

AAC Devices and Interventions

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What is an AAC Device or Intervention?



Augmentative communication is anything that supports one's ability to speak and alternative communication is anything that substitutes for speech. Examples of augmentative communication can include gestures, sign language, body language, letter boards, and eye pointing.

AAC devices include:

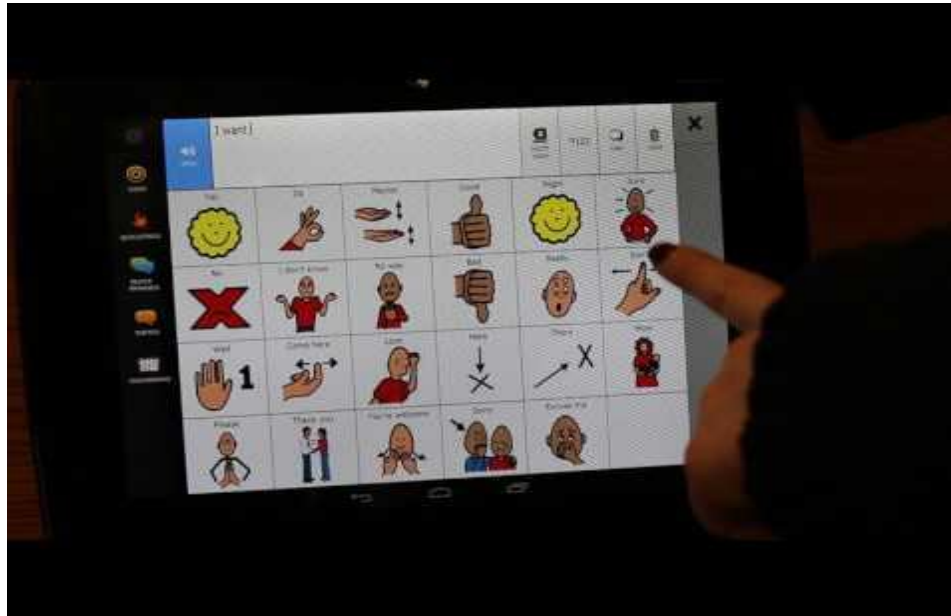
- Low/Non tech AAC devices e.g. Theme boards, single message device
- Mid tech AAC devices e.g. Alpha talker, TechSpeak (AMDI)
- High tech AAC devices e.g. Dynavox series, Spring board



Benefits of Tobii Dynavox & other speech generating devices

- **Communication Effects**—Both children and adults demonstrate improved participation in conversation as well as the creation of longer messages when using AAC.
- **Motor Effects**—the presence of a communication device can result in “reduced physical demands” and decreased “pressure to speak.”
- **Acoustic Effects**—the immediate production of speech by a Speech Generating Device (SGD) provides a consistent speech model as well as strengthens the association between the word and symbol.
- **Scaffolding Effects**—Instead of using an AAC system to show or speak messages directly to the communication partner, individuals with aphasia may use the AAC system as a cue to recall specific words and support a more complete conversation using their natural speech.

How does Tobii Dynavox work?



How expensive are basic Tobii Dynavox systems?

INDI with Snap + Core First - \$999

INDi with communicator 5 - \$1699

Speech Case without Ipad - \$399

Speech Case with Ipad - \$869

INDI 7 - \$1699

PCEye Plus - \$1699

PCEye Mini - \$1199



References--Tobii Dynavox and other Speech Generating Devices

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Picture Exchange Communication System (PECS)



PECS is-

- The Picture Exchange Communication System (PECS) is a low-tech Augmentative and Alternative Communication (AAC) for early nonverbal symbolic communication training.
- This system allows people with little or no communication abilities to communicate using pictures.

(Vicker, 2002).

PECS aim is to facilitate-

- Initiation of communication and aims to develop the basic skills for communication, including language, social skills as well as reciprocal communication.
- Initiate interaction between non-verbal students and other individuals
- Encourage functional communication skills
- Generalization of skills
- Teach skills and activities that would lead to independence
- Focus on functionally equivalent alternative behavior

(Frost, & Bondy, 2002)

PECS (Cont.)

