

AAC MOBILE APPS FOR CHILDREN WITH AUTISM

[Autism spectrum disorder \(ASD\)](#), also referred to as autism, encompasses a range of conditions characterized by social behavior, communication and language, and a narrow range of interests and activities that are both unique to the individual and carried out repetitively. In most cases, these conditions manifest themselves during the first five years of life. They also tend to persist into adolescence and adulthood.

[One in 160](#) children worldwide have ASD. The National Autism Association reports that among [children with autism](#):

- 40% do not speak;
- 25%–30% speak some words at 12 to 18 months of age, but suddenly lose the skill to speak them; and
- Others might speak, but not until later in their childhood.

If you are a parent of a child with ASD, you may have heard about a class of assistive technology (AT) known as augmentative and alternative communication (AAC) devices. These devices are designed to help you and your child more effectively communicate with one another. These include voice output devices, switch-activated recordable message tools, computer software programs, and mobile apps. Over the past few years, there has been a surge in picture- and/or text-based AAC mobile apps to choose from. This guide will provide you with a few examples.

Text-Based AAC Mobile Apps

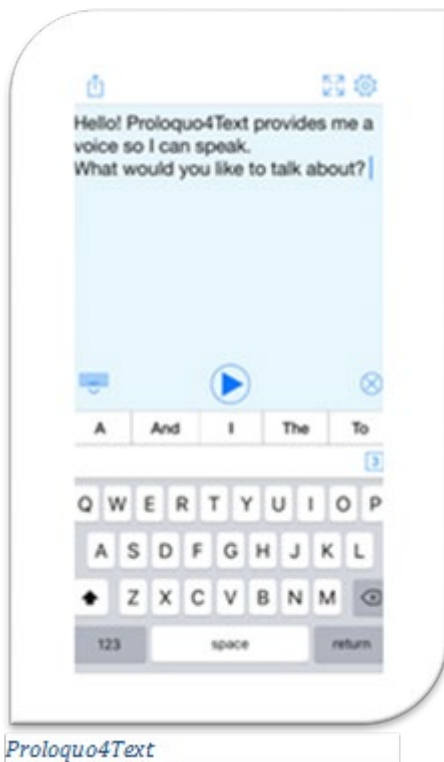
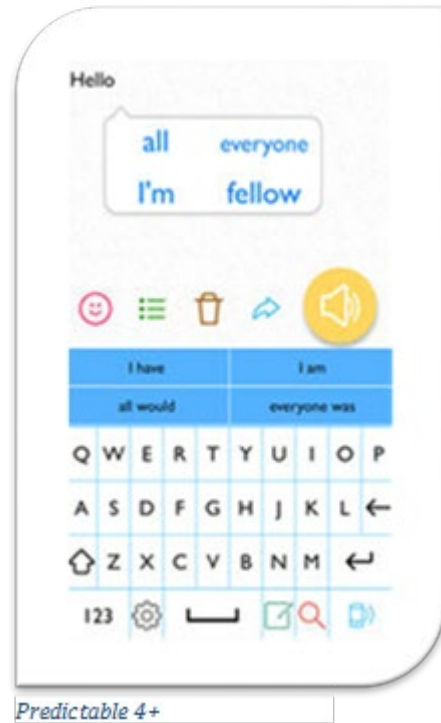
A text-based AAC app is a text-to-speech communication aid. It reads aloud text-based messages that your child types.

One example of a text-based AAC app is [Predictable 4+](#). It provides word predictions to help your child type out his or her messages faster. The word prediction function is self-learning. It uses the letters your child has typed, his or her text usage patterns and vocabulary, and his or her preferred grammar and style of speech to provide accurate word predictions.

When the app is opened, the screen displays three main options: a message box, a QWERTY keyboard, and a speak button. When your child types a word using the keyboard, it appears in the message box. Word predictions also appear in a bubble next to the word. For example, if your child types “hello,” word predictions such as “all,”

“everyone,” “I’m,” or “fellow” may appear. When he or she taps a desired word prediction, it appears in the message box. Using the previous example, the phrase “hello all” would appear after tapping “all.” Finally, after pressing the speak button, the app will read aloud the text contained in the message box.

Predictable 4+ offers several additional features such as *spell check*, which highlights misspelled words; *autocorrect*, which replaces misspelled words with the closest alternative; and *saved phrases*, allowing you or your child to create and save commonly used phrases for quick and easy access. The app also has many built-in keyboard options to choose from. In addition to the QWERTY keyboard, there are specialty keyboards including an ABC layout (which displays keys listed in alphabetical order) and a high-frequency layout (which displays keys listed from most to least commonly used letters.)



Another example of a text-based AAC app is [Proloquo4Text](#). When the app is opened, the screen displays three core options: a message box, a QWERTY keyboard, and a play button. As your child types, he or she can use the app’s word prediction feature to type the message faster (the predicted words appear in a white box directly above the keyboard). The app can be set to either read the message aloud word-by-word as he or she types or only after he or she taps the play button.

