Apps: An Emerging Tool for SLPs

A plethora of apps can be used to develop expressive, receptive, and other language skills.

by Jessica Gosnell

Portable electronic devices such as the iPhone, Droid, BlackBerry, and iPad, collectively termed mobile media devices, have changed the way we interact with the world, from social connections to work and entertainment. Speech-language pathologists are not exempt from this "mobile revolution," as the platform has changed the way many SLPs engage clients to meet their individualized goals.

Although there are many mobile devices with application (app) options for SLPs, including the Droid platform, this article will focus on the iDevices, including the iPad, iTouch, and iPhone, as this author has the most experience with this platform. (A list of Droid apps for children with special needs created by special education teacher Jeremy Brown is available at **www.snapps4kids.com/wp-content/uploads/2011/08/Jeremy_Brown%E2%80%99s_Android_App_Recommendations_7_27_2011.pdf**.)

It is clear that iDevices are quickly becoming a key tool in our intervention arsenal. The multifunctional, engaging platform allows for a convergence of treatment materials, quick access to incentives, and data collection. The iDevices are relatively inexpensive and available through local retailers or online stores, and apps are affordable and easily acquired through downloads.

However, the unparalleled popularity of the platform—coupled with the speed with which apps are being produced—has resulted in new challenges and responsibilities for SLPs (Gosnell, Costello, & Shane, 2011).

SLPs have always needed to be informed, creative, and critical, but the rapidly changing world of apps and iDevices introduces new challenges for savvy clinicians. Being informed now means keeping up to date with an ever-growing selection of apps created to support speech and language goals.

With creativity, we can maximize the diagnostic and therapeutic "power" of the iDevice platform by using these dedicated apps and the built-in features of the iDevice. Through imaginative client-centered creativity, the SLP may use a broad range of apps not expressly designed or intended to target speech, language, and communication objectives to entice clients to engage actively in and enjoy intervention.

It is also critical that we remember the clinical adage that "no single tool fits the needs of all clients" and that we should always first focus on matching a client's needs, strengths, and skills to the most appropriate tools and strategies (Shane & Costello, 1994). It is imperative that we continue to be critical in our assessment and be aware of the potential mismatch of apps and iDevice platforms to a client's actual needs.

Dedicated Applications

We are entering a new era of tech-savvy kids. Many young children are exposed to their parents' iDevices. Children are able to manipulate and interact with these devices easily and with very little instruction and are engaged in the technologies for long periods. Clinicians can use this interest to their advantage through the many "dedicated" speech applications available through digital marketplaces, such as the iTunes store, including apps for language development, speech/sound production, receptive language, organizational skills, and augmentative communication.

Speech-production apps commonly provide a deck of images targeting phonemes in initial, medial, and final word positions (e.g., Pocket SLP, ArtikPix). In addition, many of the apps have built-in data collection features to support managing many students on a caseload (e.g., PhonoPix). The animations and reinforcement provided for correct answers are an added bonus to an already enticing medium.

Traditional language treatment (expanding mean length of utterance, using various syntax forms, increasing lexical diversity) can still be targeted through apps (e.g., iStory, 60 Story starters). Table 1 provides examples of dedicated apps that target goals of spoken language production. (This article includes a number of tables that highlight examples of

Table 1. Expressive language and speech production apps *(unless marked "free," prices range from $.99 to $29.99).*

	PhonoPix		ArtikPix		Speech Trainer 3D
	Smarty Speech		Speech Pairs		SLP Minimal Pairs
	StoryTime! (free)		60 Story Starters		Language Builder

Table 2. Receptive language apps *(prices range from $.99 to $8.99; * indicates availability on Droid platform).*

	Speech With Milo: Sequencing		iPractice Verbs*		Speech With Milo: Prepositions
	ABA Receptive ID		Understanding Inferences		Splingo's Language Universe
	House of Learning		Preposition Remix		Name That Category

Table 3. Augmentative communication apps *(prices range from $29.99 to $189.99; * indicates availability on Droid platform).*

	Proloquo2go		MyTalkTools Mobile		Assistive Chat
	AAC Speech Buddy*		Tap Speak Sequence		Grace
	TouchChat-AAC		Predictable		SoundingBoard

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applications. They are not intended to provide a compilation of all possible apps that could be used for speech-language assessment and intervention, given the prolific, fast-paced, and dynamic worldwide development of apps.)

