

## **Technology Trends in School Counseling**

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### **Abstract**

In this follow-up study, 973 members of the American School Counselor Association (ASCA) were surveyed regarding their use of technology in day-to-day counseling activities. School counselor use of technology for student planning purposes has increased over time, while its use in responsive services has not changed significantly. Counselors now answer email and respond to non-urgent messages outside of work hours less frequently. The authors discuss implications for the future role of technology in school counseling.

*Keywords:* technology, school counseling, trends

## Technology Trends in School Counseling

School counselors are increasingly encouraged by professional organizations to be informed about technology and to use software and other technological aids effectively in their work. ASCA's ethical standards state that counselors "demonstrate appropriate selection and use of technology" in all aspects of counseling students, which include giving attention to relevant ethical and legal considerations (ASCA, 2016, A.14.a.). School counselors are encouraged to "maintain appropriate boundaries" when communicating with students using various means, while a new section of the ethical standards addresses the growing field of virtual or distance school counseling (ASCA, 2016, A.14.e, A.15.). Similarly, the American Counseling Association's Code of Ethics (ACA, 2014) includes a section on distance counseling, technology, and social media, reflecting the reality that throughout the counseling profession services may now be provided using various technological means.

Discussions of the use of technology in school counseling increasingly focus not on the technology itself, but instead on the promise of technology as a delivery mechanism to increase the effectiveness of comprehensive school counseling programs. In working with populations of students who have used technology since early childhood and who communicate daily via the internet, text messaging, and social media, school counselors may need to embrace technology to connect with, understand, and fully support students (Gallo, Rausch, Smith, & Wood, 2016). Concurrently, the use of technology has raised questions around digital citizenship for students and ethical practice for counselors. Relevant ethical and legal issues include confidentiality and the need for counselors to maintain appropriate personal and

professional boundaries. Given these questions and issues, it is vital to gather current and relevant data on specific technological applications and frequency of use among school counselors to provide a benchmark for understanding the integration of technologies in professional practice. Toward that end, the purpose of this study is to examine recent data on technology use among school counselors. As a follow-up study, it is unique in that it can serve to illuminate trends and reveal the current and dynamic landscape of technology use in the field of school counseling.

Recently, several programs incorporating technology have emerged which are designed to increase the scope and effectiveness of counseling services. Most of these have employed technology-based interactions in which personalized information and feedback may be provided to each student but may not involve communication with a live virtual counselor. For example, one program implemented a web-based alcohol intervention program for high school students which was intended to be more engaging to the target audience than traditional programs (Doumas, Esp, Turrisi, & Schottelkorb, 2014). Another article describes the use of a web-based intervention program, implemented in a primarily American Indian population, designed to help students identify personal strengths and identify the steps they could take to carry these forward in their future academic studies and career pursuits (Zyromski, Bryant, Deese, & Gerler, 2008). Other programs have used computer technology to identify students who may need a higher level of intervention and support, such as students experiencing mental health issues (Gruman, Marston, & Koon, 2013). Web-based programs have also been used in school counselor education, for example in training site supervisors who will

offer clinical supervision to school counseling practicum and internship students (Swank & Tyson, 2012).

Programs that fully incorporate virtual counseling may still be relatively rare, as few published articles address them. One study investigated the willingness of secondary school students to use virtual counseling services, if they were to be made available (Glasheen, Campbell, & Shochet, 2013). Although this research did not show that boys would be more likely to use virtual counseling services, as had been anticipated, it did indicate that virtual counseling may be preferred by students who are experiencing psychological distress or who wish to discuss more sensitive issues with a counselor. As virtual counseling becomes more common in school settings, researchers have begun investigating its potential effects on the field of school counseling. Based on four structured interviews with practicing virtual school counselors, Osborn, Peterson, and Hale (2015) identified ways in which virtual counseling may differ from traditional practice, including the use of novel methods for promoting counseling services, continual adaptation of means of online communication, and an interest among virtual counselors in being on the cutting edge of the field. At the same time, virtual counselors described other aspects of their work as similar in basic form to traditional counseling, although with a need for special attention to details of implementation in a virtual setting. These aspects include ongoing program evaluation and improvement as well as attending to ethical issues such as crisis management, confidentiality, and professional boundaries. In contrast, some earlier research into the impact of technology-mediated communication in school counseling focused more narrowly on ethical implications and perceived challenges (Wilczenski & Coomey, 2006).

