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K-5 School Counselors' Use and Perception of Educational Apps for Students with Disabilities

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School counselors play an important role in supporting students with disabilities. While counseling is done primarily through verbal communication, students with disabilities may have difficulties in communication, which could hinder their participation in such counseling sessions. One way to remove their communication barriers is to use educational technology, such as applications (apps) on mobile devices. Yet, current research is still uncertain regarding how school counselors, specifically K-5, perceive and incorporate these apps into their counseling sessions. The present study surveyed and reported the use and perception of school counselors working with K-5 students with disabilities in the state of Ohio. The survey data showed that the majority of K-5 school counselors did not use educational technology including apps; however, a significant number of counselors perceived technology apps as being important for students with disabilities and would utilize the technology if their school provided access to it.

Keywords: students with disabilities, technology apps, school counselors

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School counselors are qualified educators who understand and support students experiencing mental health related difficulties in a school setting (American School Counselor Association [ASCA], 2022). In addition to mental health, school counselors play a vital role in supporting academic achievement, graduation options, and social/emotional development of young children (Barna & Brott, 2013). In today's diverse schools, the roles and responsibilities of school counselors have expanded to a broader range of students, including those with disabilities. The Individuals with Disabilities Education Act (IDEA) recognizes 13 different categories of disabilities under which students can receive special education services: individuals with autism, blindness/visual impairment, emotional disturbances, hearing impairment, deaf-blindness, an intellectual disability, multiple disabilities, orthopedic impairments, other health impairments, specific learning disability, speech or language impairment, a traumatic brain injury, and a developmental delay (Rewoldt, 2018). Recent statistics by the National Center for Educational Statistics have stated that 7.10 million school aged individuals are receiving special education services due to one of the above mentioned 13 categories (Hussar et al., 2020). Although the effects of school counseling for those with disabilities have not been well documented, school counseling services may support students with disabilities to be productive in social and academic settings (ASCA, 2022). Consequently, ASCA encourages school counselor involvement with students with disabilities. In particular, elementary school counselors are encouraged to support students with disabilities in the areas of development and learning confidence, as well as with advancements in life skills, values, social groups, and communication (ASCA, 2022).

In a typical counseling session, effective verbal communication skills are needed, because counseling is done primarily through verbal communication. Although students with disabilities are heterogenous in their skills, many children with disabilities have limited communication skills, such as little or no speech or difficulty understanding speech (Kuder, 2018). For instance, children with autism spectrum disorder (ASD) may have difficulty expressing their thoughts in understandable speech (National Research Council, 2001; Tager-Flusberg et al., 2005). Thus, for a school counselor, a challenge to working with students with disabilities may lie in the communication barrier between the school counselor and the student with disabilities.

With advancements in touch-screen technology, today's technology including mobile applications (apps) may reduce the communication barriers between school counselors and students with disabilities and support equal access to school counselors for students with disabilities (Elsahar et al., 2019). An app is a computer software application that is designed to run on mobile devices such as smartphones and tablets (Papadakis et al., 2018). In the field of special education, apps are rapidly emerging as a new medium for accommodating the challenges facing children with disabilities (McMahon et al., 2013). For instance, children with ASD who have limited spoken language could touch the image of a smiley face on an app called *Proloquo2Go* to express their emotional state of being happy (Sennott & Bowker, 2009). It is reasonable to infer that these apps may similarly support children with disabilities who experience challenges in communication to ensure equal access to school counseling services. Yet, the current literature is limited to whether school counselors are employing such apps and how they perceive the use of educational apps to better support individuals with

disabilities during their counseling sessions. If school counselors do not currently employ educational apps in their counseling of children with disabilities, it may be beneficial to explore possible barriers that prevent school counselors from accessing or using this technology. The present study aims to investigate school counselors' use and perceptions of educational apps to support elementary school students with disabilities within counseling sessions.