As with expressive language, many apps target receptive language skills. Receptive skills sometimes require spoken answers, but other times simply require pointing to an appropriate object or picture. Table 2 includes examples of apps created to target both modalities for enhancing receptive language abilities. Preposition Remix and Splingo's Language Universe are examples of apps that use a game format, requiring the child to point to or move the appropriate object or picture on the screen. Many apps require the child to "talk out" answers (e.g., if…then) or describe scenes (e.g., "the boy is in the bed…"), and some even record user responses.

Table 3 identifies many commonly used augmentative and alternative communication (AAC) applications—apps developed to enhance, replace, or supplement an individual's communication capabilities.

More than 100 AAC applications are available through such marketplaces as iTunes. Websites, blogs, and Google documents seem to be a common source of information about AAC apps (e.g., **www.spectronicsinoz.com/article/iphoneipad-Apps-for-aac**), and often can be used as a first step toward acquiring information.

Creatively Adapting Apps

A search focused only on a specific profile of dedicated apps (speech production, targeted language goals, augmentative communication) could miss many well-designed apps that offer motivating and fun learning opportunities. Using creativity, clinicians can reach beyond an app's intended target audience and purpose and adapt it to support interventions. Apps created for other purposes (e.g., Starfall, created for early literacy skills) could be used to motivate uninspired children to engage in intervention goals such as letter knowledge, phonemic awareness, and decoding skills.

Starfall, for example, was helpful in working with Sophia, a 5-year-old girl with cerebral palsy who vocalizes minimally. Her mother reported Sophia "shut down" in regard to using her voice, refusing to produce any form of sound even when engaged in imitation tasks, co-active movement, or play. When presented with the Starfall app on an iPad during an assessment, Sophia quickly started touching letters while producing sound approximations mimicking the sounds by the iPad.

Like Starfall, almost any app can be transformed into a treatment tool. The free app "Doodle Buddy," for example, created for "painting, drawing, scribbling, and sketching," can be adapted and used to meet many intervention goals. Table 4 (p. 12) provides examples of expressive and receptive uses of this app. The examples include common therapy goals (on the left) and images that correspond to an activity or goal (on the right). Although this app was not created for speech-language intervention, a creative clinician use it well beyond its intended purpose to support a variety of expressive and receptive goals and activities.

In the series "from useless to learning apps" (**www.geekslp.com**), SLP Barbara Frenandes details similar examples of using what some may term "useless apps" (e.g., Angry Birds). She highlights how to capitalize on the child's captivation with the app and to conduct a productive, goal-directed treatment session.

Table 5 (p. 12) details apps—although not created explicitly to target receptive or expressive goals—that imaginative clinicians can use as a catalyst for participation. They can be used in many different ways (speech production, sequencing, voice feedback, pacing, age-appropriate concepts, following directions, etc.). Potential goals may include following directions (e.g., My Playhome, Cupcake Corner), increasing vocabulary (e.g., Pogg), or sequencing (e.g., More Pizza!). (For more ideas and app lists, refer to Therapy App 411, **www.therapyapp411.com**; Geek SLP, **www.geekslp.com**; and Speech Language Pathology Sharing, **http://slpsharing.com**.) These sites provide lists of apps and examples of ways to use an app to support a variety of expressive and receptive goals and activities.

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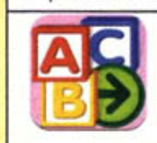
Table 4. Using "Doodle Buddy" for receptive and expressive goals.

