

We're All on the Same Page: The Use of Technology Applications to Effectively Communicate With Families of Students With Disabilities

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Abstract

Parent and professional communication is at the helm of effective special education practice. This article suggests ways to increase and expand mutually preferred communication methods among families of students with disabilities and educational teams. First, it aims to provide accessible methods for educators to enhance their ability to effectively communicate with families of diverse backgrounds in order to best serve their students with disabilities. Second, it suggests ways to support families in being well-versed in their child's educational program, progress, performance, and well-being at school. Current mobile applications that can be utilized to foster communication among families and education teams, including teachers and related service professionals, are suggested and described. Future directions for the use of mobile applications to foster these mutually valuable relationships and implications for research are discussed.

Key Words: communication, families, students with disabilities, partnerships, technology applications, school teachers, professionals

Introduction

Communicating and working with parents as equal partners is essential to family involvement, which is a statute of the Elementary and Secondary Education Act (ESSA) of 2015. Family involvement in education is also vital to the academic and social–emotional success of students with disabilities in schools today. Active family–professional collaboration is not only considered best practice, it is one of the key components of the Individuals with Disabilities Act (IDEA) of 2004 (Rock, 2000; Turnbull et al., 2011). Furthermore, well-functioning family–professional partnerships for students with disabilities yield positive student academic, social, and behavioral outcomes (e.g., Boonk et al., 2018; Can, 2016; Hurjui, 2014; McCoach et al., 2010). While family support and communication is a fundamental part of early childhood and early intervention services, communication between families and teachers remains crucial throughout the middle and high school years as well.

Communication in Educational Contexts

In educational contexts, communication is essential to foster collaborative and working relationships toward shared goals and initiatives for students across elementary, middle, and high school levels. Clear and frequent communication is the foundation for establishing trust among families and educational teams. Consistent communication builds rapport and can improve the working environment and partnership between the school and home (Natale & Lubniewski, 2018). Communication between family and school is vital for the success of the student. “Family” not only includes the parent or primary caregivers, but also the student. Parent–student–teacher engagement is an important part of communication and collaboration as students are an integral part of their own education, and they should play an active, participatory role in their education. According to Olmstead (2013) who details the Hoover-Dempsey and Sandler (1997) model of parent involvement, family involvement can be reactive (e.g., attending school activities and meetings, volunteering) or proactive (e.g., helping with homework, staying informed, following a child’s progress). Communication is considered a proactive part of parent involvement and is highly valued by both teachers and parents (Olmstead, 2013). Communication has been found to be most effective when it is used to increase clarity, empathy, and active listening (Sharma & Sharma, 2014). Specifically, reciprocal parent–professional communication is critical, and educational teams must make significant efforts to respect and understand parent perspectives when teaching students with disabilities in schools today (Todd et al., 2017).

While most educators agree that family communication is essential to teaching, communication training is often left in the periphery of preservice special education teacher training and practice (Allred, 2015). Preservice teachers experience limited opportunities to build and maintain positive, trusting partnerships with families (Korthagen et al., 2006; Hedges & Lee, 2010), leaving many new teachers to learn on the job. Therefore, it is logical to conclude that teachers need direction in understanding how to best meet the communication needs and desires of families (Symeou et al., 2012).

Purpose

The purpose of this article is to (a) discuss ways for families of students with disabilities and school professionals (including but not limited to: general and special education teachers; speech/language, physical, and occupational therapists; school psychologists and social workers) to increase and expand mutually preferred communication methods; and (b) suggest current digital applications that can be used to enhance communication among families, education teams, and related service professionals. We aim to provide accessible methods for school professionals to enhance their ability to effectively communicate with families in order to support them in being well-versed in their child's educational program, progress, performance, and emotional/behavioral well-being at school.