In summary, the existing literature on the use of technology in school counseling suggests that the field has been quicker to adopt such technology for purposes such as curriculum delivery and program management and relatively slower to explore the potential of technology for responsive services. This study aims to determine whether this trend may be continuing, or if different patterns of technology use among school counselors may have emerged over the past several years. In order to examine this question, this research study replicates an initial study the authors conducted in 2013 that examined school counselors' use of online technologies, including beliefs and practices as well as mitigating factors such as school counselors' background, training, and experiences (Steele, Jacokes, & Stone, 2014). The results from this study are compared with findings from the initial study conducted in 2013 in order to identify trends in school counselors' use of technologies over the span of four years and implications for the profession. Comparing the results of the two studies in the context of other relevant research may offer guidance in identifying patterns and trends, and it suggests ways in which the field might move forward in leveraging technology to address current challenges and enhance critical services provided to students.

This research study utilized the same four research questions in the 2013 published study, which are:

1. To what extent are school counselors performing or delivering day-to-day activities in an online or remote setting?
2. What beliefs do counselors possess regarding the role of online technology in the school counseling profession?
3. What are school counselors' practices with regard to student confidentiality and privacy, as well as personal-professional boundaries that may be blurred by access to online technologies?

4. How are factors related to school counselors' background, working environment, and experience associated with their online technology use and beliefs?

### **Method**

A survey instrument designed and developed by Steele, Jacokes, and Stone in 2013 and revised slightly in 2017 (Steele, Stone, & Nuckols, 2017) was distributed to members of ASCA in 2017. As noted by the authors of the original 2013 study, the purposeful sampling of ASCA members and affiliates was chosen because they possess the content knowledge and qualifications important for the study. This enabled the identification of trends that may occur in the larger population of school counselor members of ASCA when random sampling may not be possible for reasons of time or cost (Keppel & Wickens, 2007).

This trend analysis examined the non-experimental, quantitative data collected through a Web-based survey instrument. Using a case available analysis, descriptive statistics were computed on all survey items to examine general trends related to school counselor's online technology use and beliefs regarding the role of online technologies in their profession. Non-parametric statistics were employed to explore how factors related to counselors' backgrounds and experiences are associated with their technology use and beliefs. Findings from this study were compared to the findings from the original study in 2013 to identify trends in school counselors' use, beliefs, and practices related to online technologies over the span of time.

### **Participants**

The participants in this study were registered members or affiliates of ASCA in 2017. Overall, 973 participated in this survey. Of those who responded to the demographic questions, 89% ( $n = 861$ ) were female and 11% were male ( $n = 103$ ).

These findings related to gender are mildly representative of the school counseling field overall, with approximately 77% of school counselors identifying as female (Data USA, 2019). In terms of counseling experience, 34% ( $n = 326$ ) of participants reported less than five years of experience, 21% ( $n = 204$ ) reported between 6-10 years of experience, while 45% ( $n = 441$ ) reported more than 10 years of school counseling experience. Almost half of participants (44%,  $n = 428$ ) report having either “quite a bit” or “extensive” prior technological training. Meanwhile, 42% ( $n = 404$ ) report having “some” training, while 14% ( $n = 132$ ) report having “little” or “no training.”

In school settings, 29% ( $n = 285$ ) of participants reported working at the elementary school level, 18% ( $n = 178$ ) reported working at the middle school level, while 35% ( $n = 342$ ) of the participants reported working at the high school level. In addition, 167 participants, or 17%, reported working in a combination of settings, whether elementary and middle school or middle school and high school. Most school counselors in this survey reported working in public schools (88%,  $n = 851$ ), while 54 participants (6%) reported working in a private school setting. The remaining 6% reported a variety of settings including independent, online, and parochial schools.

### **Instrument**

To analyze survey trends over time, we utilized the same instrument that was designed by Steele, Jacokes, and Stone (2014) albeit with slight modifications to increase clarity. The survey sought to explore school counselors' technology use and beliefs regarding online communications and to examine the relationship between counselors' responses and factors related to their backgrounds, such as gender and prior technology experience. We slightly modified a few of the questions to collect more



usable and precise data. Using a 5-point Likert-type scale: (1 = *great deal*, 2 = *moderate amount*, 3 = *occasionally*, 4 = *rarely*, or 5 = *never*), participants responded to 29 questions designed to explore the first three research questions.

The first set of 21 questions on the survey instrument sought to examine the extent to which school counselors utilized online technology across the delivery components of the ASCA National Model. Using a Likert-type scale, participants reported how often, if at all, they deliver or perform the following counseling activities in an online or remote setting:

- school guidance curriculum (structured lessons, events, or activities);
- responsive services (individual or group counseling, referrals, psychoeducation, peer-helping, consultation with stakeholders);
- individual student planning (appraisal, advising related to personal goals and future plans); and
- system support (professional development, consultation, collaboration, and program management).