Emotional Challenges for Students with Disabilities

Existing research identified potential opportunities for elementary school counseling for students with disabilities based upon the emotional challenges encountered by these students within the classroom. In particular, two studies addressed the need for stress management for students with disabilities. In a study by Nelson et al. (2013), young students with deaf-blindness, ages 4, 6, and 13, were studied to demonstrate the relationships between school work and stress. The students' stress levels increased when they were asked to participate in a school-related activity but decreased when they were allowed to cease participation. Because of this school work-related stress, these students with deaf-blindness were not learning the necessary educational content and demonstrated challenging behaviors (Nelson et al., 2013). Similar school-related stress was also reported by Lytle and Todd (2009) in their study of school-based stress in students with ASD. Lytle and Todd (2009) reported that the following environmental factors induced heightened stress for the students with ASD: unfamiliarity of the school, a change of routine, lighting, sounds, sensory issues, food-related matters, other peers, and educational activities they must partake in. Both Nelson and colleagues (2013) and

Lytle and Todd (2009) noted that students with disabilities may experience stress stemming from the educational environment.

Given that stress management is one of the services that can be provided by school counselors (Carlson & Kees, 2013), these studies suggested that school counselors may be considered as an option for providing support to students with disabilities in the area of stress management. In addition to the school work-related stress, a study by Miller et al. (2016) showed that stress in parents was higher in families where children were diagnosed with fetal alcohol syndrome disorder (FASD). Families were also more negatively impacted when their children were diagnosed with ASD than when the children were diagnosed with another mental health condition (e.g., behavioral problems, anxiety). These results suggested that the functional characteristics of the children with disabilities had a greater impact on the family versus diagnosis status alone (Miller et al., 2016). To support the children's families, while also encouraging the children's success in school, these functional characteristics may be addressed in an educational setting by school counselors.

Finally, Bishop et al. (2007) showed that individuals with ASD and FASD demonstrated difficulties with peer interactions, unusual sensory interests, difficulties in cooperating with others, asking inappropriate questions, and making inappropriate statements. Given this notion, supporting social skills can be an additional service area that school counselors can provide to students with disabilities. For instance, individuals with ASD may derive advantages from participating in structured social skills interventions, potentially conducted in a small group format. Within such sessions,

individuals with ASD could engage in exercises aimed at practicing the formulation of appropriate questions in social interactions.

Despite the potential benefits of school counseling for students with disabilities, school counselors may not be adequately prepared to work with these students (Feather & Carlson, 2019; Milsom & Akos, 2003). Although school counselor training programs incorporate more disability content in their degree programs than they did in the past (Milson & Akos, 2003), many counseling professionals still do not know how to develop appropriate counseling programs for students with disabilities due to limited knowledge and skills to address the needs of this group (Feather & Carlson, 2019).

Students with Disabilities and Educational Apps

In the field of education, the use of apps has provided support for students with disabilities (McMahon et al., 2013). With the growing popularity of mobile devices, educational apps have been widely adopted as an assistive technology (AT) for modifications and adaptations to support students with disabilities (Ok, 2018). Studies showed that educational apps can be adopted as a tool to promote academic gains of students with disabilities (Ok, 2018). For instance, two schools in Pennsylvania reported using iPad apps that connect dots between an English idiom and the equivalent term in sign-language to help students who are deaf to learn English. Although American Sign Language is usually these students' first language and most deaf students graduate with fourth-grade level reading skills, students from these two Pennsylvania schools graduated at a seventh or eighth grade reading level. This progress was hypothesized to be a result of the use of iPad apps to help with their language learning (Shah, 2011).

In addition to the benefits of academic progress, studies also revealed positive effects of using educational apps as a tool for Augmentative and Alternative Communication (AAC) for students with limited speech skills. In the area of communication, children with ASD often have difficulties with verbal and nonverbal cues (Simmons, 2014). As an AAC, the Picture Exchange Communication System (PECS), a program that uses symbols and words to help with communication, has been widely used by children with ASD to learn to express themselves by choosing various photos (Simmons, 2014). The PECS app can be used on mobile devices, which makes this modality beneficial for children with disabilities who have difficulty communicating. AAC apps can help students become more independent and productive in various aspects of life (Simmons, 2014). Another example of the effective use of apps with students with disabilities was described by Shah (2011). An 11-year-old child with Down Syndrome and apraxia could not communicate well with his peers and often became frustrated by not being able to express his emotions. His speech therapist and mother came together and found an app called *Proloquo2Go*, which allowed the child to choose pictures and form sentences to communicate with his peers. This child had not been able to effectively communicate with his peers before using this app (Shah, 2011). Shah's (2011) study suggested that technology may be useful within the context of school counseling for students with disabilities. If school counselors use similar apps in counseling, it may reduce the communication barriers between school counselors and students.