Expressive Goals	Visuals in "Doodle Buddy"	Case examples
Repair communication breakdowns using a whiteboard		Mary, who has dysarthic speech, supplements her speech through expressive apps and this whiteboard app. She quickly writes on the whiteboard and shows her message to her partner. A person struggling with expression (either verbally or in writing) could draw to supplement the communication intent.
Improve expressive language in terms of elaboration of verbal output		Sophia uses a Vantage Lite (dedicated speech-generating communication device) with this app, by directing her communication partner what to do (e.g.,"Draw a blue house" or "Draw a tiny bird") or commenting on a scene that was drawn together (e.g., "I see a dolphin and a fish").
Receptive Goals		
Increase ability to follow two-step directions		Max was directed to draw a circle and then draw a star in the circle. He had attempted this activity previously with marker and paper and was not engaged. Now he completed it without prompting.
Improve knowledge of location concepts (e.g., in, on, under, behind)		In a prepositional knowledge exercise, we imported a scene/ photograph and directed James to, for example, circle the dog that is IN the tree. The "coolness" factor of the technology motivated him to engage.

Speech-production apps should not be used in place of speech-language treatment with a certified SLP, nor should use of apps for clinical purposes proceed without training and guidance.

Table 5. Expressive and receptive language apps *(unless marked "free," prices range from $.99 to $2.99; * indicates availability on Droid platform).*

Expressive language apps					
	Starfall		Talking Carl		Singing Finger Free
	Songify Free		Talking Tom*		Pogg
	Doodle Buddy (free; can use Whiteboard Pro for Droid option)		Cloudy Shake (free)		BalloonAnimals* (free)
Receptive language apps					
	My PlayHome		Ike's Machine		Madera and Figaro Save the Day
	I Learn with the Mighty Jungle Animals		Pogg		Cupcake Corner
	Toca Tea Party		More Pizza!		Magnetic Draw

Using Photo libraries

Many of the applications adapted for treatment are low-cost. An additional no-cost resource is the use of your photo library. This built-in feature is commonly untapped and easily can be used to support a broad range of activities and interventions (see Table 6, p. 13). Examples include creating:

- An "articulation deck" (download photographs that are in the public domain).
- A photo deck for description (e.g., pronouns).
- A library filled with photographs for preference indication (an individual can "scroll" through and select photos).
- An organized photo library with activities specific to individuals on your caseload. Creating photo folders with individuals' names or activities allows easy access to clients' photos during sessions.
- A sequencing activity or a visual schedule.
- A photo deck for object, scene, dynamic, and element cues (Shane & Weiss-Kapp, 2007).

App Pitfalls

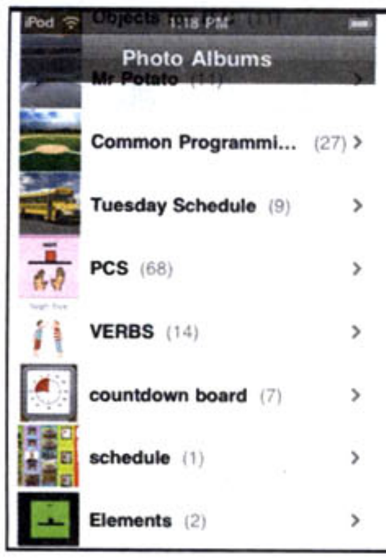
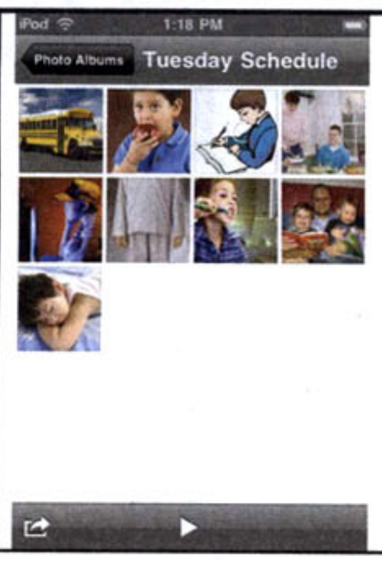
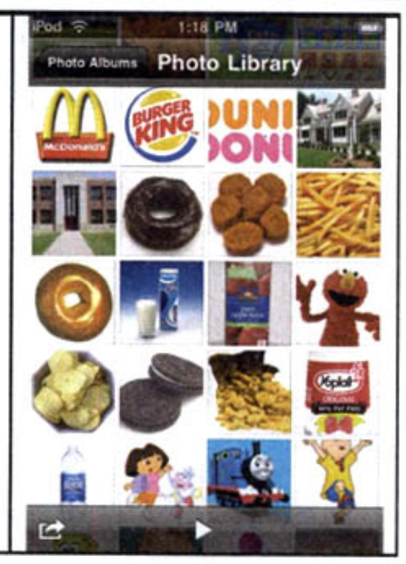
The iDevice platform is exciting, but it warrants caution because of pitfalls that could affect the course of intervention and impede progress. We are observing shifts away from the SLP being the driving force behind intervention: In some instances families are choosing to "self-treat," and in others the educator or tech department is handing out iPads with preselected apps, requring clinicians to fit their clients' treatment to the available iDevice and apps.