Additional questions sought to determine the extent of school counselors' access to technologies, the manner and frequency of use, and the extent of training.

To explore the second research question regarding counselor beliefs, participants responded to four questions. The first question asked participants to rate the extent to which they feel online communication is compatible with their counseling role. Additional questions included asking respondents to report to what extent they feel that the advantages of online communications outweigh the disadvantages, how comfortable they are counseling students using video-conferencing technologies such as Skype, and how important technology is in their day-to-day professional work.

The survey also included a subset of questions related to the third research question (what are school counselors' practices with regard to student confidentiality and privacy?), as well as personal-professional boundaries, which may be blurred by access to online technologies. Questions on this topic asked participants to indicate: whether they include students' names or initials in the subject line of emails, whether participants have set standard hours of the workday, and if so, whether these boundaries are clearly communicated to students and families. Participants were also asked to indicate whether their school e-mail is connected to a personal electronic device such as a smartphone, and how often, if at all, participants answer non-emergency and urgent message outside regular work hours.

An additional 10 questions gathered participants' demographic and background variables such as gender, years of experience working as a counselor, and school setting. These questions were designed to explore the fourth research question that sought to determine whether school counselors' technology use and beliefs were related to aspects of their background.

The authors used Cronbach's alpha coefficient of internal consistency (Cronbach, 1951) as a reliability estimate for the initial 21 questions related to the use of online technologies. Results of Cronbach's alpha was .710, which falls within an acceptable level of reliability (Field, 2005; George & Mallery, 2003). Cronbach's alpha for the subset of four questions related to counselors' beliefs regarding online technologies was .690 which for Web-based surveys is often acceptable (Schmitt, 1996).

## **Procedure and Analysis**

The authors sent an email invitation to ASCA members to respond to a survey about their use of online communication in their school counseling work in spring of 2016. The email stated that the results would be used in the 4<sup>th</sup> edition of a book, *School Counseling Principles: Ethics and Law*, written by Carolyn Stone (2017). A total of 973 members responded to the survey.

The data analysis utilized in this study replicated that of the 2013 study to identify trends over time. Descriptive statistics, including percentages, were calculated to describe the data. Summary tables highlight key findings from this survey and inferential statistics were utilized to reveal differences between this study and the 2013 study. In order to analyze the data related to the fourth research question, inferential statistics were employed to reveal differences among factors related to school counselors' backgrounds. The Kruskal-Wallis H Test was used to explore how factors related to school counselors' backgrounds were associated with their use and beliefs regarding online technology. Median scores were reported, except in cases in which the distribution of scores in each group were not similar or when the medians were equal among all groups, in which case the means and standard deviations were reported.

## **Results**

### **School Counselors' Use of Online Technology**

Findings from this survey suggest that school counselors are increasingly using technologies across key aspects of the delivery component of the ASCA National Model, acknowledging that delivery is 80% or more of a school counselor's activity (ASCA, 2012). In examining the mean scores reported by counselors in Table 1,

findings reveal a significant difference in the use of technologies for student planning purposes between the 2017 survey ( $M = 3.87$ ,  $SD = 1.38$ ) and the 2013 survey ( $M = 4.05$ ,  $SD = 1.24$ ),  $t(1701) = 2.79$ ,  $p = .005$ .

**Table 1**

*School Counselors' Use of Online Technologies*

Counseling Activities	Survey Year 2017			Survey Year 2013		
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>
Core Curriculum	957	3.98	1.36	755	4.06	1.31
Responsive Services	958	4.03	1.35	755	4.08	1.25
Student Planning	956	3.87**	1.38	747	4.05	1.24
System Support	952	3.40	1.37	747	3.50	1.33

*Note.* Mean derived from a 5-point Likert scale (1 = *great deal*, 2 = *moderate amount*, 3 = *occasionally*, 4 = *rarely*, 5 = *never*). \*\* $p < .005$

These findings suggest that over the last several years, school counselors are increasingly using online technologies for student planning, including appraisals, and advising on students' personal goals and future plans. Results also suggest that counselors are using technology for implementing guidance curriculum, which includes delivering lessons and guidance activities, more often now than they did in the past. While not statistically significant, on average, counselors report using online communications in the area of guidance curriculum at least "occasionally" in the 2017 survey compared to "rarely" in 2013.