While studies from the field of education suggested possible benefits of using educational apps to support counseling with students with disabilities, it was not documented whether school counselors use such technology when working with these

students. Although dated, Owen and Weikel (1999) reported that counselors either had limited technology skills or, even with skills, only used their technology for basic duties (e.g., record-keeping, scheduling). In a 2010 study, school counselors rated technology competencies relating to ethical standards and data management as most important (Sabella et al., 2010). In counseling-related tasks, technology integration was suggested for multicultural and computer literacy, as well as alcohol and drug counseling programs (Glover, 1995; Shulman et al., 1995). For a long time, school counselors did not believe that technology would enhance the quality of services (Cabaniss, 2001), though computers could play an important role in school counseling services (Bluhm & Kishner, 1988). However, in a recent survey by Steele and colleagues (2020), school counselors reported their increased use of technology in day-to-day counseling activities to increase the effectiveness of counseling services. In sum, the existing literature has focused on the general use of technology, such as information and communication technologies. Alternatively, the educational use of technology, including educational apps, for students with disabilities has not been addressed.

Present Research

Although educational apps may be used to facilitate quality and effective counseling services for students with disabilities, the current literature is limited regarding how school counselors employ such educational technology to support students with disabilities during their counseling sessions. Thus, the purpose of the present study was to survey elementary school counselors on their current use and perceptions of educational apps for counseling students with disabilities. The specific research questions examined in this study included:

(1) How do school counselors use educational apps to support students with disabilities during their counseling sessions?
(2) How do school counselors view the importance of such technology integration for their counseling for students with disabilities?
(3) What barriers do they experience in the use of educational technology for counseling students with disabilities?

Method

Participants

The participants in the present study consisted of 51 K-5 school counselors from Northeast Ohio who were invited to participate in the present study to provide insight regarding the unique challenges, practices, and needs within their specific educational landscape. Following receipt of the institutional review board (IRB) approval for conducting this study, elementary schools in Northeast Ohio were contacted directly by the first author via email. The first author contacted participants from a listserv at a local university's counseling program, where the first author attended. An internet search was also conducted to find elementary schools that employ school counselors within a 40-mile radius from the local university, through which professional email addresses of the school counselors were obtained. An email was sent to school counselors working with the K-5 population. This email explained the purpose of the study, justification for the study, relevance of the study to school counselors, informed consent, and a request for them to complete a short online survey. Fifty-six of the 69 participants who accessed the survey reported they were currently a K-5 school counselor and were able to proceed with the survey. However, only 51 participants completed the entire survey, in which the

data were collected. The 13 participants who reported they were not currently K-5 school counselors were routed to the end of the survey and thanked for their participation.

Among the 37 participants who provided demographic information, 35 (94.6%) were female and 2 (5.4%) were male. Among these same participants, eight individuals reported being between age 20 to 30, nine participants reported being between age 31 to 40, ten participants reported being between age 41 to 50, and ten participants reported being between age 51 to 60. Nine of these participants reported having 0 to 3 years of experience as a school counselor, while 16 reported having between 4 to 11 years of experience. Seven participants reported having between 12 to 19 years of experience, and 5 participants reported having 20 or more years of experience as a school counselor. Among these 37 participants, a majority of individuals reported being Caucasian (n = 36; 97.3%). African American, Native American, and a non-specified other racial identity were reported by 3 participants. The majority of the 37 participants who provided demographic information reported working in suburban schools (n = 19; 51.4%), while 12 participants (32.4%) reported working in a rural school, and six participants (16.2%) reported working in an urban school.

Procedure

The researchers obtained IRB approval before beginning data collection for this study. The school counselors were invited via email to complete an online survey, which was administered through an online survey website called surveymonkey.com. Items on the survey explored how school counselors use and perceive technology apps in a K-5 setting with students with developmental disabilities.

