

AAC 101

The Basics

The greatest compliment that was ever
paid me was when someone asked me
what I thought, and attended to my
answer.

- Henry David Thoreau

TODAY

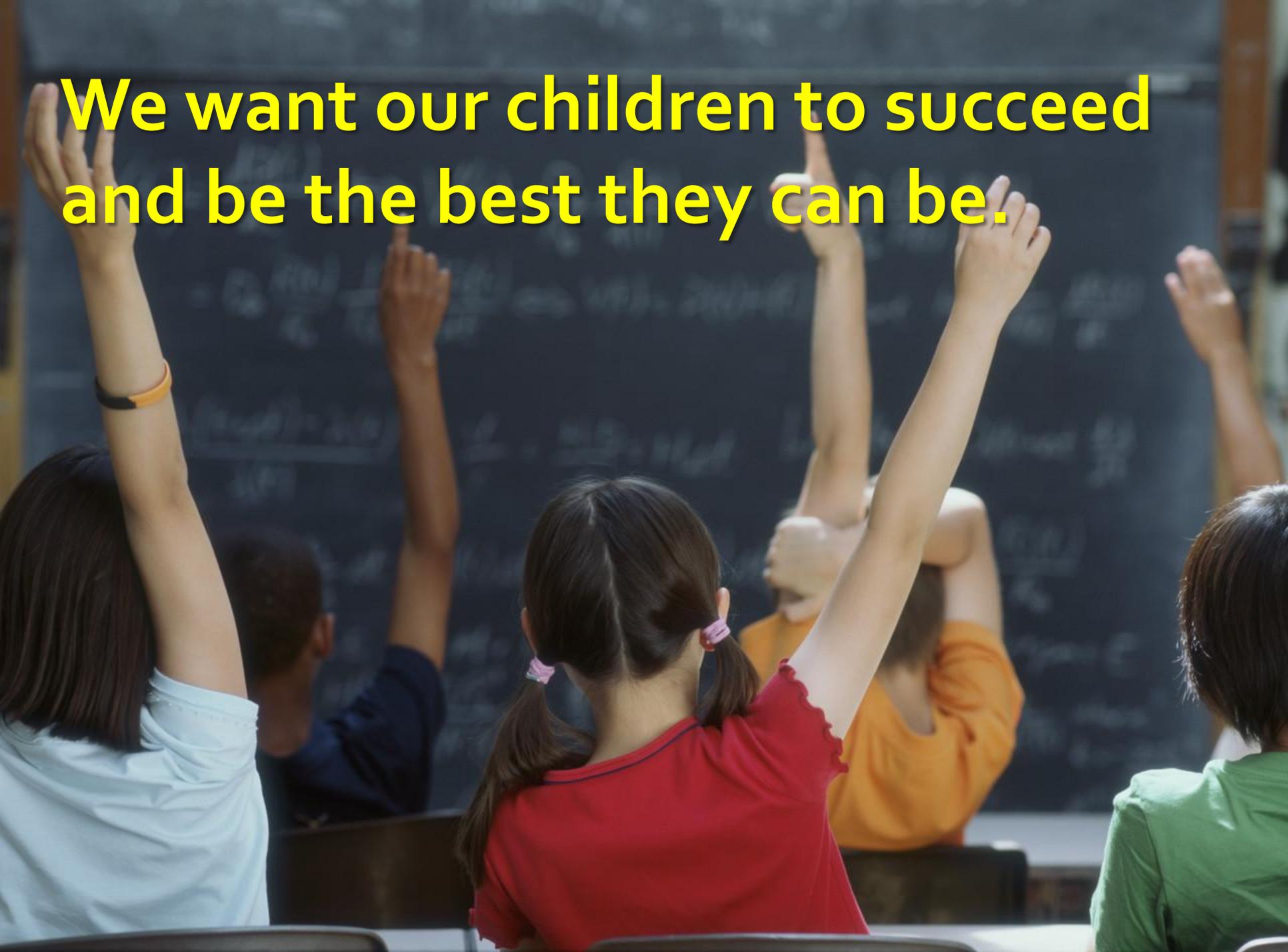
- Communication
- Assistive Technology
- Augmentative and Alternative Communication



Communication

What it is ALL about!

**We want our children to succeed
and be the best they can be.**





Functional and Effective Communication is essential to every part of life!

Vision

**Making effective communication,
a human right, accessible and
achievable for all**

ASHA, 2009

How is communication important to education?

- Speech and language skills are essential to academic success and learning.
- Language is the basis of communication
- Reading, writing, gesturing, listening, and speaking are all forms of language.
- Learning takes place through the process of communication
- The ability to communicate with peers and adults in the educational setting is essential for a student to succeed in school.

VanTatenhove

**You have to learn to
communicate before you
can communicate to learn.**

Definition

Communication is the **process** of using **a shared medium** to share our ideas, thoughts, and feelings with other people and having those ideas, thoughts, and feelings understood by the people we are talking with.

