into their practice (Kozlowski et al., 2015; Reljic, Harper, & Crethar, 2013; Steele et al., 2014), few studies address whether school counselors accept new technologies, as well as examine attitudes and actual usage. TAM provides the theoretical framework to understand school counselors' acceptance and use of Naviance. To shed light onto the phenomenon, the following research questions guided this study: (a) Do school counselors choose to use or not choose to use Naviance; and (b) how does Naviance acceptance and usage enhance school counseling practices in terms of productivity and efficiency?

Methods

Data sources collected for this qualitative dominant crossover mixed analysis study included a survey questionnaire, face-to-face semi-structured interviews, and Naviance staff usage and engagement reports. According to Onwuegbuzie and Teddlie (2003), the benefits of a crossover mixed analysis include the ability to compare, correlate, and integrate quantitative and qualitative findings to describe the phenomenon. This type of qualitative dominant crossover mixed analysis takes into consideration a qualitative stance with quantitative data that provides additional detail to the study (Frels & Onwuegbuzie, 2013; Onwuegbuzie, Leech, & Collins, 2011). Ross and Onwuegbuzie (2010) grouped quantitative analyses according to difficulty, starting at the basic, descriptive level 1, and reaching as high as level 8, which includes multidirectional and multilevel analyses like multilevel structural equation modeling. In this study, the researchers used a level 1 quantitative analysis, which includes descriptive data taken from usage and engagement reports, and percentages from the questionnaire to determine productivity and efficiency.

Participants

A purposeful and convenience sample was utilized for this study. Purposeful sampling is used to identify and select individuals who are knowledgeable about a phenomenon (Palinkas et al., 2015), whereas convenience sampling is beneficial when participants are easily accessible and in close geographic proximity (Etikan, Musa, & Alkassim, 2016). The first researcher purposefully sought out middle and high school counselors who worked in close proximity and use Naviance in their role, from 14 public schools within the southwestern part of the United States. The first researcher sent an email to 48 potential participants. Of the 48 participants contacted, 38 school counselors agreed to participate, of which 10 were male and 28 were female. Twelve counselors worked at the middle school level and 26 at the high school level. All participants held a master's degree and Pupil Personnel Service credential. Counselors ranged in age from 25 to 51. The age range for 55% of the school counselors was 25–44 years, whereas the remaining 45% age range was 45–51 years.

School District and Research Team

The school district implemented Naviance in 2014. The Naviance technology was given a low to medium priority, with the expectation that school counselors would at least minimally use the technology. The Naviance implementation occurred over a 3-year period. In the first year, two middle and two high schools implemented Naviance. In the second year, three additional high schools, two alternative high schools, and two additional middle schools launched Naviance, and during the final year, the remaining three middle schools rolled out the technology tool. Also in the third year, all Advanced Placement (AP) teachers were trained on Naviance AP test prep at each high school. Counselors and select school personnel received two full-day trainings on Naviance during each

implementation year and Webex trainings were offered quarterly to those who needed a refresher on Naviance features and functionalities. In addition, professional development was offered to counselor groups upon request.

The first researcher works at the district office and provides monthly professional development to school counselors; however, the first researcher does not supervise the school counselors. Further, there are multiple layers of supervision that remove the first researcher from the day-to-day interactions of school counselors; the first researcher does not sign the performance evaluations of counselors, thereby preventing the first researcher from being able to use knowledge obtained from this study to negatively affect the participants. The second researcher works at a university in Texas as an adjunct faculty member. The first researcher identifies as African American and the second as Afro-Latino, with a mean age of 45. The first researcher is female and the second is male. Neither researcher has received financial assistance to conduct this study from Hobsons or its affiliates.