Family Communication: An Evolving Landscape

Successful family–school partnerships are those that include effective communication between teachers and families, as communication contributes to the academic, social, and emotional success of all students (Natale & Lubniewski, 2018). While communication is an essential factor in creating partnerships, it has not always been easy for teachers (and other school staff) and families to communicate frequently and effectively. Although face-to-face interactions with families help to build rapport and trust, such interactions are not always possible given logistic constraints (Ozmen et al., 2016) such as time of meetings, schedules, and availability which have often limited parent–teacher communication. However, the ability to engage in instant communication builds and promotes a feeling of connectedness, and technology provides the means to accomplish this (Natale & Lubniewski, 2018). Therefore, in recent years, the use of technology has played a large role in accomplishing what is needed to build parent–professional rapport based on trust and mutual respect (Can, 2016). Sharma and Sharma (2014) argue that face-to-face communication is not always necessary in order to establish a working partnership among

parents and professionals. Over the past decade, traditional methods of communication among educational teams and parents have shifted from written logs, notes home, and phone calls towards the use of technological means of communication such as email and the use of digital and mobile applications (or “apps”).

Traditionally, one-way communication methods, those which provide ongoing correspondence from school and home like written communication, have been popular. Examples of one-way communication include methods like written newsletters, report cards, and communication notebooks (Graham-Clay, 2005). However, calling and sending individual emails to families can be time consuming and difficult, especially for high school teachers who may teach upwards of 100 students daily (Ramirez, 2002), including many who are learners with 504 and Individualized Education Programs (IEPs).

It is important to note that there are often discrepancies among family and teacher communication expectations (Natale & Lubniewski, 2018). Specifically, teachers are more likely to use technology to communicate in mass messages to the entire class (e.g., email, blog post, website update) to update parents on class events and units of study (Natale & Lubniewski, 2018). Parents, in contrast, communicate to gain information about their specific child. Students with IEPs have specific data and services that need to be reported on an individualized basis making collaborative communication tools a necessity for students with documented disabilities under IDEA. School websites can provide general information and announcements, and class websites can provide more specific information about units of study, field trips, and specific class events. These websites are important as they provide information on classes, teachers, school events, contact information, and different tools like research applications, but they tend to serve as an information platform as opposed to a communication outlet (Ottenbreit-Leftwich et al., 2010). Class websites also serve as a platform for teachers to provide information on homework, testing, and resources. While providing information to families is essential, dialogue should be valued and supported (Symeou et al., 2012).

Salend et al. (2004) emphasized the internet can be an “interactive tool for individualizing homework and supporting the involvement of families in the homework process” (p. 65) which can include electronic assignment logs and individualized homework modifications. Platforms like Google Classroom have made this even more feasible. Weekly emails can provide even more specific details about class information, as they provide teachers an opportunity to explain units of study and specific lessons covered during the week. However, Olmstead (2013) found a discrepancy between parent and teacher perceptions of email: parents indicated teachers did not communicate information about the class,

whereas teachers indicated they used email to provide class updates. Some parents indicated they preferred text messaging communication, but teachers in the study were resistant to communicating via text message (Olmstead, 2013), which is why specific communication applications may be useful for teachers and parents to have quick, direct communication without risking teacher confidentiality by providing personal cell phone numbers. According to the Public Information Act, when personal cell phone numbers are used to communicate with families, they can be subpoenaed in a court of law, including due process hearings. While school districts need to be mindful of whether applications adhere to the Health Insurance Accountability and Portability Act (HIPAA) and the Family Educational Rights and Privacy Act (FERPA) compliancy, they may allow teachers to communicate 1:1 or with groups of families without breaching confidentiality and putting educational teams at risk by using applications that are FERPA compliant. It is critical to note that teachers should consult with their district and school administrators to determine if a given application meets the local education agency's interpretation of FERPA compliance.

With the increase of technology capabilities and specific applications, two-way communication—when teachers and families engage in dialogue together—has become increasingly accessible. While a phone call home has been a common tool for two-way communication and annual parent–teacher conferences were a time for parents and teachers to engage in meaningful dialogue, communicating through technology provides parents and teachers additional opportunities to engage in more frequent, two-way communication.