Before the participants completed this survey, informed consent was presented within the survey. The participants consented by proceeding to and participating in the survey. The informed consent document explained to the participants that there were no foreseeable risks or benefits to completing this survey; however, it would aid in the understanding of how K-5 school counselors use and perceive the use of educational apps for students with disabilities. Confidentiality and anonymity of participant data were ensured by not collecting any identifying information from the participant such as their name or school affiliation. In addition, IP address was not collected to further secure the confidentiality of the data. The data from the study were also held on a password-protected computer; and only the researcher had access to this computer. The researcher's email address and phone number were provided in the informed consent for any additional questions.

The survey consisted of 26 questions developed by the authors. The first two questions were screening questions to ensure the participant worked as K-5 school counselors and worked with students with disabilities. Nineteen questions explored specific apps used and the school counselors' perceptions of these apps. In particular, seven of these questions in the survey consisted of multiple-selection items, with an additional "Other" option provided to allow participants to input their own answers if none of the provided selections adequately captured their response. The last five questions asked about the participants' demographic information (see Table 1).

Data Analysis

Quantitative survey items were analyzed using SPSS for descriptive statistics. For each survey item, frequency and percentage were calculated. Out of the 69 survey

responses received, 51 were complete responses. Missing data were handled by pairwise in SPSS. In addition, participants had the opportunity to write their responses for certain questions, which provided additional qualitative data. These qualitative data were reviewed and organized in the tables labeled "Other" to give the researchers additional information.

Results

Fifty-one of the 69 participants who accessed the survey reported that they were currently K-5 school counselors working with students with disabilities and were able to proceed with the survey. Individuals who reported that they were not currently K-5 school counselors were routed to the end of the survey and thanked for their participation. Descriptive statistics of the participants' responses to the survey questions are provided in Tables 1 and 2.

School Counselors' Use of Educational Apps

When school counselors were asked how they acquired the apps and devices needed to use the educational apps, 53% of the school counselors stated they used free apps, followed by their school district purchasing mobile devices (40%) and the apps (22%). One noticeable answer from the participants' responses was 29% of the school counselors did not use or possess the apps to use to support students with disabilities.

School counselors reported that they used the most apps with students with disabilities when educating the students on skills such as peer relationships (51.3%) and coping skills (51.3%), as well as educating the students on understanding self (46.2%). Concerning the types of educational apps, school counselors reported a range of apps used when working with students with disabilities. Two apps with the highest usage

report were both social skill-related apps (e.g., Social Skill Builder and Give Me 5!). Regarding the subgroups of students with disabilities with whom school counselors used apps for counseling purposes, students with emotional disturbances were reported with the highest rate (48.5%), followed by autism (45.9%) and specific learning disabilities (45.9%). Finally, when the school counselors were asked to choose their typical frequency of app usage for counseling with students with disabilities, the most common response was no use of apps (32.4%) followed by a monthly use of apps (29.7%).

School Counselors' View of the Importance of Educational Apps

The results related to the counselors' perception of the importance of educational apps are summarized in Table 1. When participants were asked to rate their practice and perceived importance of using educational apps with K-5 students with disabilities, 38% of the school counselors either agreed or strongly agreed that they used apps on mobile devices when working with students with disabilities. The mean rating was 2.38, indicating that school counselors tended to disagree and not use educational apps with students with disabilities.

School counselors further rated either strongly agree or agree that their perceived tendency of choosing an app was based on (a) the recommendation by their peers (98%, $M = 3.23$), (b) the affordability of the cost (87.5%, $M = 2.96$), and (c) the review ratings of the apps (79.2%, $M = 2.92$). When the participants were asked to rate their perceived importance of using educational apps, 94% of them rated either agree or strongly agree that apps promoted academic achievement of students with disabilities ($M = 3.04$). Approximately 65% of the school counselors rated either agree or strongly agree that

technology was important for counseling services for students with disabilities (*M* = 2.73).

When asked about their preference of using the apps, 46% strongly agreed or agreed that their students with disabilities preferred using apps in counseling (*M* = 2.52) and 29% strongly agreed or agreed that they preferred using apps when working with students with disabilities (*M* = 2.29). When asked to choose their perceived affected areas when using apps with students with disabilities, 52% of the school counselors chose that their students were more motivated to learn and 39% of them stated that their students would better express their feeling with the apps. Finally, when school counselors were asked about their future intentions of using apps, two most frequently selected responses were to look for additional apps while using the same apps they currently use (56%) and to explore different ways to use the apps they currently use (36%).