Instruments

Survey questionnaire. The TAM electronic questionnaire, first developed by Davis (1993) and validated in different contexts by several researchers (Nair & Das, 2011), consisted of 17 questions, of which 13 were on a 5-point Likert-type scale questionnaire, with the scale ranging from 1 (strongly agree) to 5 (strongly disagree). Also included in the survey questionnaire was demographic information (questions 1–3). To explore the research question, survey questions 4–15 asked about the extent to which Naviance was easy to use (4 questions); whether Naviance enhanced middle and high school counselors' counseling practices, job productivity, and efficiency (4 questions); if Naviance was useful (2 questions); and attitudes toward using Naviance (2 questions). Question 16 was open-ended and regarded counselors' overall attitude toward using Naviance, and the last question asked participants to indicate the frequency that they use Naviance (1 = daily, 2 = weekly, 3 = monthly, 4 = at least every other month, or 5 = not at all). Validation of the survey questions was established through a school counseling professional, who is a researcher, university faculty, and a retired school counselor of 30 years. Both researchers had combined experience of more than 30 years in counseling.

Interviews. Face-to-face, semi-structured interviews were another source of data for this study to help answer both research questions. The researchers used TAM and the survey questionnaire to construct 10 interview questions. The 10 interview questions centered on usefulness, ease of use, attitudes, and whether Naviance helped to enhance school counseling practices, job productivity, and efficiency. To ascertain ease of use, the first two interview questions focused on which of the functionalities in Naviance were the easiest to navigate and which data visualization features were easy to decipher. Questions 3 and 4 investigated how Naviance enhanced the role of school counselors and the benefits of using Naviance to engage multiple stakeholders. Interview questions 5–8 examined the ways that Naviance increases job effectiveness, efficiency, and productivity. The remaining questions explored whether Naviance was worthwhile and integration challenges.

Validation of the interview questions were by an expert panel of doctoral-level professionals in the fields of education and school counseling. Two members of the panel have been school principals and district personnel for more than 20 years combined. The third expert panelist is a university faculty member and retired school counselor. The first researcher sent the interview questions to the expert panel via email and requested feedback. One of the experts suggested that the researchers add a definition for perceived ease of use and perceived usefulness for the participants as part of interview questions two and three, which the first researcher subsequently incorporated. The second expert suggested that the researchers incorporate the language *middle and high school counselor* as part of the

purpose of the study in the interview script rather than *school counselor*, which the first researcher included. The third expert did not offer additional suggestions.

Archival materials. To further help address the second research question, the researchers used the Naviance staff usage and engagement reports as a secondary data source. Specifically, the staff usage report showed the number of times that school counselors had accessed Naviance since implementation. In addition, the engagement reports showed the features in Naviance school counselors use to support the academic, college, and career development of students.

Procedure

The first researcher sent an email invitation along with a Qualtrics link for the TAM questionnaire to 48 middle and high school counselors to participate in this study. The survey remained open for 10 business days. Within that timeframe, 38 middle and high school counselors consented to participate in this study. After the survey closed, the first researcher sent an email to all 48 counselors inviting those who completed the survey to participate in face-to-face interviews. Of the 38 counselors who completed the study, 10 consented (three middle and seven high school counselors) to participate in the face-to-face interviews. The first researcher told participants that the interviews would be digitally recorded, they could withdraw any time, and their demographic information and personal identities would remain confidential. The first researcher conducted 10 separate interviews, which lasted on average 33 minutes.

After transcription of the interviews by rev.com, an online transcription company, each participant received a copy of the transcript to review and offer feedback within five business days. At the close of the five business days and with no changes suggested from participants, the first researcher deleted information that could identify participants and emailed the interview and Naviance staff and engagement data, which was retrieved at the district level, to the second researcher. The use of video conference calls as a virtual workspace was useful in collectively reading over transcripts, developing and comparing coding, and discussing themes.

Trustworthiness Procedures

To ensure trustworthiness and credibility of the study, the researchers used the process of triangulation and member checking to strengthen construct validity during the data collection process. The selection of triangulation allowed the researchers to collect data using a combination of sources to incorporate multiple perspectives on technology use and integration. Although archival materials (e.g., school counselor usage and engagement reports) did not require insight from the participants to increase the researchers' understanding because of their pre-existing nature (Yin, 2014), the materials were instrumental in authenticating information from the interviews and were determined to be a valued data source. Another method used to strengthen trustworthiness was member checking. The first researcher separately emailed each participant, asking them to review the interview transcriptions to check for accuracy and offer feedback. Each participant replied within the 5-day timeframe indicating no corrections or feedback were necessary.