Technology as an Essential Component to Communication

Using technology applications to communicate allows both teachers and parents to communicate during times that are convenient for them (i.e., beyond school hours and school location; Brewer & Kallick, 1996). As early as 1995, teachers were using technology like video to send families quick, personalized information such as welcome videos (Aronson, 1995), videos on popular topics like how to help with a science project (Clevenson, 1999), and progress videos for students with severe disabilities (Alberto et al., 1995). Today, a wide range of mobile applications exist that allow for convenient, two-way parent–teacher communication while preserving confidentiality for both the teacher/provider, caregiver, and student. While smartphone ownership used to be exclusive to those who could readily afford such technology, a survey by the Pew Research Center (2021) found that 85% of Americans owned a smartphone in 2021. Their research shows that while adults in higher socioeconomic brackets and with higher levels of education are more likely to own and use smartphones, the number of adults who own smartphones continues to increase.

In 2021, *Statista* surveyed 1,502 adults ages 18 and over and found that 80% of adults in rural communities, 84% of adults in suburban communities, and 89% of adults in urban communities owned smartphones (Statista, 2021). It can be concluded that mobile applications can be accessed by families across urban, suburban, and rural settings and from multilingual backgrounds. Of course, we suggest that teachers inquire about each family's access and offer alternative modes of communication when needed and necessary.

Additionally, teachers, administrators, and districts must also determine whether or not these modes of communication meet HIPAA and FERPA compliance as well as accessibility compliance such as the Web Content Accessibility Guidelines (WCAG) and Section 508 of the Rehabilitation Act of 1973. While WCAG is not a legal mandate, it is an important set of guidelines to help sites achieve compliance with accessibility such as multiple means of representation (e.g., text and audio; W3C Web Accessibility Initiative, 2018). Section 508 of the Rehabilitation Act of 1973, which was updated as recently as 2018, provides individuals with disabilities the right of equal access to federal information online (i.e., agencies should ensure the technology is accessible and does not pose "undue burden"; U.S. Access Board, 2021). Section 508 covers federally funded programs and services, but it does not apply to private industries. As part of Section 508, the Voluntary Product Accessibility Template (VPAT™) explains how products (e.g., software, hardware, electronic content) meet the Section 508 Standards (U.S. Access Board, 2021). Applications suggested in this report may or may not meet Section 508 accessibility, but tools are routinely updated and changing to meet the evolving needs of individuals. Applications that do not currently meet the accessibility standards may do so in the future.

In a 2019 report, Gauvreau and Sandall explained how technologies that enable early childhood teachers to share photos with parents can promote family and school connections in a variety of ways, including sharing meaningful, individualized information and promoting parent–child interactions. Furthermore, Can (2016) argued the use of one district specific mobile application, *Meridian Connect*, which is a school-specific technology application that allows families and teachers to communicate and gather information, has been shown to foster parent involvement and relationships with educational teams. Other, more general applications that can be used by any teacher/school (e.g., Classdojo, Remind) strengthen family–teacher communication as they allow teachers to send messages (to the class, small groups, or individually), post materials, and share content like class photos, all of which allows parents to stay connected while including students as well.

It is crucial to mention that it is more relevant than ever that educational teams maintain effective means of communication with families of students with disabilities in order to build positive partnerships. In the face of the COVID-19 pandemic, communication among families and professionals has been transformed out of necessity. While research has shown that a mix of face-to-face and virtual communication is preferred among parents and educational teams (Yumurtaci, 2017), the use of technology (e.g., Zoom, Google Meets, Microsoft Teams) has been mandatory during the extended time of social distancing and, at times, quarantine and isolation. As a result, communication via up-to-date technology is essential for all stakeholders and is no longer reserved for those who view themselves as technologically savvy. Therefore, we believe it is reasonable to expect the use of technology to carry over and continue into the post-pandemic environments, especially for populations who identify as medically vulnerable. Furthermore, parents and guardians with nontraditional employment arrangements, including those who are geographically distanced from their school-aged children such as military families and those who live away or frequently travel for work, can still stay informed and involved with their child's education.