Preparing for PECS-

Participants:

- Student
- Communication Partner
- Physical Prompter

Reinforcers:

- How to determine items of interest
- Variability

Supplies:

- Reinforcers
- Book with Velcro
- Pictures with Velcro (Boardmaker)



Phases of PECS

- It follows the pyramid of building upon another
- 6 phases
- Each phase has objectives and specific procedural guidelines

Phase 1 – How to Communicate

- Requires 3 people
- the child (or adult) who will be transmitting a message,
- the person who receives the message (e.g., Mom or the teacher),
- and the facilitative adult who deliberately assists the message sender to make the targeted response.
- Goal: Approach people to initiate communication
- To teach initiation, use 2-person prompting procedure
- Teach 3-step sequence
- pick up, reach, release
- One picture at a time
- No discrimination

In this phase, the student reaches/points to the picture of motivator. The Adult 2 aids the student to pick up and place it in the hands of the Adult 1. The Adult 1 shows the picture to the student and exchanges it for the motivator. Adult 1 can give a verbal praise.

PECS Phases

Phase I How to Communicate

- Spontaneous Requesting
- 2-Person Prompt Procedure
- Pick up, reach, release



Phase II Distance and Persistence

- Travel to Communicative Partner
- Carry PECS Book
- Persistence across obstacles

Phase IIIA Simple Discrimination

- Highly-preferred vs. non-preferred
- 1/2 second rule
- 4-Step Error Correction Procedure



Phase IIIB Conditional Discrimination

- Correspondence Checks
- 4-Step Error Correction Procedure
- Find pictures in book

Phase IV Sentence Structure

- Construct and exchange Sentence Strip
- Backstep Error Correction Procedure
- Constant Time Delay to encourage speech



Attributes Descriptive Vocabulary

- Request specific items
- Size, Color, Shape, etc.
- Action words

Phase V Answering, "What do you want?"

- Maintain spontaneous requesting
- Progressive Time Delay



Phase VI Commenting

- Responsive Commenting
- Commenting versus requesting
- Spontaneous Commenting



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"FLEX your PECS!"

(Frost & Bondy, 2002)

Phases of PECS (Cont.)

Phase-2 Distance and Persistence

- Communicative partner moves away from student
- Picture-on communication book-moved further from student (single pictures, no discrimination)
- Persistence taught
- Variety of people, locations, activities, reinforcers involved

(Frost & Bondy, 2002)

In phase 2, the adult holds the motivator in his/her hand and the picture of the motivator is attached to the communication board/book using a velcro. The Adult 1 moves away and gives way to the student to reach for the picture. Once the student gets the picture, the Adult 1 moves away to enable the student to move out of the chair to give the picture. The Adult 1 then has their back turned so that the student can be persistent to give the picture.



Phase-3 Commenting

- Motivation to use correct picture= getting desired item and avoiding undesired item
- Remember to reinforce at 1st indication of choice
- 4 steps Error Correction Procedure for mistakes

(Frost & Bondy, 2002)

In Phase 3, there are 2 pictures (motivator picture & irrelevant picture) on communication board/book. If the student reaches for the motivator picture and gives it to Adult 1. The student would receive the item and verbal praise from Adult 1. If the student gives the irrelevant item picture, Adult 1 gives the motivator and points at the right picture on the board/book. Eventually, when the student consistently provides the correct picture, the number of pictures on the board are gradually increased-3,4,...

Phases of PECS (Cont.)

Phase-4 Building Sentences

- I want + reinforcer picture put on sentence strip
- Entire strip given to adult

(Frost & Bondy, 2002)

In Phase 4, the student places the picture of the motivator on the sentence strip and gives the sentence strip to Adult 1. Adult 1 reads the sentence while pointing and showing it to the student. Next, “I want” picture is put on the board/book. Student puts “I want’ on the sentence strip. Motivator is removed from the sight, and above steps are repeated for practice. Note: Adult 2 might need to prompt to guide the student to give the sentence strip to Adult 1 and to put the ‘ I want picture on sentence strip.



Phase-5 Answering “What do you want?”

