

Part 2:

Choosing an Augmentative or Alternative system: Prerequisite Skills & Assessment

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AutismONTARIO

TRACIE LINDBLAD



Speech-Language Pathologist

Masters of Education (Curriculum)

Board Certified Behavior Analyst (BCBA®)

Trained/Certified in:

- Assistive Devices Program (AAC)
- The Picture Exchange Communication System (PECS)
- Paediatric Feeding Disorders

Conflict of Interest

- Salaried employee of Autism Ontario
- Clinical Advisor for Linggo

Statements

Language

- Identity-first (e.g., autistic person)
- Person-first (e.g., person with autism)

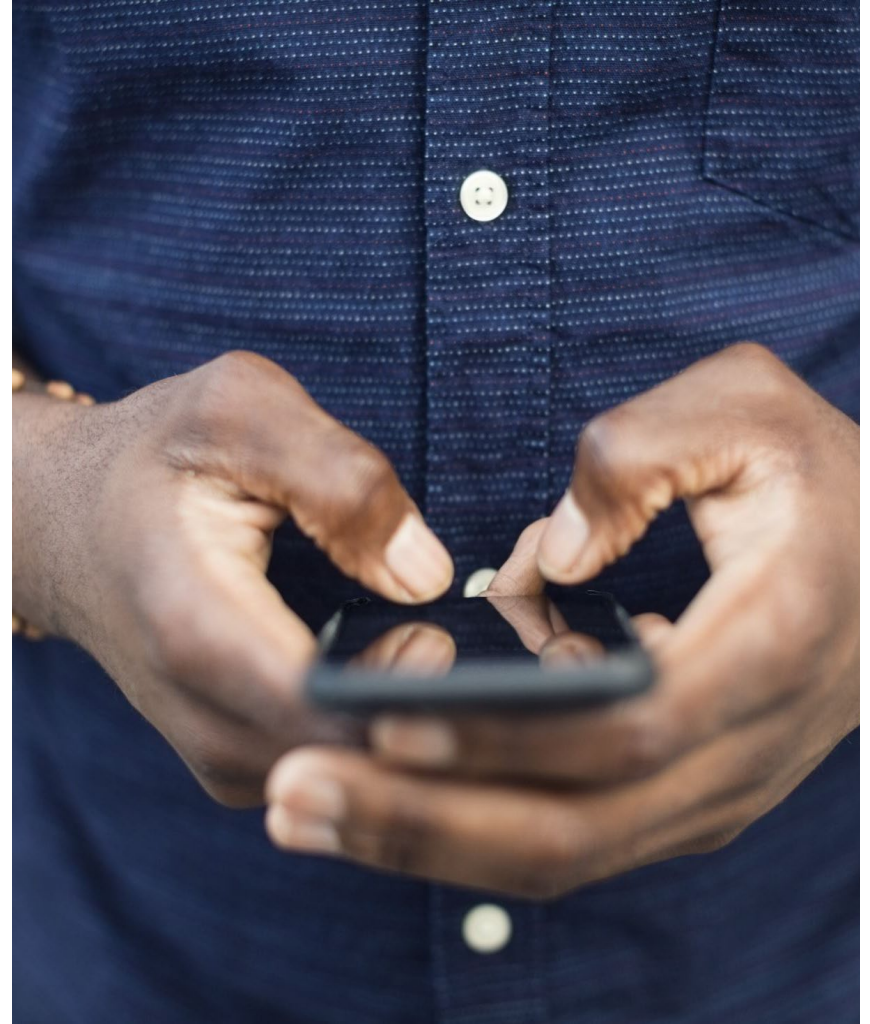
Use During the Presentation

- Both terms will be used interchangeably
- Respectful of all attendees and stakeholders – right to choose any label