Data Analysis

The process of thematic analysis guided this study, which involved identifying patterns, insights, or concepts in the data that help to explain why those patterns are there (Bernard & Ryan, 2010). Both researchers used the process of open and axial coding, which involved breaking apart each data source, and deductive coding, which uses a top-down approach making connections and categorizing

themes under TAM (i.e., perceived ease of use, perceived usefulness, attitudes, and actual usage). After reviewing themes from both researchers, there was absolute agreement about themes and codes.

The researchers followed the six phases of thematic analysis described by Clarke and Braun (2013), which included (a) familiarization of the data; (b) generation of initial codes; (c) identification of themes; (d) review themes; (e) define and name themes; and (f) produce the report. First, the researchers read through each line of the transcript several times to become familiar with content and understand perceptions regarding the usefulness, ease of use in using Naviance, and attitudes. Second, the researchers generated initial codes. Open coding allowed the researchers to break apart and group the data, and axial coding allowed the researchers to make connections to the data once it was categorized (Bernard & Ryan, 2010).

Next, the researchers categorized themes according to TAM from the transcribed interviews. TAM served as *a priori* themes, which related to the research questions as well. Themes capture important data about the research questions (Clarke & Braun, 2013) and explore patterns (Alhojailan, 2012). To help sort through the data to identify potential themes and the relationship between the codes, the first researcher established a codebook to assist in analyzing the data. Then, the researchers defined and named the themes based on TAM. Next, the researchers connected the narrative to the themes, named each theme according to the model, and generated themes. The last step of the data analysis process was to produce a concise, non-repetitive account of the story related to the research questions (Clarke & Braun, 2013).

Results

Perceived Ease of Use

Drawing from the survey questionnaire, 79% of the middle and high school counselors ($n = 30$) strongly or somewhat agreed that Naviance has a friendly interface for students and counselors, requires minimal effort, and was easy to use, while 5% ($n = 2$) neither agreed nor disagreed and 16% ($n = 6$) somewhat disagreed. Similarly, when asked whether Naviance was clear and understandable, 79% ($n = 30$) strongly or somewhat agreed, while 3% ($n = 1$) neither agreed nor disagreed, and 18% ($n = 7$) somewhat or strongly disagreed.

During the interviews, the counselors reported that the Naviance data platform layout made it easy to view and use all the pertinent data required for advising students on academic performance, college readiness, and social and emotional development. Specifically, some of the layout features discussed by counselors included Quick Links (i.e., application manager, transcript manager, journal dashboard, curriculum, and test prep) and counseling tabs (i.e., students, planner to help assign tasks and discuss goals, course planner, scholarships, colleges, careers, and a new feature, analytics). Other areas described by counselors that contributed to the ease of use of Naviance was data visualization of college applications submitted by students on the home page, and outcome images (i.e., overall percentage of students that applied and were accepted to at least one college and overall percentage that applied to and were accepted to a 4-year college).

Another feature reported by middle and high school counselors that they believed was easy to use was the reports and analytics functionality. At the middle school level, counselors indicated that they were able to run reports on whether students completed their career inventories or curriculum assignments. If a student failed to complete an assignment, counselors mentioned that sending an electronic reminder to their student via Naviance was seamless. One middle school counselor stated, "I run various queries in Naviance, which are extremely helpful. I like the feature where it allows me to automatically generate a weekly status report on all of my students."

One high school counselor described Naviance's academic, college, and career online resources: "Naviance is the best setup I've seen in my 20-plus years of being a counselor. It's a one-stop shop and really simple to use." Two other high school counselors described the ability to cross-share information with other Naviance counselors nationwide. For instance, a male high school counselor stated, "I no longer need to create student surveys! Other counselors who use Naviance in other states have created a battery of surveys across entire grade levels that I can export and electronically use with my students."