- Answering “what do you want?”
- Leads to commenting
- Maintain spontaneity

(Frost & Bondy, 2002)

In phase 5, Adult 1 would ask, “What do you want?” and point to the picture ‘I want’ simultaneously. Next, Adult 1 would ask, “What do you want?” and would delay in pointing to the picture ‘I want’. Again, Adult 1 would ask, “What do you want?”, student independently would sequence- ‘I want’ & picture on the sentence strip and would give it to Adult 1



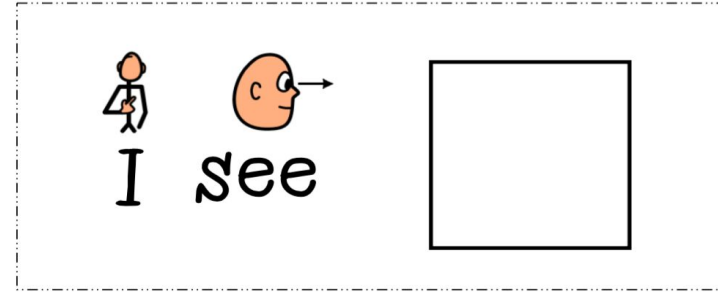
Phases of PECS (Cont.)

Phase-6 Commenting

- Answering “comment” questions
 - “What do you see/have/hear/feel?”
 - “Discriminating between commenting Sentence Starters and requesting Sentence Starter •
- Spontaneous commenting and requesting

(Frost & Bondy, 2002)

In phase 6, Adult 1 would ask, “What do you see?” and point to the picture ‘I want’ simultaneously. The student would place ‘I see’ on sentence strip (adult 2 may need to prompt this) and a picture. If student sequences the correct picture, Adult 1 would say ‘Yes you see a...’ and would give a small reward not related to neutral item. Next, Adult 1 would ask, “What do you see?” and would delay in pointing to the picture ‘I see’. Again, Adult 1 would ask, “What do you see?”, student independently would sequence- ‘I see’ & picture on the sentence strip and would give it to Adult 1. Adult 1 could further ask ‘What do you want?’ & ‘what do you see?’ and the student would respond appropriately to each question. The similar steps are repeated with other senses too.



Additional Communication Skills



- Request help
- Indicate “no” to Do you want?
- Indicate “yes” to Do you want?
- Request “Break”
- Respond to “Wait”
- Follow Functional Directions
- Responding to Transitional Cues
- Following a Visual Schedule

Things to Remember

- It's important that the child exchanges the picture
- Give small quantities of the motivator if it is food/drink
- Let the student have the toy/activity only for a short amount of time
- Alternate the communication partner/adult 1 so the child can communicate with a range of people
- Make sure that the picture has the written word at bottom
- Ensure that all the pictures are of same size
- Keep the communication book/board in the same place and where the student can access it

(Coles, (n.a))

References



References

Coles, H. (n.a). *The Picture Exchange Communication System (PECS)*. Camden Language and Communication Service.

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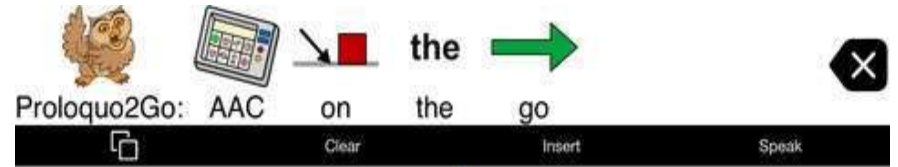
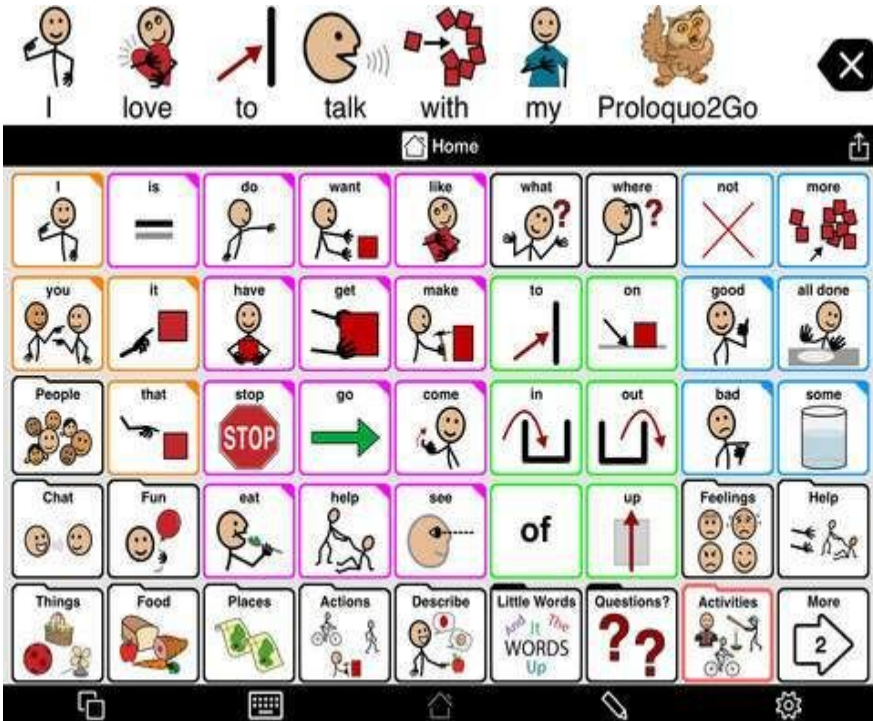
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Proloquo2Go