Barriers of Using Educational Apps

When school counselors expressed factors that prevented them from using apps while working with students with disabilities, two of the most frequently reported barriers were their lack of knowledge concerning how to choose an appropriate app (65%) and lack of technology in their school district (44%). About 87% of the school counselors reported receiving no training on the use of apps to support students with disabilities. Similarly, when the school counselors were asked to rate the statements concerning their needs, 58% agreed or strongly agreed that they were in need of technology (*M* = 2.71). Approximately 85% of the school counselors agreed or strongly agreed that they would use apps for counseling services for students with disabilities if the school district provided the technology (*M* = 3.04). The results are presented in Table 2.

Discussion

The present study aimed to investigate what elementary school counselors know and think about the use of technology that can help them to be more effective and efficient in counseling. More specifically, the present study investigated how K-5 school counselors use and perceive educational apps when working with students with disabilities.

Regarding the first research question on the use of apps for counseling students with disabilities, results showed that less than half of the school counselors reported receiving the devices or apps for their counseling services. More importantly, among the school counselors who responded to the question regarding the frequency of their use of these apps, the most frequent usage of these apps was no usage at all (32.4%), followed by using the apps once a month (29.7%) when counseling students with disabilities. Across most survey questions where open-ended responses under "other" was available, responses consistently showed that approximately 25% of the school counselors (ranging from 23% to 31%) did not use or have apps to support students with disabilities. Additionally, approximately 62% of elementary school counselors strongly disagreed or disagreed with using apps when counseling students with disabilities.

The current study did not address the general use of technology of school counselors. However, the present findings supported previous research that school counselors had limited use of technology for counseling-related tasks (Moore, 1990; Owen & Weikel, 1999). This low rate of use of educational apps may be a byproduct of the lack of training, as approximately 87% of the school counselors in the present study

reported not receiving training related to the use of technology for students with disabilities.

Although cautious interpretation is warranted due to the low rate of educational app usage reported by the participants, school counselors who did report app use described the use of a range of educational apps to support students with various disabilities, including specific learning disabilities, autism, emotional disturbance, and attention deficit hyperactivity disorder. The reported use of apps for counseling-related tasks ranged from the use for communication purposes to employing apps for peer support.

Concerning the perception of the use of educational apps, 64.59% of the participants stated the use of technology apps, when working with students with disabilities, was important; and 93.75% of these school counselors agreed or strongly agreed with the statement that apps promote academic achievement for students with disabilities. These results indicated that school counselors perceived the importance of the potential benefits of educational apps for students with disabilities; however, many of them did not have access to this technology. Our findings are consistent with the previous findings by Sabella and colleagues (2010) that school counselors perceive the importance of technological competencies.

Finally, school counselors reported two main sources preventing them from using apps while working with students with disabilities: lack of knowledge (65%) and lack of technology (44%). As previously mentioned, the lack of knowledge is partly due to the lack of training (87%). Our findings are partly consistent with the previous studies that school counselors are not well trained to support students with disabilities (Feather &

Carlson, 2019). However, school counselors shared their willingness to incorporate educational apps into counseling with students with disabilities, as 85.41% of the participants stated that they would incorporate apps into their counseling sessions if their schools provided appropriate technology. This high rate of interest is consistent with the technology expectation statement by ASCA (2022), which indicates that school counselors are expected to promote responsible and appropriate use of technology to advance academic and social/emotional achievement of students through counseling services.

Implications for Practice

The findings of this study carry significant implications for school counselors who work with students with disabilities. First, findings from this study suggested that school districts should prioritize the provision of educational technology, such as iPads with educational apps, to school counselors. As reported in their high usage of educational apps for communication, these technology tools can facilitate more equitable support for children with disabilities, particularly those with communication difficulties. By leveraging such technology, counselors can tailor their counseling sessions to individual needs and enhance the benefits of counseling services for students with disabilities.

