

25 iPad Facts & Apps for Supporting Students with Autism Spectrum Disorder & Other Exceptionalities

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With the inception of the iPad and the surge of app development for children with Autism Spectrum Disorder (ASD), the iTunes “App” Store where iPad applications (typically referred to as “apps”), are purchased for classroom implementation can seem a little overwhelming at times! Nonetheless, the user-friendly nature of the tablet, its accessibility, and its relatively low costs have changed the way many learners with ASD can, for example, learn new skills, meet curricular expectations, utilize augmentative communication, and access required accommodations (Banda, Grimmer, & Hart, 2009; Mang & Wardley, 2012). The following 25 apps and facts can help with building a strong entry level foundation of professional knowledge and skill to support students with ASD in your classroom through the use of iPad-based tablet technology.

1: Devices

A range of tablet devices are currently available, falling primarily into one of three categories: (a) the iPad, (b) Android tablets, and (c) Windows tablets. Although variety and price varies, the iPad has dominated in the education field, with iPad sales in school doubling each year (Travlos, 2012). The primary reason for this participant success is the availability of desired apps, as well as the presence of built-in accessibility features which provide immediate options to meet the needs of a range of learning styles. Currently, the iTunes store has over 40,000 educational-based apps available, including a significant portion of online textbooks and other learning resources available on interactive iBooks, a framework for building customized teaching and learning materials. Apple has also created iTunes U, a free, user-friendly learning management system which

allows academic content sharing at any age, grade, or level (apple.com/education/ipad/itunes-u/). In comparison, other, similar devices are more limited in the educational sector.

2: Accessibility

One of the most valuable characteristics of the iPad is its built-in accessibility. These features are created for individuals with various learning styles, challenges, preferences, and/or disabilities, adapting the presentation of information for vision/hearing/communication, physical/motor skills, and learning/language/literacy needs. An overview of these features are available online at apple.com. To find these options on the iPad itself, go to Settings -> General -> Accessibility. Guided access, text-to-speech, speech-to text, and zoom are some other options which provide accommodations for individual learning needs.

3: Guided Access

Some students are prone to exiting target instructional apps for more preferred and/or reinforcing apps, creating a situation of off-task time that should be devoted to learning. The guided access option allows educators and/or parents to lock the screen (wholly or partially) and disable the iPad’s home button, enabling a greater likelihood of on-task behaviour.

4: Text-to-Speech

Text in documents, iBooks, notebooks, online documents, etc., can all be read aloud at any point by enabling or “turning on” this built-in option. Simply choose the nationality of the voice, and each time text is highlighted on the iPad, it is then “spoken” aloud.

5: Speech-to-Text

This feature is only available in models newer than the iPad2 (e.g., iPad Mini, iPad Air). The built-in keyboard microphone, if utilized, transcribes spoken words with impressive accuracy into electronic text.

6: Zoom

Turning the zoom feature on will allow users to zoom in on (i.e., magnify) any portion of the screen—or within apps themselves—with a three-finger tap.

Finding Apps

Apps can be overwhelming when looking at the tens or hundreds that appear after a search in the App Store. In order to make the searching process more efficient, consider apps or websites that are specific to special education or ASD to help find the app that is suitable for a particular student's needs with greater efficiency and accuracy.

7:Autism Apps Search Engine

Autism Speaks has recently released a unique search tool targeted specifically on finding the best apps for ASD: Autism Apps Search Engine. While this tool is not limited to iPad apps, they are included. This search tool is not only unique in its narrow focus, but also allows its user to search by function, device, age group, as well as through a more commonly-known keyword search. Its user can also read and add comments and ratings, and most exciting: read summaries of any related research. Read more about Autism Apps on the Autism Speaks website.

8:Apps for Teachers

Apple itself has also created a new category in their online offerings: Apps for Teachers found on their website. This includes information about traditional academic subject areas, as well as special education-based apps. This category can be found within the Apps for Teachers site by scrolling down to “Accessibility” which launches “Special Education Apps” in the iTunes store organized by subcategories such as “Communication.”

9:App Abled

Although there are many other choices in cyberspace,

App Abled, found online at www.appabled.com, also warrants mention. Self-professed as “app advice for the special needs community,” this site offers up multiple lists, regular reviews, a developer of the week, and an app of the day. Utilize any of these app-finding sites and tools to narrow down your search from “everything on the internet” to “what works for a child with ASD,” and find the apps for you and your needs with greater efficiency and effectiveness.

10:Apps Gone Free

Before you delve further into the world of apps, step back and look through the new selections of the day in the Apps Gone Free app: an app about apps! Apps Gone Free makes no for-cost recommendations. They simply post what are described as “xpert-picked top-ranked apps, for FREE!” as daily suggestions for your selection. Read more about this app (and download it) online on iTunes.

Apps for Social-Emotional Growth

One of the most significant benefits of using the iPad for students with ASD is the benefit of teaching social skills in a systematic manner. Since students with ASD do not typically acquire social skills by observation alone (Myles, Simpson, Ormsbee, & Erikson, 1993), targeting skills with relevant, skills-based apps can be beneficial.

11: Social Express

A comprehensive social skills teaching tool. Follow a story where various characters make social mistakes, while stopping to ask the student questions on what occurred and what they should do next.

Cost: \$, Available on iTunes

Read more: at thesocialexpress.com

12: Bla Bla Bla for Volume Regulation

An app that mirrors the student's voice input with a visual image of various characters whose expressions and voice match the volume of the student. Good for teaching volume control.