Meanwhile, technology use in the area of system support and responsive services has changed little over time. Results from both 2017 and 2013 survey responses indicate that counselors are continuing to use technologies at least occasionally for system support, which include activities such as professional

development and program management. On the other hand, counselors use technology only rarely for responsive services such as counseling students or providing referrals, and this has remained stable over the past several years (see Table 1).

### **Beliefs Regarding the Role of Technology**

Most school counselors in the survey, 87% ( $n = 836$ ), reported that technology is important in designing and delivering comprehensive school counseling programs. Only 2.3% ( $n = 22$ ) of school counselors reported that technologies are not important in their professional work. Further, results show that counselors believe that online communication is compatible with their school counseling role. This belief of compatibility of online communication to counseling has increased over time. In 2013, 57% counselors reported that online communication is at least moderately, if not extremely, compatible to their role as a professional school counselor. In 2017, this figure increased by 6%, as can be seen in Table 2. Meanwhile, only 37% of school counselors reported feeling that online communication was only slightly or not at all compatible with their role in 2017, compared to 43% of counselors surveyed in 2013.

While findings suggest that school counselors believe that technology is important in their professional role, most counselors are not comfortable counseling students using video conferencing platforms such as Skype. This has changed little over time, as revealed in Table 2, with approximately 64% of school counselors reporting they would be only slightly comfortable, or not at all comfortable, counseling students using video conferencing platforms such as Skype. Further, only 2% ( $n = 23$ ) of school counselors in this survey report having had specific training in counseling students online, while 98% report having no training at all in this area.

**Table 2***Reported Compatibility and Comfort Using Online Technologies to Perform Counseling Duties*

<b>Variable</b>	<b>N</b>	<b>Extremely or Very</b>	<b>Moderately</b>	<b>Slightly or Not at all</b>
2017				
Compatibility	961	28% ( <i>n</i> = 270)	35% ( <i>n</i> = 334)	37% ( <i>n</i> = 357)
Comfort	963	14% ( <i>n</i> = 131)	23% ( <i>n</i> = 219)	64% ( <i>n</i> = 613)
2013				
Compatibility	764	24% ( <i>n</i> = 182)	33% ( <i>n</i> = 251)	43% ( <i>n</i> = 331)
Comfort	765	14% ( <i>n</i> = 105)	25% ( <i>n</i> = 193)	61% ( <i>n</i> = 467)

### **Practices Related to Privacy and Personal-Professional Boundaries**

The results of this study reveal that counselors are making increased efforts to protect the privacy and confidentiality of students in email exchanges. Nearly 83% (*n* = 798) of school counselors either use students' initials or do not provide any identifiable information to protect students' confidentiality in email exchanges. This is in comparison to 78% (*n* = 541) of counselors surveyed in 2013, an increase of 5% over the span of four years. Meanwhile, counselors who use names in the subject lines of email decreased by 7% over the past four years.

In terms of personal and professional boundaries, survey results show divergent trends. For example, a greater number of school counselors report that their work email is connected to a personal phone, iPad, or other mobile device than in the past. In 2013, 44% (*n* = 340) of respondents indicated work email is connected, while in 2017, that percentage rose by 20% to 64% (*n* = 614). However, while counselors report being more connected to work-related messages, school counselors are less likely to answer non-urgent messages outside of work hours than in the past. On average, school counselors in the 2017 survey reported answering non-urgent messages "occasionally"

( $M = 3.02$ ,  $SD = 1.20$ ), compared to a “moderate” amount ( $M = 2.88$ ,  $SD = 1.24$ ) in 2013, resulting in a significant difference between the groups,  $t(1728) = 2.38$ ,  $p = .02$ .

**Table 3**

*School Counselors' Use of Online Technologies Outside of Work Hours*

Activity	Survey Year 2017			Survey Year 2013		
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>
Check email	964	2.65**	1.17	766	2.49	1.16
Answer non-urgent messages	964	3.02*	1.20	766	2.88	1.24

*Note.* Mean derived from a 5-point Likert scale (1 = *great deal*, 2 = *moderate amount*, 3 = *occasionally*, 4 = *rarely*, 5 = *never*). \* $p < .05$ ; \*\* $p < .005$

Counselors are also less likely now than in the past to check email outside work hours. While the means in both groups suggest that on average, school counselors, check their email a “moderate” amount both in 2017 ( $M = 2.65$ ,  $SD = 1.17$ ) and 2013 ( $M = 2.49$ ,  $SD = 1.16$ ), the mean difference was statistically significant. This suggests that school counselors report checking email outside work less often in 2017 than in 2013,  $t(1728)$ ,  $p = .005$  (see Table 3).