Second, the present study highlighted the importance of targeted professional development initiatives for school counselors regarding the effective integration of educational apps in their practice to support students with disabilities. Professional development sessions should focus on equipping counselors with the skills and strategies to utilize educational technology appropriately, as well as to accommodate the needs of

students with disabilities by enhancing counseling outcomes and promoting inclusivity within school settings.

Limitations and Future Research

The research participants included participants in the Northeast Ohio area; therefore, generalizability of our findings may be limited until future research studies replicate the findings of the present study from a larger geographical location. In addition, the present study mainly used descriptive statistics to analyze the data, specifically frequency and percentages. More complex and sophisticated statistical analysis methods, as well as additional qualitative analyses may be employed in future studies to provide a more comprehensive understanding of this topic. The current study only researched K-5 school counselors. Middle school, high school, and post-secondary school counselors may be studied in the future to explore their perception of technology apps. This study also focused on school counselors specifically. Considering other counseling specialty areas, such as clinical mental health counseling and addiction counseling, future studies may research the apps that different counselors in different specialty areas use in different settings when working with clients with a range of physical and mental health disorders. Lastly, the overall number of emails sent to schools and school counselors inviting them to participate in the present study was not obtained, which future research could address.

Conclusion

Previous research identified the utility of technology apps and school counseling on children with developmental disabilities (Barna & Brott, 2013; Myers, 2005; Shah, 2011; Simmons, 2014; Stephenson & Limbrick, 2015). With the increasing technology

use in our society, K-5 school counselors may find it helpful to integrate educational apps that can support success among their students with disabilities. While the data from the present study may not be broadly generalized, results suggested benefits of ongoing research and support for school counselors with regard to the use of educational apps in K-5 school counseling settings. Future research may replicate and expand upon this study to increase efficacy in working with students with disabilities among school counselors and other professional counselors throughout the nation.

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Table 1

Percentage and Number of School Counselors Who Responded for Each Survey Item

Answer Options	%	*n*
How did you acquire the apps and the devices needed to use them? (n=51)		
My school district purchased the mobile device.	39.2%	20
My school district purchased the apps.	21.6%	11
I purchased the mobile device.	11.8%	6
I purchased the apps.	13.7%	7
PTA or parents/guardians purchased the mobile device.	0.0%	0
PTA or parents/guardians purchased the apps.	2.0%	1
I use free apps.	52.9%	27
Other	35.3%	18
"I do not use apps."	25.5%	13
"District does not provide devices to use apps."	3.9%	2
"District provides devices and would purchase apps if asked."	2.0%	1
When using apps to support students with disabilities, I use them for (n=39)		
Peer relationships	51.3%	20
Coping skills	51.3%	20
Education on understanding self	46.2%	18
Communication	46.2%	18
Education on understanding others	43.6%	17
Effective social skills	43.6%	17
Problem solving	41.0%	16
Goal setting	33.3%	13
Decision making	33.3%	13
Academic support	30.8%	12
Study skills	28.2%	11
Organizational skills	25.6%	10
Career awareness	20.5%	8
Career exploration	20.5%	8
Career planning	12.8%	5
Other (please specify)	30.8%	12
"I do not use apps"	23.0%	9
"Controlling emotion"	7.6%	3
"Family and parents related issues"	7.6%	3
Please indicate any apps you use when working with K-5 students with disabilities (n=39)		
SocialSkillBuilder	25.6%	10
Draw Free for iPad	17.9%	7
Give Me 5!	17.9%	7
Dragon Dictation	12.8%	5