Communication

Communication requires that all parties have an area of *communicative commonality*.

There are **auditory** means, such as speaking, singing and sometimes tone of voice, and **nonverbal**, physical means, such as body language, sign language, paralanguage, touch, eye contact, or the use of writing.

Communication

A good working definition for *effective communication* is to **share meaning and understanding** between the person sending the message and the person receiving the message.

Communication is a **two-way process**. The information goes out to a person on the other end. There is a sender and a receiver.





**Is communication
a simple skill?**

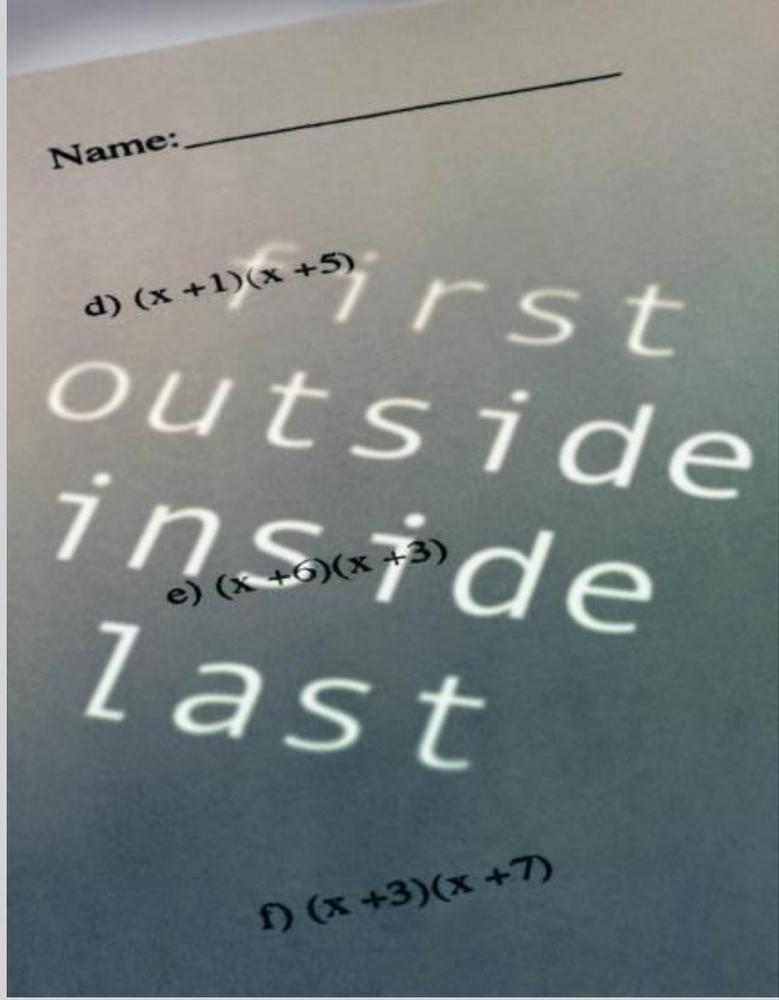


Communicating is not an isolated series of one skill, **it involves several skills.**

Speaking involves not only getting your message across but also being able to **listen** and understand what others are saying (active listening) and **observing** the verbal and nonverbal clues in order to **monitor** the effectiveness of your message.

?

How much
communication is
through our words
alone?



- Verbal communication is only 10 to 30 percent of the message.
- Nonverbal communication is 70 to 90 percent of the sent/ received message.



**Does a speech/
language
disorder really
affect my
student at
school?**



How learning is affected

Children with communication disorders **frequently do not perform at grade level.** They may struggle with reading, have difficulty understanding and expressing language, misunderstand social cues, avoid attending school, show poor judgment, and have difficulty with tests.

How learning is affected

Difficulty in learning to **listen, speak, read, or write** can result from problems in language development.

Problems can occur in the production, comprehension, and awareness of language sounds, syllables, words, sentences, and conversation.

Individuals with reading and writing problems also may have trouble using language to communicate, think, and learn.

Language Disorder

- When a person has trouble understanding others (*receptive language*), or sharing thoughts, ideas, and feelings completely (*expressive language*), then he or she has a *language disorder*.

Speech Disorder

- When a person is unable to produce speech sounds correctly or fluently, or has problems with his or her voice, then he or she has a *speech disorder*.

Pragmatics

- **Using language** to greet, inform, demand, promise, or request (different communication functions)
- **Changing language** depending on the needs of a listener or situation (code switching)
- **Following rules for conversation and storytelling**
 - Taking turns, staying on topic, rephrasing, personal space
 - Using verbal and nonverbal signs, facial expressions and eye contact

Present Ways of Communication

1. Oral Speech
2. Symbolic Representation (symbols, text)
3. Reading & Writing Ability
4. Non-Oral Communication
5. Communication Effectiveness
6. Communication Partners
7. Communication Settings
8. Message Needs
 1. Functional
 2. Social
 3. Informational – Sharing – Conversation
 4. Developmental & Educational/Vocational Needs

Communication Development

Things to Think about...