### **Online Technology Use and Beliefs Related to School Counselors' Backgrounds**

In replicating the analysis from the 2013 study, the authors used the Kruskal-Wallis H test to explore how factors related to school counselors' background were associated with their use and beliefs regarding online technologies. Results of this study reveal similarities to the findings from 2013. In both studies, significant differences among counselors' belief of online technologies were found according to the level of technology training a counselor reported to hold.

Similar to the 2013 study, this present study found differences in reported compatibility ( $H(4) = 27.651$ ,  $p < .001$ ) and comfort ( $H(4) = 27.967$ ,  $p < .001$ ) in using

online technologies according to level of prior training. In terms of counselors' reported compatibility of online technology to their counseling role, pairwise comparisons with a Bonferroni correction revealed significant differences between counselors who had "extensive" training and those who had "quite a bit",  $p = .047$ , "some,"  $p < .001$ , "very little,"  $p < .001$  or "none,"  $p = .010$ . On average, counselors with "extensive" training ( $n = 91$ , median = 3.00) reported increased compatibility between online technology and their counseling role than those with less training ( $n = 870$ , median = 4.00). Further, those with "extensive" training also are more likely to report higher levels of comfort using online technology ( $n = 91$ , median = 3.00) than other counselors ( $n = 870$ , median = 4.00).

While this study and the 2013 study found differences in counselor use and beliefs regarding online technology among males and females, the areas of difference between genders varied across studies. Unlike results from the 2013 study, which found that female school counselors were significantly more likely than males to report checking email or meeting with students outside work hours, the results of this study found no statistically significant differences between genders in this area. However, results from this study did reveal significant differences between genders according to beliefs about compatibility and reported comfort using online technologies. On average, results revealed that males were more likely to report that online technologies were compatible to their school counseling roles than females, ( $H(2) = 10.137$ ,  $p = .006$ ). In addition, males were more likely to report feeling comfortable using online technologies than females, ( $H(2) = 10.061$ ,  $p = .007$ ).



## Discussion

The results of this trend study reveal that counselors are increasingly using technology to carry out their professional duties; however, the pattern of use differs among the delivery components of the ASCA model. For example, counselors are reporting a significant increase in the use of technology in student planning, while continuing to shy away from utilizing technology for responsive services. This makes sense given the increased push in college and career readiness that has transpired recently. With this push, and the increasing trend in personalized learning within educational technology, it is not surprising to see that counselors are employing online technologies in greater numbers in the area of student planning.

Recent initiatives in the past decade such as *Reach Higher*, developed and promoted by former First Lady Michelle Obama, seek to prepare and support students to achieve post-secondary educational options. This nationwide effort, along with many other statewide initiatives, have focused attention in the area of college and career planning to encourage students to continue their education past high school—whether in a professional school, community college or 4-year university setting. Meanwhile, personalized learning continues to be a leading trend in the educational technology field. Greater numbers of school districts are supplying students with access to laptops and personalized learning software (Schaffhauser, 2018), while technology companies have increasingly begun to develop online tools and platforms aimed at assisting counselors in the student planning process.

While the trend in using online technology for student planning purposes will most likely continue to increase, the data from this study paint a different picture with

regard to technology use for responsive services—the fourth component of ASCA’s delivery model that makes up a recommended 80% of school counselors’ time (ASCA, 2012). Designed to meet students’ immediate needs and concerns, responsive services in the ASCA model include individual and small group counseling and services for students in crisis. Data from both studies revealed that, on average, school counselors reported “rarely” using technology for responsive services. This has been relatively unchanged over the past several years, despite the prevalence of mental health concerns among U.S. students (CDC, 2019). At the same time, this study shows most school counselors agree that online technology is important in designing and delivering comprehensive school counseling programs. This study also reveals that counselors believe that online communication is compatible with their school counseling role and this belief of compatibility has increased over time. What, then, might be the source of disconnect between technology use and responsive services?

In studying the relative importance of various technological competencies for school counselors, Sabella, Poynton, and Isaacs (2010) found that the ability to successfully navigate legal and ethical issues around technology was perceived as most important by counselors. Considering the option to use technology for responsive services such as individual and group counseling, counselors who lack confidence in handling ethical and legal implications may be less inclined to offer them (Glasheen, Campbell, & Shochet, 2013). Findings from this study also make clear that while school counselors believe that online technologies are important in their professional role, many counselors do not have specific training to implement such technologies. At the same time, the study reveals that school counselors who have more training in

technology report more comfort and compatibility using technology in their day-to-day practice. Therefore, school counselors may lack the training to implement technology to assist in delivering responsive services to students.