Agenda

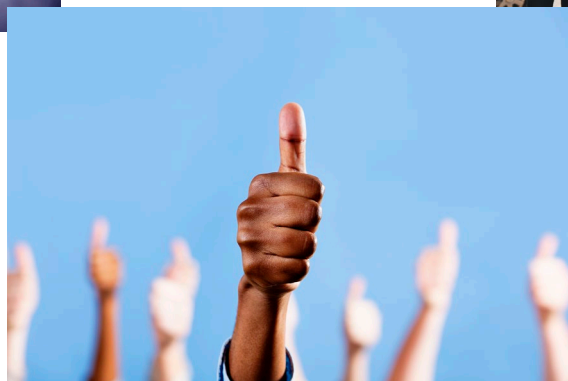
- Brief Review of AAC
- Pros and Cons of different AAC systems
- Skills required or needed for each system
- Assessment in AAC
- Resources and Supports

What is AAC?



What is AAC?

AAC is called 'augmentative' when used to supplement, add to, or clarify speech



What is AAC?

AAC is called 'alternative' when used in place of speech



Who would benefit from AAC?

- Approximately **25%-50% of individuals** with autism spectrum disorders (ASDs) remain minimally verbal throughout their lives, with **little or no functional speech**

([Rose et al., 2016](#), [Brignell et al., 2018](#))

Types of AAC – Unaided Systems

- Unaided systems do not require any tools or materials
 - Gestures
 - Vocalizations
 - Touch
 - Body Language
 - Facial Expressions
- Formal unaided systems
 - [American Sign Language](#)
 - [Fingerspelling](#)
 - Sign Languages (Sign English, Signed English, [Signed Exact English](#) I and II, Key-Word Signing, [Makaton signs](#), [British Sign Language](#), etc.)

Types of AAC – Aided Systems



Picture Exchange
Communication System (PECS)



Flip'n Talk
Communication System

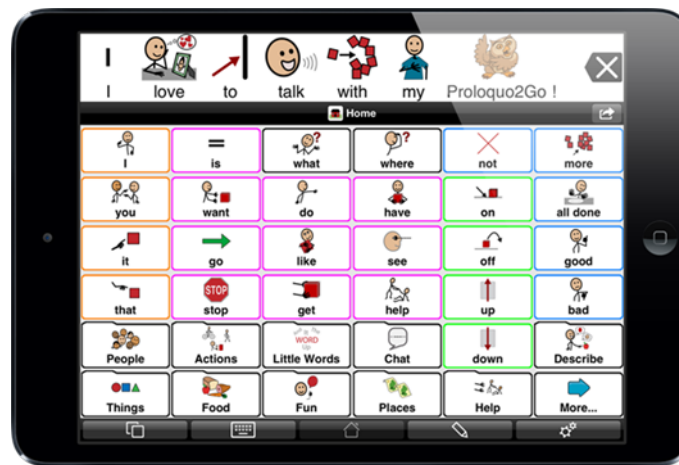
Types of AAC – Aided Systems



LAMP Words For Life



Linggo



Proloquo2Go

Which AAC System is Best?

The primary goal of the field of AAC is supporting the **communication** and **participation** of individuals with **complex communication needs**

– ([McNaughton and Light, 2015](#))

What does the research say?

- AAC intervention alone may **not** help speech develop for individuals with limited speech imitation skills
([Gevarter et al, 2013](#); [Schlosser and Wendt, 2008](#))
- For those with limited speech imitation skills, the addition of intervention components that target speech sound development may be necessary to see speech gains
([Brady et al., 2015](#); [Gevarter et al, 2016](#))
- **Behavioural methods** such as differential reinforcement, reinforcer delay, and speech imitation prompting **may be required** to maintain previous speech and/or increase speech during Speech Generating Device use
([Gevarter et al, 2016](#))

What does the research say?

AAC will not hinder speech development

- Not exactly
- But it does not guarantee that speech will develop either

Children don't need to match pictures or receptively identify pictures before using AAC

- But a learner needs to have good visual skills
- There is some benefit to having good matching & comprehension skills so that your child can focus on learning a new communication system

Children do not have to start with low-tech systems before SGD.