Overall, most of the middle and high school counselors reported that Naviance was easy to use; however, some school counselors somewhat disagreed. For example, one high school counselor mentioned, "When Naviance is working correctly and the students can complete the activities, Naviance is easy to use. As a counselor, Naviance feels like busy work [record keeping, student follow-up, having groups of students logging in to a system], especially when there are issues with connectivity." Another counselor reported, "Naviance is not user-friendly at the high school level. It's too cumbersome and time consuming."

Perceived Usefulness

On the survey questionnaire, when asked whether Naviance increases job-related effectiveness and productivity, in both instances most school counselors (79%, $n = 30$) strongly or somewhat agreed, while some were neutral (5%, $n = 2$) or somewhat disagreed (16%, $n = 6$). When asked whether Naviance enhances counseling practices, 84% of school counselors ($n = 32$) strongly or somewhat agreed, while 16% somewhat disagreed ($n = 6$). When asked whether Naviance was useful 92% of school counselors agreed ($n = 35$), while 8% ($n = 3$) somewhat or strongly disagreed.

During the interviews, eight of the 10 middle and high school counselors reported that the Naviance system is a comprehensive counseling solution that allows for the collection and quick retrieval of information that shows measurable results of their work, which increases their job effectiveness and productivity. For instance, school counselors identified the ability to retrieve overall assessment results, graduation status, academic progress, individual and small group tracking, pre- and post-outcomes, analysis on college application and acceptance rates (i.e., 2- and 4-year acceptances), field trip numbers, PSAT/SAT/ACT historical data, and more. The collection, analysis, and reporting of data from Naviance was perceived by school counselors as a useful strategy that supported their effort in becoming more data-driven, with data needed for school counselors to establish credibility in their role, evaluate their impact, and demonstrate program accountability that promotes student outcomes. The perception by many middle and high school counselors was that the Naviance system facilitated evidence-based practices. One high school counselor put it this way, "administrators understand data, and if we want to demonstrate our value to stakeholders, we must show how our work impacts student outcomes." A middle school counselor stated, "Presenting survey data and responses from students after each presentation or field trip shows teachers, administrators, and parents the effect of our efforts."

When asked whether Naviance enhances their counseling practice, one middle school counselor stated, "I think that Naviance makes our jobs a lot easier. . . . Naviance has helped to streamline the college, career, and academic process and make it very clear. Everything about our job as counselors is more fluid." Another middle school counselor stated, "I think Naviance is very beneficial to my role. I can track student progress, communicate to teachers about relevant meetings, quickly deliver services, and actively engage to find digital resources to address needs." A counselor at the high school level stated, "The more I used Naviance, the more I saw the many benefits, possibilities, and connections to the work that I do every day. Naviance has become a really important tool in my arsenal." A high school counselor commented that Naviance helps capture whether students are

on or off track to graduate and is a source to share electronic resources for students needing Tier 2 supports. Another high school counselor reported that Naviance was helpful in saving time when completing tasks and gathering student information. She stated, "Using Naviance makes me a better counselor; I'm more productive throughout my day, and I can tackle other more pressing issues students might have instead of working late to update my Excel spreadsheet."

Although there were more counselors who found Naviance useful in their role, one middle school counselor and one high school counselor did not agree that Naviance enhanced their counseling practice. The high school counselor stated, "Naviance is yet again another system to use to support students that might go away when there is no more funding, so why learn it." The same counselor went on to add that she has students who are "dealing with anger, drug addiction, pregnancy, suicide, and anxiety, and Naviance does not offer curriculum on those topics." She further stated, "I can upload resources into Naviance, but it's not useful because my role also includes helping students in the areas of social and emotional development."

The middle school counselor described her experience using Naviance and added, "Naviance is good for kids, but I honestly do not see how it makes me a better counselor or my job more efficient or productive." The same counselor added, "My job is about building trust, establishing relationships, advocating, and guiding students through middle school. Naviance is a tool that can help facilitate that process, but it does not enhance my counseling skills."