One might argue that responsive services including crisis intervention is best done in person, where counselors can be physically present with the student until appropriate help arrives. While this may be true, the area of responsive services is broad and includes individual and group counseling—services that may work to help prevent such crises from occurring. This study reveals a widening gap between the use of technology for responsive services like individual and group counseling and all other three delivery components in the ASCA model. With a national school counselor/student ratio of 1 counselor to 482 students (National Association of College Counselors, 2015) the ability of one counselor to offer such responsive services, along with their other duties, results in very few opportunities for students to utilize such important preventative services. Therefore, as counselors increasingly leverage technology to better meet student needs in all other areas of the ASCA model, including both direct and indirect student services, the lack of technology use in the area of responsive services may be concerning.

Beyond revealing differences in counselors' use of technology in delivering student services, findings also showed that school counselors are making increased efforts to protect the privacy and confidentiality of students in online communications. Increasing numbers of counselors are either using only students' initials in online communications or do not provide any identifiable information. This is a positive trend

and aligns with the school counselors' mandate of protecting student privacy and confidentiality (ASCA, 2016).

This study also reveals a positive trend related to school counselors work life integration. For example, while an increasing number of counselors report that their work email is connected to a personal phone, iPad, or other mobile device than in the past, results from this study show that school counselors are less likely to answer non-urgent messages outside of work hours. Findings also revealed that, on average, counselors with less than 3 years of experience were less likely to check work email outside of work hours than those with greater than 10 years of experience. While various reasons might explain this difference, if this trend continues, it may point to younger generations such as millennials being able to better achieve work life integration.

### **Implications**

The bifurcation of technology use across the delivery aspects of student services in the field of school counseling has numerous implications. As school counselors increasingly use technologies to assist them in providing individual student planning services to students, it is likely that the growth of educational platforms in this area will also increase. Currently, many different platforms are available that assist counselors already exist. For example, University of Texas at Austin developed an interactive web-based platform, Texas OnCourse, to assist students in individualized planning through high school and into post-secondary options. As a digital platform, Texas OnCourse is free, and available on demand via Internet access to both educators and students. Currently, it serves approximately 17,000 students in over 900 schools working in

partnership with over 10,000 educators (Texas OnCourse, n.d.). These types of platforms can integrate with a school curriculum and can seamlessly assist counselors in monitoring, tracking, and advising students using their school's own curriculum.

The advantages of adopting such technological tools are numerous. For example, such platforms may offer accurate oversight of student academic progress, particularly for school counselors who are responsible for large caseload of students. Efficient tracking and flagging of students to identify those who are headed off track or may need further intervention are possible. In addition, these platforms offer opportunities for timely feedback and guidance through web-based information platforms or alternate means of connecting with the counselor, such as through collaborative tools or texts. Using technology to assist in tracking and communicating student academic progress and requirements has shown benefits. For example, after Georgia State introduced text messages to incoming first year students, some automated and some with real human interaction, they experienced a 22% reduction in summer attrition (Castleman, Page, & Schooley, 2014). Therefore, school counselors who leverage such technologies may be able to effectively manage their caseload and assist students in meeting their identified goals.

On the other hand, this increasing trend also brings other issues that must be considered carefully. For example, what are the most effective educational technologies and tools available to provide accurate and timely support for students? Does the school size, context, or background of students matter in choosing a technology? How are counselors trained to use this technology and how do counselors respond if the technology fails? Further, how does the counselor review the student planning tools to

ensure that the technology is set up to deliver the most viable outcomes? Finally, who ultimately owns the student data that are gathered to provide such services and what are the legal and ethical issues related to student data privacy? While the increase use of technology overall appears to be a benefit to students and counselors alike, these questions raised will need to be answered not only by the counselors, but by a team of educational leaders across the school. These leaders will need to include (but are not limited to) a principal, superintendent, technology directors, and others who will ultimately shape the architecture and delivery of such technology, and respond thoughtfully and systematically to the legal and ethical issues that the increasing use of technology will bring with it.

Meanwhile, the study's findings also underscore the lack of technology use by school counselors over the past several years in the area of responsive services. Is there a way to leverage technology to increase capacity and resources in the area of responsive services as counselors have been doing in the other areas of the ASCA model? Research suggests that online delivery of support services may be a viable option to meet student needs (Gabel, Grogan-Johnson, Alvares, Bechstein, & Taylor, 2013; Novoteny, 2017). Recent studies in online speech-related services to students revealed similar outcomes between online and in-person speech services. This holds promise in applying this model to counseling, particularly in rural communities (Wales, Skinner, & Hayman, 2017). More closely related are the development and usefulness of online counseling services in the private sector. Research in online counseling has shown that for some individuals, the method of online counseling is preferable to that of face-to-face counseling (Wong, Bonn, Tam, & Wong, 2018). Those suffering from

anxiety and stress, which often include many high school-aged students, are particularly responsive to online counseling services (Barak, Hen, Boniel-Nissim, & Shapira, 2008). The online medium may provide a safe “distance” and allow the student to choose the medium of disclosure, such as audio only or audio and video, lowering barriers to seeking help. Given the potential benefits of using online technologies in responsive services, the results of this study suggest that online communications may be underutilized not due to available technologies, but rather due to lack of professional development and training.