Cost: Free, Available on iTunes

Read more online on Lorenzo Bravi's website, www.lorenzobravi.com

I3: Story Wheel

Designed to teach conversation turn taking, story development, and imaginary play through making an interactive story with another person.

Cost: Free Trial Version plus in-app purchases, Available on iTunes

Read more online about Story Wheel, www.storywheelapp.com

I4: Hidden Curriculum for Kids, Adolescents, & Adults

Based on the well-known book, *The Hidden Curriculum* (Smith-Myles, Schelvan, & Trautma, 2013), these apps simply ask questions and provide choices related to common social situations that are often a struggle for those with ASD.

Cost: \$, Available on iTunes

Read More about The Hidden Curriculum resource www.aapcpublishing.net

I5: Speech Prompts

A multi-functional app providing a volume meter that can be customized by context, and a voice match that teaches tone, intonation, and pitch by recording and visually depicting sound waves. Users can compare, manipulate, save, and review various sound waves.

Cost: \$, Available on iTunes

Learn more by watching an online demo at <http://vimeo.com/55303423>

ABA-Based Apps

In the recent National Standards Project completed by the National Autism Center (2009), the majority of strategies with a strong evidence base are found with the field of Applied Behaviour Analysis (ABA). Some of the below ABA-based tools are tools for the needs of students, and others are developed for the ABA-based needs of educator and clinicians.

I6: Behavior Snap

A data collection app that collects duration, frequency, ABC, and interval data that can be made into reports and shared in an email database.

Cost: \$, Available on iTunes

Read more on the developer's website at www.behaviorsnap.com

I7: Preference & Reinforcer Assessment

A tool that guides individuals to complete multiple stimulus (with and without replacement) and paired-choice preference assessments, with additional features (e.g., where to place reinforcers) while collecting data automatically.

Cost: \$, Available on iTunes

Read more at the autismepicenter.com

I8: Kindergarten.com Apps

A variety of apps that teach basic concepts to early learners with flashcards, receptive identification, and problem solving, based on the principles of ABA. Apps include a built-in data collection feature, prompts, and reinforcement.

Cost: \$

Read more at kindergarten.com

I9: Skill Tracker Pro

A comprehensive data collection software which provides options for various clients and observers, with automatic charting features and video recording.

Cost: \$, Available on iTunes

Read more at www.behaviortrackerpro.com

20: Token Board

A versatile token board that includes personalized pictures and numbers of tokens to customize a token economy

Cost: \$, Available on iTunes

Read more at zorten.com

Apps for Literacy Support

A range of apps are available to support literacy-based classes, as well as literacy needs, acting as tools for supporting students who struggle with reading, writing, organization, and more. Many of these are similar to apps that many be familiar to teachers, students, and parents from their experiences with Special Education Amount (SEA)-funded hardware and software purchases (Ontario Ministry of Education, 2013). However, they may not have the same level of complexity as the laptop-based software. On the other hand, they may have a sufficient number of features to support in-class needs for junior, intermediate, and high school learners who need accommodation and support for success as independent learners in a literacy-infused environment.

21: Dragon Dictation

Dragon Dictation is the app equivalent of Dragon Naturally Speaking with its speech-to-text features.

Cost: Free, Available on iTunes

Read more at nuancemobilelife.com

22: Typ-o HD

Typ-o HD is an example of word prediction software. In addition, its user can pre-set three levels of spelling support, and can touch-and-hear choices of word replacement to make informed writing decisions.

Cost: \$ but free trial versions are advertised by its developer, Available on iTunes

Read more at secondguess.dk

23: Firefly K3000

Firefly K3000 is the app-based version of Kurzweil 3000, providing text-to-speech capabilities and more.

Cost: Free, Available on iTunes

Read more at bridgesontario.wordpress.com

24: Inspiration Maps

Inspiration Maps allows visual learners to brainstorm, plan, research, outline their written work (e.g., essays), and more in an interactive, visual manner. Kidspiration

Maps and Kidspiration Maps Lite are analogous program options for younger learners and/or those developing more basic skills.

Cost: \$ or Lite Version for free, Available on iTunes

Read more at inspiration.com

25: AudioNote

A great app for students to take notes. At the same time that notes are being taken, a simultaneous audio recording is occurring. Pictures can be inserted and when the student needs to reference the audio clip for the missed portion of the lesson, it will play when the text is touched.

Cost: \$, Available on iTunes

In Sum

Along with the pedagogical experience and critical decision-making skills of professional educators, these 25 apps and facts related to available devices, accessibility features, finding apps, apps for social-emotional growth, ABA-based apps, and apps for literacy support provide a framework for utilizing the iPad successfully for students with ASD.

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Burke and Cerniglia showed that children with ASD were able to learn to follow instructions with up to four steps in a relatively brief period of time (1990, as cited in Koegel, L.K., Koegel, R. L., Harrower, & Carter, 1999, p 177).

As with teaching self-initiations, described in article 3, continue using the motivation strategies while teaching the child with ASD to respond to multiple cues. Burke and Cerniglia (1990, as cited in Koegel, L.K. et al., 1999) also demonstrated some generalized responses following the intervention period. The ability to respond to multiple cues in the environment may also increase the child's ability to access learning opportunities in their daily lives and decrease the need to break instructions down into single steps. This may allow the child to be involved more in typical peer groupings with less direct adult support required.

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