- A good question to ask yourself is, "Why would you not want to consider a student's current skills when evaluating appropriate AAC systems support?"

There are no cognitive or behavioral pre-requisites to SGD use

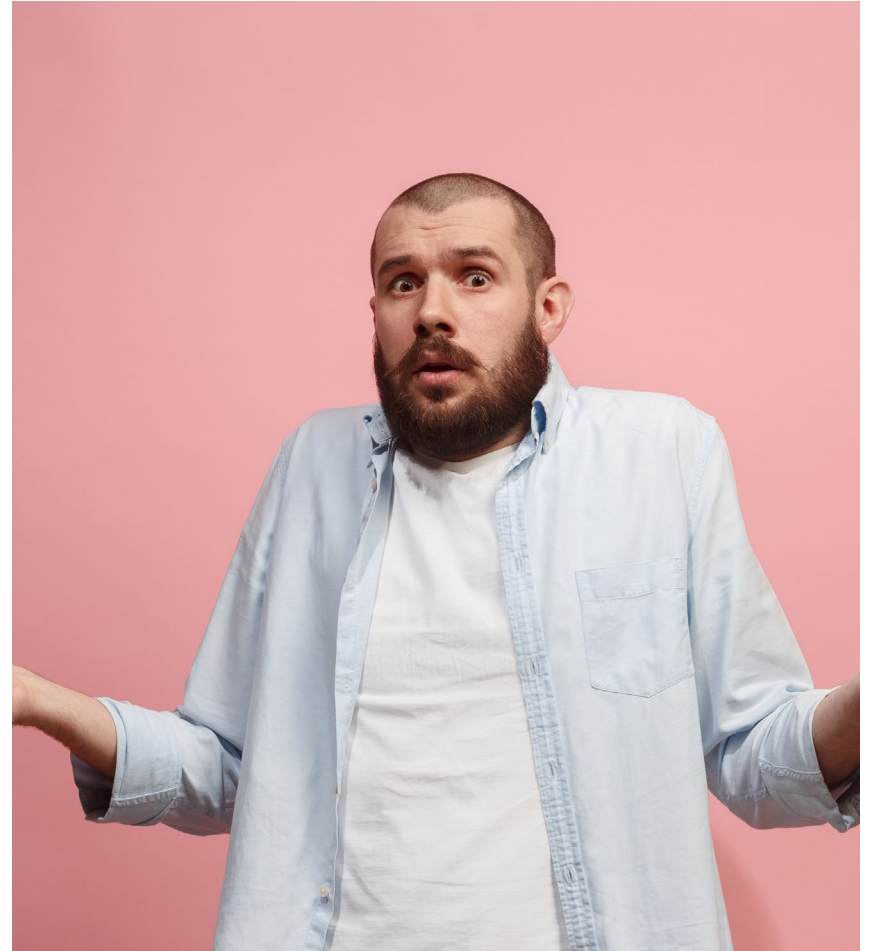
- There is no research that supports *no pre-requisite skills for high tech AAC* – there was no tech when the field of AAC started

What does the research say?

- [Lorah et al. \(2015\)](#) underscore the point that,

“the research is not about “iPads® as SGDs” but rather [it] is about the combination of hardware, software, and training protocols. All three must work together to provide support for the individuals...”

**Which AAC
system is best?**



Pros & Cons of AAC Systems

System	Equipment Needed	Basic Skills Required	Training Needed	Ease of Use
Sign Language	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • Fine motor skills • Motor imitation skills 	Yes	Difficult
PECS	<ul style="list-style-type: none"> • Binder • Picture cards • Velcro • Laminate 	<ul style="list-style-type: none"> • Hand and arm skills (holding, grasping, reaching, placing) • Visual skills 	Yes	Easy
Picture-based pointing	<ul style="list-style-type: none"> • Picture cards • Laminate • Board or binder 	<ul style="list-style-type: none"> • Pointing skills • Imitation skills • Visual skills 	Yes	Easy to Moderate
Speech Generating Devices	<ul style="list-style-type: none"> • Hardware (e.g., tablet) • Software • Accessories 	<ul style="list-style-type: none"> • Fine motor skills • Imitation skills • Visual skills • Listening skills 	Yes	Easy to Moderate