As the importance of mental health and wellness grows, state and national policy leaders are calling for the provision of counseling and related services to students. With school counselors often overburdened with unreasonable caseloads, the need to build capacity for services and resources for both counselors and students is crucial. For example, some political groups are advocating for schools to collaborate with behavioral health departments to provide additional counseling services to students, particularly at schools (Wasco & Frost, 2019). By developing online partnerships, mental health professionals can collaborate with school counselors to provide students with regular one-on-one and group counseling sessions. This approach enables school counselors to oversee, but not provide, direct mental health services to qualified students. This sort of collaboration may increase the capacity for more students to receive such services while reducing demands for counselors to be the sole provider of such services. Further, for school counselors working in rural communities or for those who serve multiple school districts, providing online responsive services such as individual or group counseling can save driving time to schools situated across long distances. While

many possibilities exist to leverage technology to enhance responsive services, given the complexity of the issue, careful thought and development of such collaborations must occur.

### **Limitations**

The results of this study should be viewed with several limitations. Because the survey was offered only online and only to school counselor members of ASCA, the sample may not be completely representative of the population of school counselors including those school counselors who are not members of ASCA and those who might lack access to the technology required to complete the survey. Also, the process of developing and refining the survey did not incorporate direct input from professionals with experience as school counselors in public schools. The perspective and background of the researchers no doubt influenced the composition of the survey. Further research in this area might include qualitative data collection and analysis in which interviews and open-ended surveys can elucidate the reasons for the differing trends in technology use and ways to equip counselors with the technological tools, structures, and training needed to better serve all students.

### **Conclusion**

This follow-up study examines technology use among almost one thousand school counselors and provides a detailed trend analysis over the past several years. In general, school counselors are at least occasionally using technology in all aspects of their comprehensive counseling program, except in the area of responsive services. There exists both a need and an opportunity to leverage technology to provide additional school counseling resources and responsive services, such as one-to-one



and group counseling to students. In order to move forward with increased opportunities to integrate technology for responsive services, school counselors must have access to professional development and training. The study suggests that lack of training, rather than access to appropriate technologies, may be a significant barrier to technological adoption in the area of responsive services.

## References

- American Counseling Association. (2014). *ACA code of ethics*. Retrieved from <http://www.counseling.org/docs/ethics/2014-aca-code-of-ethics.pdf>
- American School Counselor Association (2016). *ASCA ethical standards for school counselors*. Retrieved from <https://www.schoolcounselor.org/asca/media/asca/Ethics/EthicalStandards2016.pdf>
- American School Counselor Association. (2012). *ASCA national model: A framework for school counseling programs*. Retrieved from [https://www.schoolcounselor.org/asca/media/asca/ASCA%20National%20Mod %20Templates/ANMExecSumm.pdf](https://www.schoolcounselor.org/asca/media/asca/ASCA%20National%20Mod%20Templates/ANMExecSumm.pdf)
- Barak, A., Hen, L., Boniel-Nissim, M., & Shapira, N. (2008). A comprehensive review and a meta-analysis of the effectiveness of Internet-based psychotherapeutic interventions. *Journal of Technology in Human Services*, 26(2-4), 109-160. doi:10.1080/15228830802094429
- Castleman, B. L., Page, L. C., & Schooley, K. (2014). The forgotten summer: Does the offer of college counseling after high school mitigate summer melt among college-intending, low-income high school graduates? *Journal of Policy Analysis and Management*, 33(2), 320-344. doi:10.1002/pam.21743
- Center for Disease Control and Prevention. (2019, April 19). Data and statistics on children's mental health. Retrieved from <https://www.cdc.gov/childrensmentalhealth/data.html>
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297-334.