Speech-production apps should not be used in place of speech-language treatment with a certified SLP, nor should use of apps for clinical purposes proceed without training and guidance. Solid clinical judgment and knowledge are required to assess and monitor the efficacy of an app as a clinical tool. Many of the listed apps may be user-friendly, but provide incorrect feedback, such as accepting incorrect sound production responses as correct, inaccurately collecting data, or encouraging the user to ignore function in lieu of drilling on "just any sound" instead of clinically relevant targets.

A comprehensive assessment must be the starting point prior to selecting an iDevice and app or any other tool or strategy. The popularity of the iDevice platform, coupled with the impressive speed with which apps that parallel desirable features of dedicated speech-generating devices are being produced, have resulted in many practitioners forgoing, or at least temporarily suspending, well-established clinical assessment strategies. When SLPs select the iDevice platform and apps without assessments, they run the risk of making decisions without sufficient experience or clinical judgment and knowledge (including awareness of language abilities or needs, other assistive communication device options, and the differentiating features of apps).

A great harm of reckless clinical decisions is the time wasted trying to learn or use an inappropriate communication technology. As a way to ensure appropriateness of apps, clinicians should ask two primary questions: "Were the iDevice platform and accompanying app determined through a thorough clinical feature-matching process?" and "Are we fitting the

Table 6. Organized photo library.

Organized Library	Visual Schedule	Photos for Preference Indication
		

person to the iDevice and communication app or are we fitting the person systematically to the iDevice?" (Gosnell, Costello, & Shane, 2011).

As responsible SLPs, we should be alert to the overuse and flurry of recommendations for iDevices as they relate to replacing intervention with a certified SLP and dedicated AAC devices. In many cases these devices fall short: the iDevice doesn't provide appropriate feedback, the application freezes, the volume is not sufficient in many environments, the hardware is quite fragile, or access options for those with motor challenges are limited (Farrall, blog 2011). As SLP Jane Farrall states, "I could spend a lot of time trying to 'make' this technology work for someone when there is a piece of specifically designed technology that will work straightaway."

As we enter this new era of educating and engaging tech-savvy children, providers must continue to learn and challenge themselves to develop more engaging and relevant assessment and intervention strategies. The iDevice platform can be loaded with free and reasonably priced apps that may be used to support work in speech, language, comprehension, AAC, and literacy. Apps can easily be incorporated into treatment and may at times be the most effective support of our intervention goals. But only through informed clinical judgment and a continued demand for evidence can a tool or strategy be deemed the most judicious and effective for a client's needs.

We must maintain an ever-diligent focus on what most motivates and engages a child to demonstrate true competence. Only then can we legitimately incorporate the iRevolution into our arsenal of best clinical practice.

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