Pros & Cons of AAC Systems

System	Durability	Portability	Features	Expense / Other
Sign Language	<ul style="list-style-type: none"> Excellent 	<ul style="list-style-type: none"> Excellent Limited 'audience' 	<ul style="list-style-type: none"> No voice output Different types of sign 	<ul style="list-style-type: none"> Classes for teaching (some free online)
PECS	<ul style="list-style-type: none"> Very Good 	<ul style="list-style-type: none"> Good 	<ul style="list-style-type: none"> Can use photos Different languages 	<ul style="list-style-type: none"> Training can be expensive Printing and laminating of pictures
Picture-based pointing	<ul style="list-style-type: none"> Very good 	<ul style="list-style-type: none"> Fair 	<ul style="list-style-type: none"> Can use photos Different languages 	<ul style="list-style-type: none"> Difficult to limit repetitive pointing (stimming)
Speech Generating Devices	<ul style="list-style-type: none"> Fair 	<ul style="list-style-type: none"> Good 	<ul style="list-style-type: none"> Great customization Voice output 	<ul style="list-style-type: none"> Expensive Charging Voice Output

**What skills are
required, or
additional skills
which may be
needed, for specific
AAC systems?**



Sign Language

- N/A

Access

Selection Skills

- gross and fine motor skills – to produce the signs
- fine motor imitation skills

Delay to the Item or Activity

Other Skills

- N/A

- understanding what each sign means and be able to identify one sign from another – taught specifically

PECS

- turn pages in a binder
- carry the binder

Access

Selection Skills

- gross and fine motor skills
- motor accuracy for increasing numbers of pictures (which are smaller in size)

Delay to
the Item
or
Activity

Other Skills

- immediately getting the item is often difficult due to the time to complete the picture selection, exchange to the 'listener', and 'read' the strip

- understanding what pictures 'mean' and be able to identify one picture from another – *taught specifically in PECS*

Picture-based Systems

- turn pages in a book or binder
- carry the system

Access

Selection Skills

- gross and fine motor skills
- motor accuracy for increasing numbers of pictures (which are smaller in size)

Delay to
Get the
Item or
Activity

- immediately getting the item is often difficult due to time to complete the picture selection and have the 'listener' attend to the message

Other Skills

- understanding what pictures 'mean' and be able to identify one picture from another
- social initiation

Speech Generating Devices

- gross and fine motor skills
- need to be able to access the app (locate the program)
- swipe up/down
- turn on/off the device
- charge the device

Access

- gross and fine motor skills for accurate pointing
- accuracy for selecting with increasing numbers of pictures (which are smaller in size)

Selection Skills

Delay to
Get the
Item or
Activity

- immediately getting the item is often difficult due to speech output delays embedded within the app/device

Other Skills

- understanding what pictures 'mean'
- be able to identify one picture from another
- listening skills
- social initiation

What is an AAC Assessment?

Assessment for AAC

What are the steps in a good AAC assessment?

Determine the child's level of abilities in language, learning, motor, and sensory skills

Observe the child with various people and across places and settings

Involve the child, parents, caregivers, instructors, and/or others (e.g., SLP, BCBA, OT) for their goals and cultural or family needs

Complete a dynamic assessment - assesses the level of teaching / prompting needed and the type of materials required for learning

Conduct a 'feature matching' exercise to determine the top two or three systems (hardware & software, apps)

Trial each system to determine which is a good 'fit' and/or which the child prefers (or dislikes)

Assessment for AAC

Other Considerations:





- When should you consider starting at low- tech or going straight to high-tech?
 - Some research recommends completing up to Phase III of PECS and then transitioning to an SGD
- Are all people and places ‘on the same page’?