Speak it!	10.3%	4
The Picture Exchange Communication System (PECS)	10.3%	4
Talking Calculator	5.1%	2
Read2Go	2.6%	1
Notability	2.6%	1
Pictello	2.6%	1
MyVoice	2.6%	1
Virtual Manipulatives!	2.6%	1
Proloquo2Go	0.0%	0
Autismate	0.0%	0
Other (please specify)	61.5%	24
"I do not use apps"	30.8%	12
"Emotion related apps (e.g., Zone of Regulation)"	23%	9
"Social skills related apps (e.g., Social Story Creator)"	10.3%	4
"Academics related apps (Flocabulary)"	7.7%	3
I use apps with students with the following disabilities (n=37)		
Emotional Disturbances	48.6%	18
Specific Learning Disability	45.9%	17
Autism	45.9%	17
Attention Deficits	40.5%	15
Intellectual Disability	37.8%	14
Other Health Impairment	32.4%	12
Multiple Disabilities	27.0%	10
Speech or Language Impairment	27.0%	10
Hearing Impairment/Deafness	8.1%	3
Blindness/Visual Impairment	5.4%	2
Orthopedic Impairment	5.4%	2
Traumatic Brain Injury	5.4%	2
Other (please specify)	32.4%	12
"I do not use apps	24.0%	9
"Mental health issues	5.4%	2
How often do you use apps with your K-5 students with disabilities? (n=37)		
Daily	5.4%	2
Weekly	13.5%	5
Monthly	29.7%	11
Once a semester	18.9%	7
Once a year	0.0%	0
Never	32.4%	12
When I use apps with K-5 students with disabilities (n=46)		
My students are more motivated to learn.	52.2%	24
My students communicate more effectively.	37.0%	17
My students express their feelings more clearly.	39.1%	18
My students are self-efficient.	28.3%	13
Other	32.6%	15
"I do not use apps with my students."	26.0%	12

"My students are more attentive"	2.2%	1
"My students are distracted"	4.3%	2
When providing counseling to K-5 students with disabilities (n=39)		
I will look for other apps to use in addition to the apps I am using now.	56.4%	22
I will explore different ways to use the apps that selected above.	35.9%	14
I will continue to use the apps I selected in the list above.	30.8%	12
I will look for other apps to replace the apps I am using now.	25.6%	10
Other	28.2%	11
"I will not use apps."	10.4%	4
"I will do more research on apps to use."	10.4%	4
"I will consider using apps."	15.4%	6
What factors prevent you from using apps while working with K-5 students with disabilities? (n=34)		
My school district does not provide technology needed to use apps.	44.1%	15
I do not feel comfortable using apps.	8.8%	3
I do not know which apps to use.	64.7%	22
Other	20.6%	7
"Not being necessary using apps with students with disabilities."	8.8%	3
"Laptops are being used; thus, apps are not necessary."	2.9%	1
I have received training on using apps to support K-5 students with disabilities (n=46)		
Yes	13.0%	6
No	87.0%	40

Table 2

Participant Practice and Attitudes Toward using Apps with K-5 Students with Disabilities

	n	Strongly disagree	%	Disagree	%	Agree	%	Strongly agree	%	Mean
Practice of Using Apps										
I tend to choose an app that my colleagues recommend when using apps with my K-5 students with disabilities.	48	0	0.0%	1	2.08%	35	72.92%	12	25.0%	3.23
I tend to choose an app when it does not cost money when using apps with my K-5 students with disabilities.	48	1	2.08%	5	10.42%	37	77.08%	5	10.42	2.96
I tend to choose an app when it has high reviews when using apps with my K-5 students with disabilities.	48	0	0.0%	10	20.83%	32	66.67%	6	12.5%	2.92
I use apps on mobile devices (i.e., iPad, Tablets, Smartphone) while working with K-5 students with disabilities.	55	9	16.36%	25	45.45%	12	21.82%	9	16.36%	2.38
Attitude Toward Using Apps										
Apps promote academic achievement for K-5 students with disabilities.	48	1	2.08%	2	4.17%	37	77.08%	8	16.67%	3.08
Technology use is important when providing counseling services to students with disabilities.	48	1	2.08%	16	33.33%	26	54.17%	5	10.42%	2.73
My K-5 students with disabilities prefer to use apps compared to not using apps in counseling.	48	1	2.08%	25	52.08%	18	37.5%	4	8.33%	2.52
I prefer using apps compared to not using apps while working with K-5 students with disabilities.	48	2	4.17%	32	66.67%	12	25.0%	2	4.17%	2.29
Needs for Using Apps										
If my school provided technology, I would use apps to provide counseling services to students with disabilities.	48	1	2.08%	6	12.5%	31	64.58%	10	20.83	3.04
I am in need of technology to use apps when providing counseling services to students with disabilities.	48	4	8.33%	16	33.33%	18	37.5%	10	20.83%	2.71