Attitudes

When asked whether counselors like using Naviance and whether they have a generally favorable attitude toward it, in both instances the results were mixed. Twenty-eight (72%) of the 38 school counselors strongly or somewhat agreed that they liked using Naviance, four counselors (10%) neither agreed nor disagreed, and seven (18%) somewhat disagreed or strongly disagreed. When asked about having a favorable attitude toward Naviance, 23 (61%) strongly or somewhat agreed, 5 (13%) neither agreed nor disagreed, and 10 (26%) disagreed or strongly disagreed. Twenty-three school counselors (61%) reported on the open-ended survey question that Naviance was desirable to use for academic and related counseling purposes. Several counselors indicated that multiple training opportunities contributed to comfort level and positive attitudes. However, one high school counselor whose attitude was less than positive stated, "I would prefer to use Californiacolleges.edu, which is a free program that essentially offers the same activities for our students instead of Naviance. Plus, the system specifically caters to counselors and students in California, unlike Naviance."

Two challenges identified by several school counselors that interfered with having a positive attitude about Naviance related to bandwidth issues and access to schools' computer labs. Counselors expressed frustration by the slow internet connection at their schools, which they reported was due to limited bandwidth capacity. One counselor commented, "due to bandwidth limitations, Naviance does not always work." Another challenge identified that interfered with overall satisfaction of Naviance was limited access to computer labs. One high school counselor stated, "Computer labs are scarce and accessibility to use Naviance with students is difficult."

Actual Usage

Drawing from the Naviance usage and engagement reports, actual Naviance usage and engagement among school counselors was high. Since the implementation of Naviance, school counselor usage has increased each year (see Table 1). Counselor-supported engagement within Naviance is highest among high school counselors (see Table 2).

Table 1

Actual Usage of Naviance Since Implementation

Descriptors	Year 1 (2014–2015)	Year 2 (2015–2016)	Year 3 (2016–2017)
Middle and High School	1,295	3,277	5,574

Note. Number of times school counselors used or accessed Naviance from 2014–2017.

Table 2

Counselor Engagement Support Provided to Students

Descriptors	Naviance Guidance Curriculum	ACT/SAT/ AP Study Plans	College Planning	Career Planning	Academic Planning
Middle School	12,887	0	599	10,735	32
High School	22,366	153,000	11,623	508	497

Note. Number of times Naviance was used to engage students in 2016–2017.

On the survey, middle and high school counselors were asked the frequency of Naviance usage. Most school counselors used Naviance daily, followed by weekly usage. Sixty-six percent ($n = 25$) reported using Naviance daily, whereas 24% ($n = 9$) indicated using Naviance weekly, and 5% ($n = 2$) reported monthly use. Finally, 5% ($n = 2$) reported not using Naviance at all. Table 3 shows the frequency of Naviance usage.

Table 3

Naviance Frequency of Use by School Counselors

Descriptors	Daily	Weekly	Monthly	At Least Every Other Month	Not At All
Middle School	10	2	0	0	1
High School	15	7	2	0	1

Note. Frequency in which school counselors used Naviance during the 2016–2017 academic year.

Discussion

Implementing technology in school counseling is a call to action from past counseling researchers (Casey, Bloom, & Moan, 1994; Creamer, 2000; Dahir, 2009; Granello, 2000) to move the profession into the future (Dahir, 2009). When school counselors adopt and integrate technology into their practices, they can be effective in their role (Hu et al., 2003). The first research question, whether school counselors choose to use or not use Naviance, was answered by most of the counselors, who indicated that the ease of use and the overall usefulness influenced their decision to use the Naviance platform or not. Barriers identified that interfered with ease of use and usefulness were bandwidth issues within schools and school counselors' ability to connect to the resource tool.

The second research question, how Naviance acceptance and usage enhance school counseling practices, productivity, and efficiency, was answered by most of the school counselors in this study, who stated that the use of Naviance positively enhanced their job productivity, efficiency, and counseling practices. Particularly, the ability to introduce college-related material to help students develop individual education plans, identify courses, provide social and emotional resources, and advise on graduation status and college eligibility, was positive. In addition, more school counselors used Naviance as a vehicle to share information with teachers, administrators, and parents.