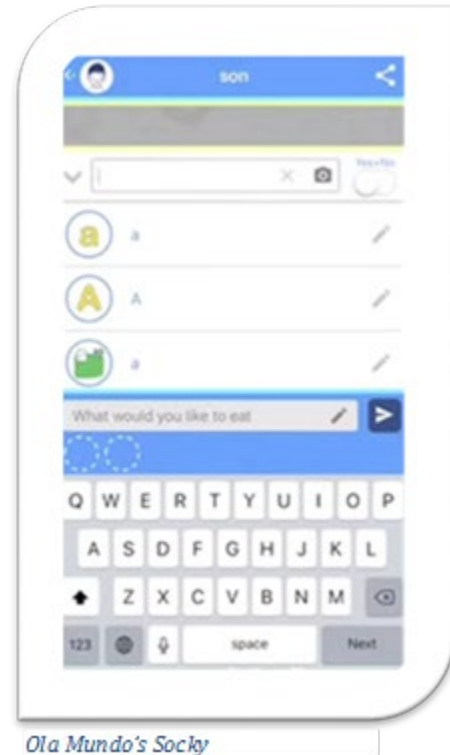
The Proloquo4Text also offers several additional features such as a phrases menu, which lists frequently used sentences and phrases; a history menu, which provides a log of previously played messages; a full screen button, which displays the message inside the message box in full screen without reading it aloud for times when your child wants to communicate silently with you when you are beside him or her; and a flip button, which

flips the message inside the message box upside down when your child wants to communicate silently with you when you are across from him or her.

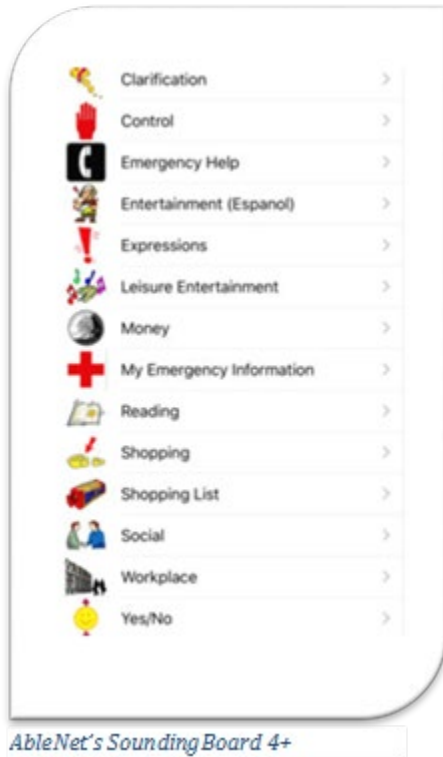
Picture-Based AAC Mobile Apps

A picture-based AAC mobile app is a picture-to-speech communication aid. It converts pictures into audio messages (via a speech synthesizer) and reads them aloud.

One example of a picture-based communicator is the [Ola Mundo Socky](#) app. When the app is opened, the screen displays three core options: a keyboard of categorized picture keys, a send button, and a message box containing the conversation thread between your child and a communication partner. The picture keys represent words divided into categories on the screen (e.g., favorites, people, actions, keywords, etc.). Your child can choose a category, and then tap on specific picture keys to create a message. For example, if your child wants a banana, he or she would press the picture keys that represent “I,” from a favorites category, “Want” from an action category, and “Banana” from a food category. Then, your child taps the send button to send the message to you. Your child’s and your messages are easily distinguishable in the thread – you each have an avatar representing you. For times when you are in the same room with one another, you can set the app to read the messages aloud.



Another option is [AbleNet’s SoundingBoard 4+](#). It consists of categorized folders of various communication topics (e.g., expressions, money, reading, emergency help, shopping, etc.) known as communication boards. Each board contains numerous pictures. Each picture has an accompanying message that is available in both audio and text formats. The app offers preloaded communication boards (boards with pictures with messages already on it) and provides an option to create new communication boards.



When the app is opened, the screen displays two core options: Select an Existing Board and Create a New Board. Your child can opt to play a recorded message aloud by tapping “Select an Existing Board” and then on a desired communication board (e.g., Food) from the options provided. Once the board is open, your child finds and taps on the picture that represents the message he or she wants to communicate. For example, if your child wants grapes, tapping on the Food communication board and then on the picture of grapes plays the message, “I want grapes.”

You can use the “Create a New Board” option to create and add a custom board. After tapping this option, you can add a picture from AbleNet’s library or the photo library of your mobile device to your custom board, along with the accompanying message. The app then prompts you to add the text and record the audio for the message when you upload the picture.