Compare Systems

AAC Comparison Chart

AAC Comparison Chart

<http://www.aactechconnect.com>

Name	Go Talk Now	ProLoQuo2Go	Sono Flex	Touch Chat
				
Price	\$79.99	\$189.99	\$99.99	\$149.99/\$299.99
Preview	http://itunes.apple.com/us/app/gotalk-now/id454176457?mt=8	http://itunes.apple.com/us/app/proloquo2go/id308368164?mt=8	http://itunes.apple.com/us/app/sono-flex/id463697022?mt=8	http://itunes.apple.com/us/app/touchchat-aac-with-wordpower/id429344385?mt=8
Mobile Technology Options	iOS version 4.0 or later Version 1.1.0	iPod Touch iPad iPhone... iOS 4.2 or later Version 1.7.2.	iPod Touch iPad iPhone... Android iOS 4.0 or later Version 1.0.2	iPod Touch iPad iPhone... iOS 4.0 or later Version 1.1.2
Symbol Options	Pictures only (digital or icons) Words only Pictures with labels Digital photos Videos included	Alphabet for spelling Words only Pictures with labels Digital photos	Alphabet for spelling Pictures with labels	Pictures only (digital or icons) Alphabet for spelling Words only Pictures with labels Digital photos

Many different AAC devices to choose from

- Different apps
- Different platforms / hardware
 - The 'i' Family → iPod, iPhone, iPad, iPad mini
 - Android tablets
 - Windows tablets
 - Standalone devices
- Assessment and a trial is always recommended prior to purchasing

Feature Matching

What does Feature Matching mean?

The feature matching process aims to achieve two main goals:

1. to use the skills and needs of the communicator and his/her family to identify key features needed in an AAC system
2. to match the key features identified to the materials and technology currently available commercially

Feature Matching

Feature Matching Template

- For ease of comparison of multiple speech generating devices to determine 'best fit'

[SGD Setup - Features Matrix template](#)

**How can I
access AAC
services,
supports, and
funding?**



Accessing AAC Services, Supports, & Funding



Assessments

- [AAC Clinics in Ontario](#)

Professionals

- [OAP Provider List](#)
- [Speech-Language Pathologists](#)
- [Board Certified Behavior Analysts](#)