- Proloquo2Go is an AAC (Augmentative and Alternative Communication) app
- Used by people with autism, Down syndrome, cerebral palsy and other diagnoses.
- Symbol-supported communication app that provides a “voice” to those who cannot speak.
- Available in English, Spanish, French, and Dutch for iPad, iPhone, iPod touch and Apple Watch.

Visual Examples of Proloquo2Go





Tutorial and Testimony Video

[Tutorial Video](#)

[Student Using Proloquo2Go](#)



Proloquo2Go System

- Covers all users, from beginning to advanced communicators, while catering for a wide range of fine-motor, visual and cognitive skills.
- Has three complete research-based vocabularies, along with over 10,000 symbols, word prediction, and customizable vocabularies to meet the needs of individuals from beginning symbolic communication to full literacy.



Proloquo2Go Vocabulary Systems

- The three vocabularies of Proloquo2Go, Basic, Intermediate Core or Advanced Core help to create an efficient communication system.
- Core Word vocabularies
 - Allow for access to the most frequently used words in English and other vocabulary to allow for expression and vocabulary growth
- The Basic Communication
 - Designed for new communicators at the one and two word level to promote developmental progression in communication skills



Where to buy Proloquo2Go and cost?

- Proloquo2Go can be found on the iTunes App Store. Origin Instruments also offers a variety of Proloquo2Go packs for the iPad and iPad mini
- Proloquo2Go is \$249.99 on the iTunes App Store



Research

“When the iPad with Proloquo2Go was incorporated into classroom activities for a child who was nonverbal with ASD, the overall level of support required to perform an activity in the classroom decreased from no technology. These preliminary finding suggests that Proloquo2Go on the iPad can enhance academic occupational performance in adding voice output and a variety of response choices” (Collette, Brix, Brenna, DeRoma, & Muir, 2018).

Collette, D., Brix, A., Brennan, P., DeRoma, N., & Muir, B. C. (2018). Proloquo2Go Enhances Classroom Performance in Children With Autism Spectrum Disorder. OTJR: Occupation, Participation and Health. <https://doi.org/10.1177/1539449218799451>

“Using Proloquo2Go™ with some children with ASD and complex communication needs who are in early preverbal stages may be useful in enhancing tacting, manding, and verbal completion skills during ABA therapy, and using Proloquo2Go™ with children who are in later preverbal stages may be useful as a more accessible form of communication in addition to ASL” (Krcek, Eastin, 2015).

Krcek, Taylor Eastin, "EFFECTIVENESS OF PROLOQUO2GOTM IN ENHANCING COMMUNICATION IN CHILDREN WITH AUTISM DURING ABA THERAPY. " PhD diss., University of Tennessee, 2015. https://trace.tennessee.edu/utk_graddiss/3345



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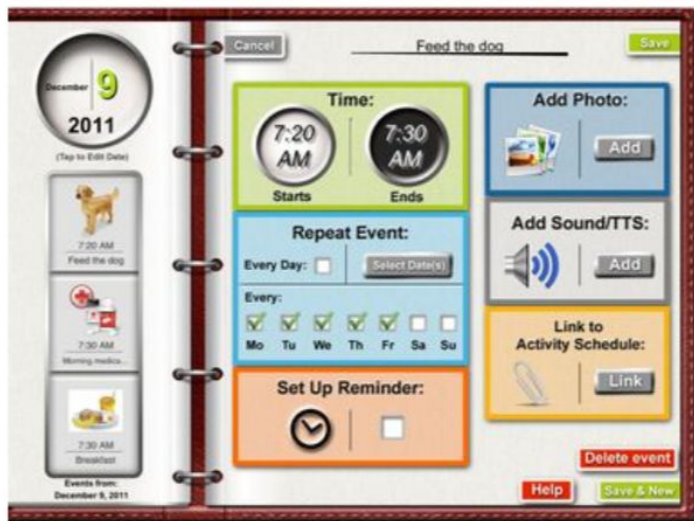
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Visual Schedule Planner

A calendar and schedule planning app for the iPhone and iPad.