Limitations

There were several limitations. The results of this study indicated that school counselors had positive attitudes toward the integration and usage of Naviance; however, the findings were limited to middle and high school counselors who work in a specific public school district located in the southwestern part of the United States, which prevented the inclusion of experiences and expertise of other public and private school counselors throughout the country. The addition of other Naviance users in small public and private schools might have produced other results. Another limitation was that the first researcher has used Naviance for the past 10 years in various roles as a district administrator. To prevent bias, the first researcher did not make assumptions based on what participants chose to share or attempt to present answers. In contrast, the second researcher has never used Naviance, which allowed for an unbiased viewpoint when writing the analysis. Further, a school counselor educator, familiar with Naviance, reviewed and read over this study prior to publication to minimize researcher technology bias.

Finally, Naviance generally provides district offices and schools with reports on engagement activities and staff and student usage. Although researchers used the Naviance engagement reports to speak to overall usage in subcategories such as college planning, career planning, guidance curriculum, and test preparation, multiple school engagement reports were combined to differentiate middle and high school engagement activities. In addition, Naviance provides reports on staff usage; therefore, the first researcher retrieved data at the school site level to determine counselor usage rather than usage by staff, such as teachers and administrators, during data analysis.

Implications for Counselors

One of the benefits of using an online platform such as Naviance is that it can bring value to the practices of school counselors when helping to introduce and prepare students for college. For instance, such a tool can support dissemination of critical student-related information, data collection, tracking and analysis, customization of 4-year graduation plans, and communication between multiple stakeholders, to name a few.

The knowledge generated from this study is useful to school counselors in several ways. First, understanding the intricacies and impact of Naviance could offer school counselors additional ways to support their students' academic development, college preparedness, and readiness efforts, and to share and provide social and emotional resources to students. Second, knowing which features in Naviance influence career and college-related outcomes at the middle and high school level can improve engagement and communication efforts between school counselors, parents, and teachers. Third, exposing students early to the numerous college readiness features and functionalities in Naviance can increase graduation and college application rates of high school students, which is consistent with literature findings. Fourth, capturing college- and career-related data can help school counselors communicate, gather, analyze, and synthesize information required to meet state accountability standards and evaluate the effectiveness of counseling programs.

Recommendations and Future Research

Given the benefits of integrating Naviance into the daily practice of school counselors, two recommendations for future practice include leveraging the reports and analytic features to emphasize programmatic effectiveness and student outcomes, and infusing the college-related curriculum into subject matter classes. Although the high school counselor is the primary interpreter of the college preparation, application, and enrollment sources, incorporating college-related information into classroom instruction could be used as a springboard to deliver information on college and career readiness and support the understanding of the relationship between academic performance and college eligibility. This practice could free up time for the high school counselor to have more meaningful and deliberate conversations with students to support their understanding of college norms and expectations and effectively facilitate the college enrollment process.

The findings indicate a need to extend TAM by exploring other external factors that influence user acceptance of Naviance. For example, future research could explore the connection between counselor usage and the number of hours trained on Naviance. Low counselor usage could be the result of insufficient training or differences in age. In addition, as many schools, particularly those located in urban settings, focus on increasing college eligibility, future studies should be conducted on Naviance test prep (i.e., ACT, SAT, AP) and student outcomes.

Conclusion

Research into school counselors' technology integration and usage has been a focus in the counseling profession since the 1980s and continues to be an important area for investigation today. Most school counselors suggested that Naviance was useful in their role as a school counselor in providing academic, career, college, and personal counseling to students and that actual usage enhanced their job performance, productivity, and proficiency. In addition, many expressed that Naviance was a tool that required minimal effort, if usage was ongoing. Lastly, perceived usefulness and perceived ease of use was connected to school counselors' positive attitude regarding Naviance.

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