- Data USA. (n.d.). *Explore, maps, compare, and download U.S. data*. Retrieved from <https://datausa.io/>
- Doumas, D. M., Esp, S., Turrisi, R., & Schottelkorb, A. (2014). Adopting a brief, web-based feedback approach to counter high school drinking: Considerations for professional school counselors. *Professional School Counseling, 18*(1), 148-157. doi:10.5330/2156-759x-18.1.148
- Gabel, R., Grogan-Johnson, S., Alvares, R., Bechstein, L., & Taylor, J. (2013). A field study of telepractices for school intervention using the ASHA NOMS K-12 Database. *Communication Disorders Quarterly, 35*(1), 44-53 doi:10.1177/1525740113503035
- Gallo, L. L., Rausch, M., Smith, C. K., & Wood, S. (2016). School counselors' experiences working with digital natives: A qualitative study. *Professional School Counseling, 20*(1). doi:10.5330/1096240920.1.14
- George, D., & Mallery, M. (2003). *Using SPSS for Windows step by step: A simple guide and reference*. Boston, MA: Allyn and Bacon.
- Glasheen, K., Campbell, M. A., & Shochet, I. (2013). Opportunities and challenges: School guidance counsellors' perceptions of counselling students online. *Australian Journal of Guidance and Counselling, 23*(2), 222-235. doi:10.1017/jgc.2013.15
- Gruman, D. H., Marston, T., & Koon, H. (2013). Bringing mental health needs into focus through school counseling program transformation. *Professional School Counseling, 16*(5). doi:10.1177/2156759x1201600506

- Keppel, G., & Wickens, T. D. (2007). *Design and analysis: A researcher's handbook*. Upper Saddle River: Academic Internet Publishers Incorporated.
- National Association of College Counselors. (2015). *State-By-State Student-To Counselor Ratio Report*. Retrieved from <https://www.nacacnet.org/news--publications/Research/state-by-state-student-to-counselor-ratio-report2/>
- Novoteny, A. (2017, February). A growing wave of online therapy. *Monitor on Psychology, 48*(2), 48.
- Osborn, D. S., Peterson, G. W., & Hale, R. R. (2015). Virtual school counseling. *Professional School Counseling, 18*(1), 179-190. doi:10.1177/2156759x0001800114
- Sabella, R. A., Poynton, T. A., & Isaacs, M. L. (2010). School counselors perceived importance of counseling technology competencies. *Computers in Human Behavior, 26*(4), 609-617. doi:10.1016/j.chb.2009.12.014
- Schaffhauser, D. (2018). Personalized learning top priority for tech usage in K–12. Retrieved from <https://thejournal.com/articles/2018/08/13/personalized-learning-top-priority-for-tech-usage-in-k12.aspx>
- Schmitt, N. (1996). Uses and abuses of coefficient alpha. *Psychological Assessment, 8*, 350-353.
- Steele, T. M., Jacokes, D. E., & Stone, C. B. (2014). An examination of the role of online technology in school counseling. *Professional School Counseling, 18*(1), 125-135. doi:10.1177/2156759x0001800118
- Steele, T. M., & Stone, C. B., & Nuckols, G. (2017). [School counselors and cyberspace survey]. Unpublished raw data.

- Stone, C. B. (2017). *Ethics and law: School counseling principles* (4<sup>th</sup> ed.). Alexandria, VA: American School Counselor Association.
- Swank, J. M., & Tyson, L. (2012). School counseling site supervisor training: A web-based approach. *Professional School Counseling, 16*(1), 40-48. doi:10.1177/2156759x1201600105
- Texas OnCourse. (n.d.). Texas OnCourse. Retrieved from <https://texasoncourse.org/>
- Wales, D., Skinner, L., & Hayman, M. (2017). The efficacy of telehealth-delivered speech and language intervention for primary school-age children: A systematic review. *International Journal of Telerehabilitation, 9*(1), 55-70. doi:10.5195/ijt.2017.6219
- Wasco, L., Frost, J. (2019, February 12). Schools need more resources for student mental health and wellness. Retrieved from <https://edsources.org/2019/schools-need-more-resources-for-student-mental-health-andwellness/608454>
- Wilczenski, F. L., & Coomey, S. M. (2006). Cyber-communication: Finding its place in school counseling practice, education, and professional development. *Professional School Counseling, 9*(4), 327-331.
- Wong, K. P., Bonn, G., Tam, C. L., & Wong, C. P. (2018). Preferences for online and/or face-to-face counseling among university students in Malaysia. *Frontiers in Psychology, 9*. doi:10.3389/fpsyg.2018.00064
- Zyromski, B., Bryant, A., Deese, B. D., & Gerler, E. R. (2008). Succeeding in school: A qualitative study of primarily American Indian students' use of an online intervention. *Professional School Counseling, 12*(2), 119-122. doi:10.1177/2156759x0801200219

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