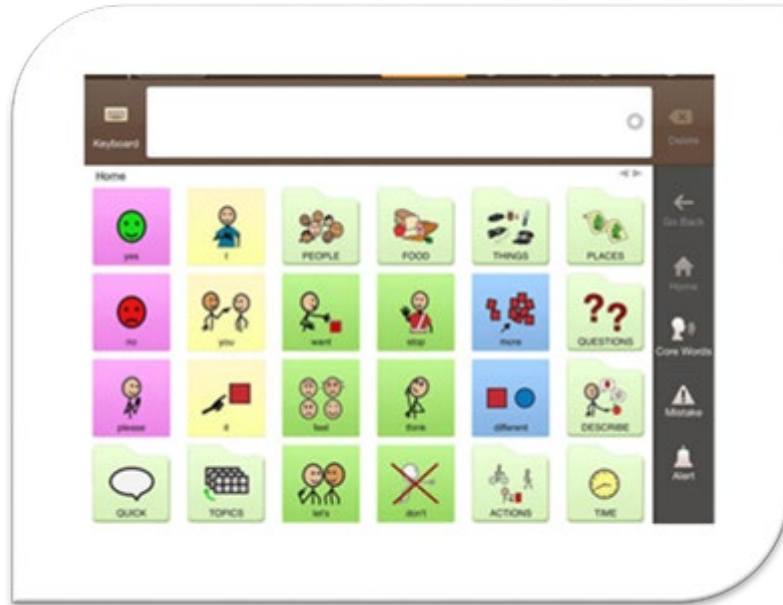
Picture- and Text-Based AAC Mobile Apps

As indicated, several AAC mobile apps offer either picture- or text-based communication. However, some apps offer both.

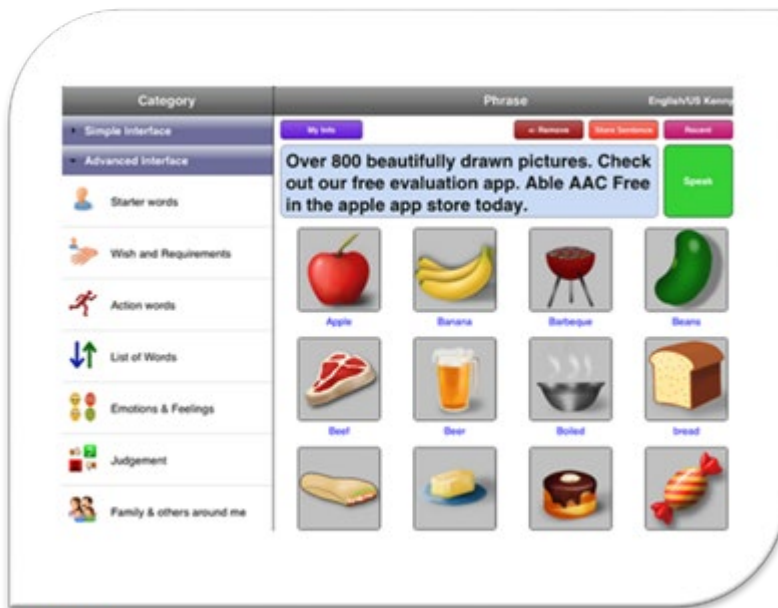
One example is [Avaz Lite](#). When the app is opened, the screen displays two core options: a message box and a keyboard. The display can be toggled between picture or text modes. When in picture mode, the screen will display picture keys categorized in different folders. When in keyboard mode, a QWERTY keypad appears. Your child can mix text and pictures to create a message. For example, she or he can type, “I want” and tap on a picture of cookies to create the message “I want cookies,” and everything will appear in the message box. Tapping on the message box activates the text-to-speech feature and, the app will read aloud the message.

The Avaz Lite app offers several additional options, including: a Help button, which explains the purpose of each button in the app; the Quick Sayings button, which contains frequently used phrases such as “Thank you” or “Please help me” that your child can use as shortcuts when creating his or her messages; and the Alert Sound button, which rings an audible bell if your child needs your assistance.

Another example is [Able AAC](#). When the app is opened, the screen displays three core options: a message box, a speak button, and three interface choices. These choices include: Simple Interface, allowing communication through pictures with accompanying recorded messages; Advanced Interface, allowing creation of sentences using pictures or words from lists provided within the app; and Type and Speak, allowing direct typing of sentences using the app's built-in keyboard.



Avaz Lite



Able AAC

text (e.g., "I want mom") appears in the message box. After tapping the speak button, the app plays the message aloud. In Advanced Interface, the process is the same as Simple Interface. However, the categories and pictures are more complex, allowing your child to create more advanced sentences and phrases as he or she gains language skills overtime. In Type and Speak mode, a QWERTY keyboard appears to allow your child to type the text of a message. In addition to typing out the message, he or she can copy

When your child is in Simple Interface, a list of categories (e.g., "I feel," "I want," etc.) appears. The app displays pictures for a category when he or she taps on the category. For example, after selecting the "I want" category, the app displays pictures representing mom, dad, dinner, lunch, etc. When your child taps on a picture (e.g., mom), corresponding

and paste emails or other internet content into the message box to have it read aloud. Able AAC can also store longer texts (e.g., for presentations) and give your child quick access to recently spoken phrases.

For More Information

To learn more about these and other types of AAC devices, please contact [AbleData](#).

References

National Autism Association. (n.d.). *Autism fact sheet*. Retrieved from <http://nationalautismassociation.org/resources/autism-fact-sheet/>

World Health Organization. (2017, April 4). *Autism spectrum disorders*. Retrieved from <http://www.who.int/en/news-room/fact-sheets/detail/autism-spectrum-disorders>



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