Table 1 provides a list of 14 cost-free (with the exception of Parent Square, which is a low-cost option) mobile applications that can be utilized to foster frequency and efficiency of communication among families and educational teams. Many of these, like Edmodo, provide opportunities for student communication as well. A number of these applications follow the WCAG guidelines, such as Remind, Seesaw, and Classtag. Others are Section 508 compliant such as Remind, Schoology, and Classtag. Edmodo notes that it is working toward Section 508 compliance, and Parent Square notes that it is ADA compliant. ClassDojo uses an outside party, eSSENTIAL Accessibility, to monitor its accessibility, but it does not specifically note WCAG or Section 508 compliance. Of the sites reviewed that are included Table 1, only Schoology provided the VPAT[®]. Each application is summarized in order to help professionals determine the best match for their individualized needs and preferences.

Table 1. The Use of Mobile Applications to Enhance Communication Among Educational Teams and Families

Applica- tion	Summary	Website
Useful for One-Way Communication		
Remind (remind 101)	This communication platform helps students and families stay connected to the school community. It keeps families up to date with what’s happening in the classroom. Teachers can send messages to an entire class, smaller groups, or individuals.	www.remind.com
Seesaw: The Learning Journal ("Class")	This digital learning portfolio allows parents to see updated work by their child. Students can create their own portfolio and post new work to it, and parents/teachers can leave comments, feedback, and “like” the work. Parents are updated in real time. This app focuses on student assessment, but they do offer messaging options, allowing you to connect with parents and offer insight into their child’s academic strengths and weaknesses by sharing data directly.	https://web.seesaw.me/
Bloomz	Bloomz is a direct messaging system and behavior management tool that allows parents to see the positive behavior updates on their child’s timeline. It creates a balance in sharing behavior challenges through messaging while recognizing success with the behavior management tool. Bloomz also has a behavior reward system in the application. Up to six family members can access one account. There is also an option specific for teachers and administrators. Families can also communicate with each other regarding outside school activities.	https://www.bloomz.com/
Otus	This app allows parents to stay connected with their child’s schoolwork. It is predominantly a management system for academics but allows parents to view assigned and completed assignments. It also keeps a log of behaviors and allows convenient mass messaging from teachers to families.	https://otus.com/
*School- ogy	This app is a learning management system with a focus on communication and collaboration. Parents can click on the student’s courses that they are enrolled in to see deadlines, updates, etc., and also view grades. Parents can watch videos teachers post. Parents will be informed by school staff members who their child interacts with all day.	https://www.schoology.com/

Table 1, Continued

Useful for Two-Way Communication		
*Buzz-Mob	BuzzMob helps connect the school community using a private and customized mobile platform and web portal. Teachers and parents can communicate by sending messages, photos, and videos in real time. It is a multi-functional app that helps parents stay up to date on assignments, event dates, general information, and emergency responses.	http://tech-faster.com/buzzmob-connect-school/
AppleTree	Appletree is an app that keeps teachers and parents in sync while allowing students to succeed. Teachers can send out updates, share photos, videos, and documents with the class. Teachers can also share a calendar so parents have event dates and deadlines beforehand.	https://appadvice.com/app/apple-tree-teacher-parent-communication/1112315544
Class Dojo	Parents, students, and teachers can access this app in order to build community by co-sharing school to home and home to school photos, files, and links with the entire class and 1:1 via private messaging. Remote learning can also take place on this app. Families, teachers, and education teams participate together. Students can create assignments in the app and share with all stakeholders. It includes social-emotional learning options, classroom management, and positive behavior support points.	https://www.classdojo.com/
*Teachers: Talking Points	TalkingPoints focuses on accessible technology to promote family engagement. It allows teachers and parents to connect via text message. Individuals can connect 1:1, as a small group, or the entire class. Teachers can also send pictures and videos to share what's happening in class and take polls. This is particularly useful for multilingual families (offers translation for over 100 languages) with limited resources and low-income families. The platform uses two-way translated communication and personalized content. This app emphasizes fostering strong family engagement and development of students' success.	https://talkingpts.org/families/
ClassTag	ClassTag is a communication app that connects teachers and families. Parents and teachers can send messages, post announcements, share videos and photos, post calendars, schedule parent-teacher conferences, provide engagement stats, and share a library.	https://home.classstag.com/