Visually Appealing



Visual Schedule Planner, created by *Good Karma Applications*, is a calendar/schedule planner that is designed to work for people with autism spectrum disorders, developmental delays or communication deficits. The use of visual schedules is an evidence-based practice that has demonstrated its effectiveness in helping students with autism. It provides a way for people with challenges, and their caregivers, to plan out the important parts of their day in a user-friendly format with plenty of visual supports to ease anxiety and promote independence. (Spriggs, Gast & Ayres, 2007)

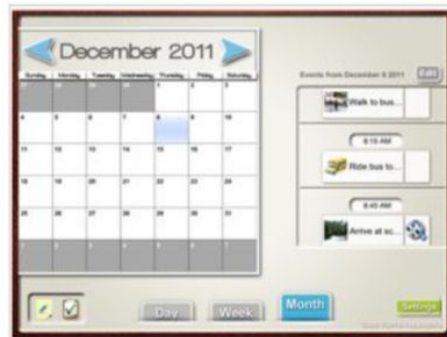
Daily



Weekly



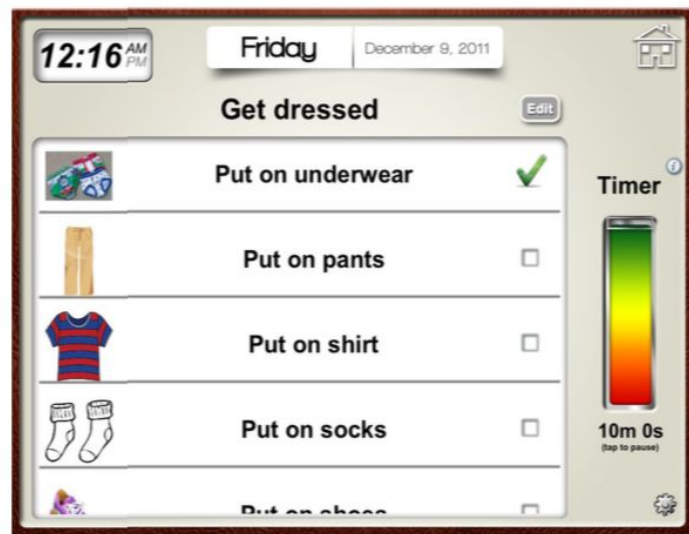
Monthly



Visual Schedule Planner allows users to view and create daily, weekly or monthly schedules. The application supports the use of custom images and sounds in order to personalize the program. Timers and reminders are easy to create in a drag and drop fashion. There are also parts of the program that allow for making checklists and a notepad function. Schedules can be printed for those that need a physical hard copy. Also, schedules can be saved to the Cloud to prevent them from being accidentally deleted.

Activity schedules can be easily created to target specific events or tasks within the daily schedule. If an individual is having difficulty with a particular task, the program can break the task down into smaller parts in order to make things easier to manage. There are currently over 1,500 images that can be assigned to tasks for those that benefit from the use of graphic representations. Over time an individual may be able to complete the task independently.

Activity Schedules



Video Modeling



The calendar in **Visual Schedule Planner** also supports Video Modeling. The use of Video Modeling is an evidence-based practice that has been shown to be beneficial to people with Autism Spectrum Disorder. Using the photo app on the iPhone or iPad, videos can easily be linked to important parts of the daily schedule. This allows the users to personalize their schedule with recognizable objects and people with whom they are familiar.



Frequently Asked Questions

Good Karma Applications provides a Frequently Asked Questions section of their website that gives step-by-step instructions on everything from how to create a schedule to how to add sounds to an image. The **Visual Schedule Planner** application is available on the Apple App Store for \$9.99 which makes it one of the more affordable communication tools for people with Autism Spectrum Disorder.

A version of the application for the Android platform will be available soon.

References

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