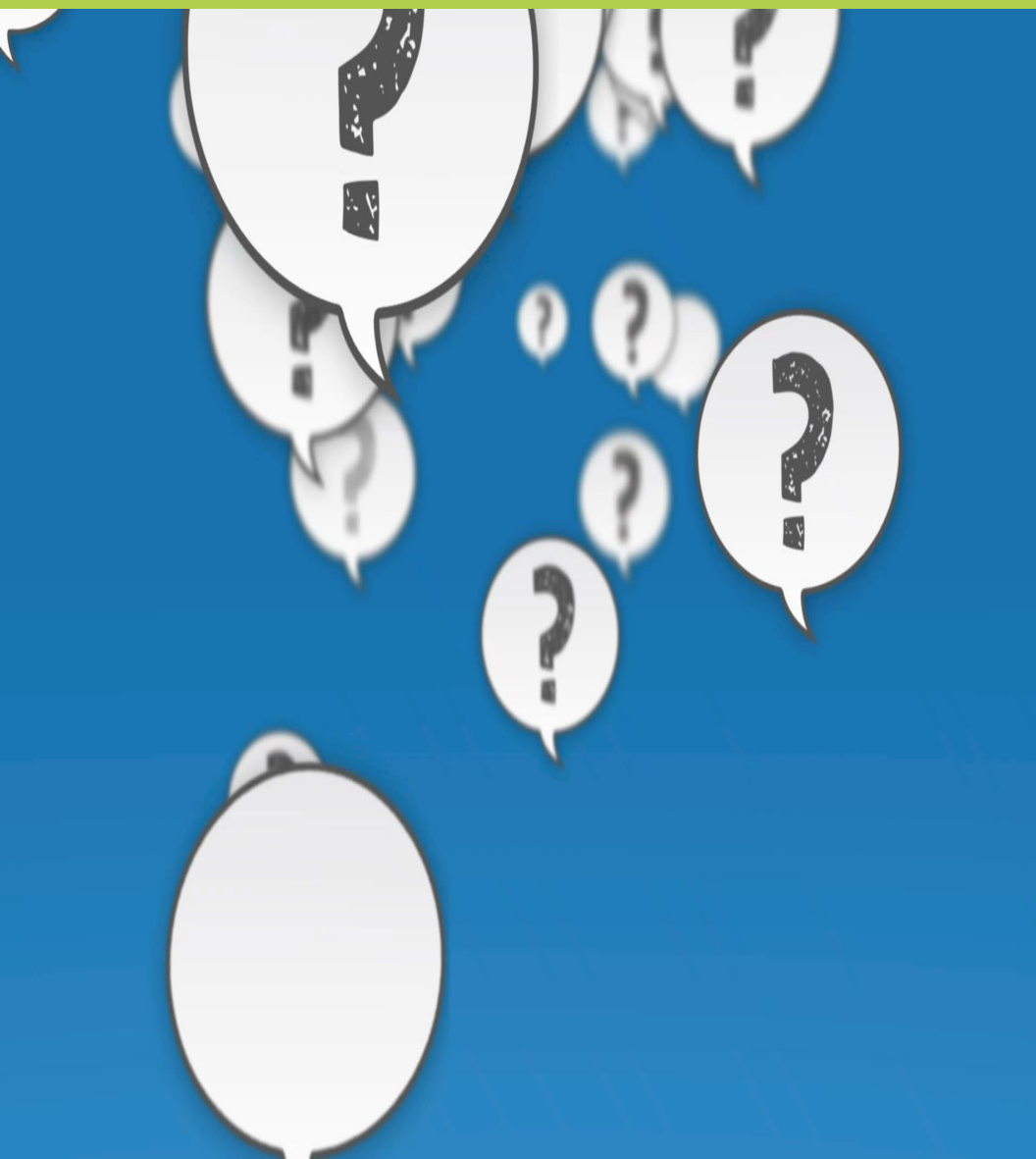
Accessing AAC Services, Supports, & Funding



Funding

- [Assistive Devices Program \(ADP\)](#) – communication aids
- Ontario Autism Program (OAP)
 - [Interim One Time Funding](#)
 - [Core Clinical Services](#) (with a prescription letter)
- Education – [Specialized Equipment Amount \(SEA\) claim](#)

Questions?



Upcoming Sessions:

Part 3: Goal Setting

- Feb. 8th - 12:30pm – 1 pm

Part 4: Introducing and Teaching

- Feb. 22nd – 12:30pm – 1 pm

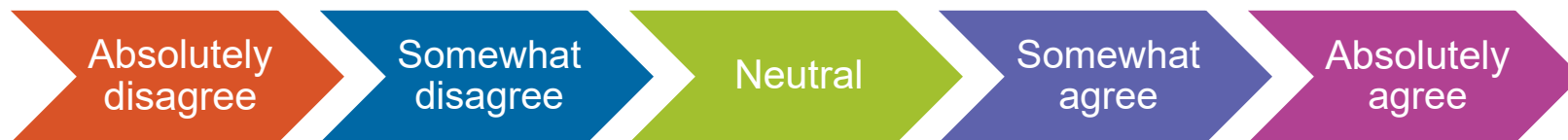
Part 5: Problem Solving and Generalization

- March 9th – 12:30pm – 1 pm

Part 1 & 2 available on demand.

Feedback Survey

- Please answer each question in the survey
- The questions include items with:
 - A Likert scale (i.e., a 5-point scale with a range of responses)



- Selecting only one answer (single answer)
- Selecting all answers that might apply (multiple selections)
- Text boxes where you type your answer

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[https://doi.org/10.1044/1058-0360\(2008/021\)](https://doi.org/10.1044/1058-0360(2008/021))

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