Table 1, Continued

<p>Parent Square</p>	<p>Parent Square focuses on creating collaborative school communities with strong parent–teacher communication. Teachers can send private notifications, keep track of absences, send documents to parents, schedule conferences, message parents, share newsletters and volunteering schedules, and collect forms/permission slips. [Pricing is based on a per student annual fee, plus a one-time onboarding fee. Feature bundles can be customized to your district or school’s communication needs. The minimum package for a single school site is \$3,000/year.]</p>	<p>https://www.parentsquare.com/features/</p>
<p>*School CNXT</p>	<p>This two-way engagement and communication platform strives to reach 100% of families in their home language. This application connects district, administrators, teachers, parents, and students so that they can share news and events, reminders, participate in two-way messaging, and engage with one another.</p>	<p>https://www.schoolcnxt.com/</p>

Notes. *Denotes multilingual application. Teachers should consult with their administration before adopting an application to ensure the application is FERPA compliant and meets district regulations.

The Need for Differentiation of Communication Methods

While it is well-known that families of students with disabilities benefit from ongoing communication from teachers and members of the educational team, it is important to work directly with families in order to determine which modes of communication work best for them. In a 2018 study of 28 elementary school parents in New Jersey, Natale and Lubniewski (2018) found that 72% of parents felt their child’s teachers were accessible through technology, and parents of children with disabilities wanted even more communication. Some parents also requested specific applications like Google Classroom and Remind. The diversity among family systems warrants educational teams to individualize their communication approach to meet families “where they are.” It is also important to avoid asking families to access a multitude of different applications in order to receive the information being relayed by schools (Laho, 2019). In order to bridge this gap, we suggest how parents and educational teams can work together to establish preferred modes of communicating while keeping accessibility for both stakeholders at the forefront.

Partnering with Families to Determine Preferences

Families have unique needs and desires when it comes to the methods in which communication with the educational team takes place (Natale & Lubniewski, 2018). The demands of work schedules, multiple children, and activities outside of school can make it difficult for parents and teachers to find common times to communicate in meaningful two-way interactions.

Individualized communication methods with families of students with disabilities are important to successful partnerships. As there are a variety of tools available (as seen in Table 1), it is important to better understand parent preferences about how and when they want to communicate before the team commits to the use of any mobile application or communication method. Additionally, not all families desire the same frequency, duration, and level of detail with regard to the details surrounding their child's academic, behavioral, and social behavior in school. Some parents prefer more general communication tactics, while others prefer detailed information about units of study and individual work. While educational teams should not be expected to offer a custom communication method for each individual family, nor should they adopt an application that has not gone under approval review by their district administrators, asking families to express their communication preferences can help teams to build a mutually beneficial system of communication throughout the school year. By surveying families in order to better understand their preferences, teachers can best serve their population of students and families to foster two-way communication and promote collaborative partnerships. Surveys can be created in cost-free, quick access systems such as Google Forms, SurveyMonkey, or notes sent home. Table 2 provides sample questions that educational teams might consider asking families at the start of the school year in order to effectively plan for family communication preferences.

Table 2. Sample Questions Surrounding Communication Preferences

1. Do you use a smartphone with access to mobile applications?					
2. Do you prefer communication is in a primary language other than English? If so, please specify language. _____					
3. When is the best time to reach you for discussion regarding your child?					
4. Do you prefer information at the beginning, middle, or end of the week?					
5. What type of information is most important to you about your child’s day?					
5a. Would you like information about the classroom units of study at the time we cover them?					
6. On a scale of 1–5 with 1 being least important, 5 being most important, and 3 being neutral, rate the importance of communication in the following areas:					
Mealtime	1	2	3	4	5
Academic goals	1	2	3	4	5
Behavioral goals	1	2	3	4	5
Social goals	1	2	3	4	5

Conclusions

Parent and professional communication is the cornerstone of effective special education practice and guided by current legislation (IDEA, 2004; ESSA, 2015). Effective collaboration is the pillar of working relationships based on trust and mutual respect (Can, 2016; Natale & Lubniewski, 2018). While technology applications replace or alter (in the case of video calls) the important, face-to-face component of communication, they have eliminated other barriers like time and space (Yumurtaci, 2017). Carry-over between home and school can be achieved by the active and consistent use of mobile applications mutually agreed upon by teachers and families leading to positive working relationships between families and schools. Students can also become an important voice in the conversation, as most applications have the option to include the student in the communication and provide access to documentation. As seen in Table 1, some of the mobile applications suggested here can be accessed in multiple languages (e.g., TalkingPoints, SchoolCNXT) which can break down language barriers that may be present during face to face communication, especially if interpreters or translators cannot be present on short notice. This is key for families whose first language is one other than English. These applications can help to decrease the need for translation of each notice sent home

and can help families to feel valued and understood by decreasing the language barrier that can come between them and the educational team. It is important to note that while some applications provide translation services in a variety of languages, the quality of such translations can vary. These translation services should be evaluated for each language needed. Furthermore, mobile applications allow families to be reached during the workday and provide them with the flexibility to respond when they are available while providing the benefit of two-way communication (Olmstead, 2013).

These applications are not solely for sending one-way communication from the classroom, but rather provide opportunities for reciprocal dialogue at the convenience of the family while preserving confidentiality of teachers' and other professionals' personal contact information (Sharma & Sharma, 2014). Drew and Gonzalez (2021) note the challenge that school specialists (e.g., special education teachers, school psychologists, school counselors) experience achieving adequate communication due to time constraints and being assigned to multiple buildings with large caseloads. Such applications can also aid communication among team members as they strive to achieve ongoing communication with each other and families. While some of these applications note compliance with Section 508 and WCAG, others cite broadly how they provide accessibility. Monitoring applications for accessibility is important to ensure they are accessible for all those who will use them, and each should be continuously evaluated and noted as applications may make alterations and improvements to be more accessible and reach a wider audience. As Sharma and Sharma (2014) document, face to face communication is not necessary in order to provide families with reciprocal communication and to build quality relationships among families and educational teams. While it is certainly still valued, many of its components can be accomplished through modern technology.

Future Directions

Technology is constantly changing and evolving, and thus one limitation of this article is that information on communication tools and applications will need to be updated over time. Conducting ongoing monitoring of mobile application updates and how they continue to evolve in the area of support for family-teacher communication as well as which new applications foster further collaboration will be needed. As noted earlier, teachers should consult with their administration before adopting an application to ensure the application is FERPA compliant and meets district regulations. Additionally, each application has accessibility features that vary and are fluid. These features should be documented and monitored by districts to be sure they meet the needs of their families and that teachers are utilizing them in ways that provide culturally

sensitive communication methods. Future studies should consider parent and professional testimony (qualitative data) to better understand the pros and cons of various mobile applications and better assess how technology has supported parent–teacher communication. As mobile technology becomes more frequently used to foster collaboration and communication between school and home, it will be important to collect data on the access that children and families from low socioeconomic status and multilanguage households experience. Researchers should consider if all students and families are able to access mobile applications and communicate with teachers or if there is discrepancy between high- and low-income households or other variables that create barriers to usage. As technology continues to evolve, it will be important to consider if additional applications will develop capability to translate in multiple languages and increase accessibility features.

When using technology as the primary method of communication, all stakeholders (e.g., teachers, families, students) should be trained in the communication method to be effective (Sharma & Sharma, 2014). This speaks to the need for training, surveying families, and providing accessibility for a wide range of families. Decision-making surrounding the use of technology should consider these factors prior to being put into place for the school year. It is also critical to survey teachers on preferences and ease. Teachers should not feel overburdened by the use of technology, but rather should feel the opposite. Mobile applications should provide access to teachers and related school professionals, ease of communication, as well as security and privacy. Future work should focus on the experience of families and teams and how the use of technology impacts the partnerships that are so crucial to the ways in which we plan for and educate our students with disabilities in K–12 schools.

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