Communication Development

Age

Typical Development

Birth-3 Months

- Makes pleasure sounds (cooing, gooing).
- Cries differently for different needs.
- Smiles when sees you.
- Pre-intentional communication (perlocutionary stage, prelingual, Potential communicative acts, Nonsymbolic behavior, Prelanguage, Preverbal, Prelinguistic) – **The caregiver assigns meaning to the child's behaviors – for example, a father interprets a baby's cry as wanting to be held – interpretation makes the cry communicative**

4-6 Months

- Babbling sounds more speech-like with many different sounds, including p, b and m.
- Vocalizes excitement and displeasure.
- Makes gurgling sounds when left alone and when playing with you.
- **Continued perlocutionary** stage development

Development Continued

Age	Typical Development
Eight-nine months	<p>• <u>Intentional but not yet symbolic communication (illocutionary stage/continued prelingual)</u> - Children begin using signals to deliberately communicate with others</p> <p>Three main purposes:</p> <p><u>Behavior regulation</u> (protest by vocalizing loudly when her mother puts her to bed)</p> <p><u>Social interaction</u> (wants a hug and reaches hands up as father goes by)</p> <p><u>Joint attention</u> (looks back and forth between parent and dog is approaching)</p>
9 months - 1 Year	<ul style="list-style-type: none">• Babbling has both long and short groups of sounds such as "tata upup bibibibi."• Uses speech or non-crying sounds to get and keep attention.• Imitates different speech sounds.• Has 1 or 2 words (bye-bye, dada, mama) although they may not be clear.

Development Continued

Age

Typical Development

13 months

- The transition to the intentional and symbolic **locutionary with communicating intentionally with referential words or signals (communication pictures/signs)**

 Words are mapped onto preverbal intentions; the transition to using words referentially is a gradual one

 The capacity to symbolize or make one thing represent something else involves a complex interplay of emerging abilities between cognitive and language maps.

Linguistic behavior – as a child's first word production with word defined as a spontaneously produced form that is phonetically consistent and used to convey a consistent meaning

- First words are symbolic yet not fully linguistic
- The period corresponding to a child's development of a first lexicon of approximately 50 different word productions the transition from prelinguistic to linguistic communication

Assistive Technology

(I thought you were going to talk about AAC)



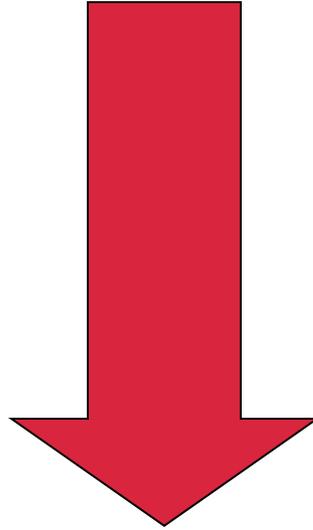
- Assistive technology is one of the services which can be provided in a special education program under the Individuals with Disabilities Education Act (IDEA).
- The requirements of IDEA say that students who need assistive technology are entitled to the aids and devices and the assistive technology services that are necessary for the student to benefit from a free, appropriate public education.

AT Continued

- Some examples of AT devices are: manual and motorized wheelchairs, augmentative communication devices, reaching and grabbing aids, ramps, lifts, grab bars and adapted vehicles.
- Assistive technology enables people with disabilities to participate fully in every aspect of life – at school and work, at home, and in the community.



**Assistive Technology
Umbrella**



**Augmentative Communication
Continuum**

AAC is AT:

Any **item, service** or **strategy** that an individual with disabilities uses to help them be more successful or more independent at work, at home, at school, or in the community.

AAC

**Augmentative and Alternative
Communication**
for Individuals with
Complex Communication Needs

When does a child need AAC?

1. To augment natural speech production
2. Provide a means for communication when other means are not available or diminished.
3. To promote speech/language development
4. To address written communication or text needs when handwriting is impaired

When does a child need AAC?

- ⦿ A child whose speech is not developing within the realm of what is considered normal, or is not likely to develop normal speech due to a pre-existing condition, is a potential candidate for AAC.
- ⦿ Even when it is unclear whether or not a child will eventually develop normal speech, and this is frequently the case, the child may still benefit from AAC.

Recent research has supported that the use of augmentative communication encourages natural speech production.

In some instances, augmentative communication devices serve as an effective interim communication strategy as the child develops more effective natural communication.

- **AAC** is *a means to enhance overall communicative effectiveness*
- **Natural communication** will **always be encouraged** and will remain an integral aspect of the total communication (multimodal) approach

ASHA, 1989

Why is this important?

**30 – 50% of
children with
ASD will
remain
NONVERBAL**



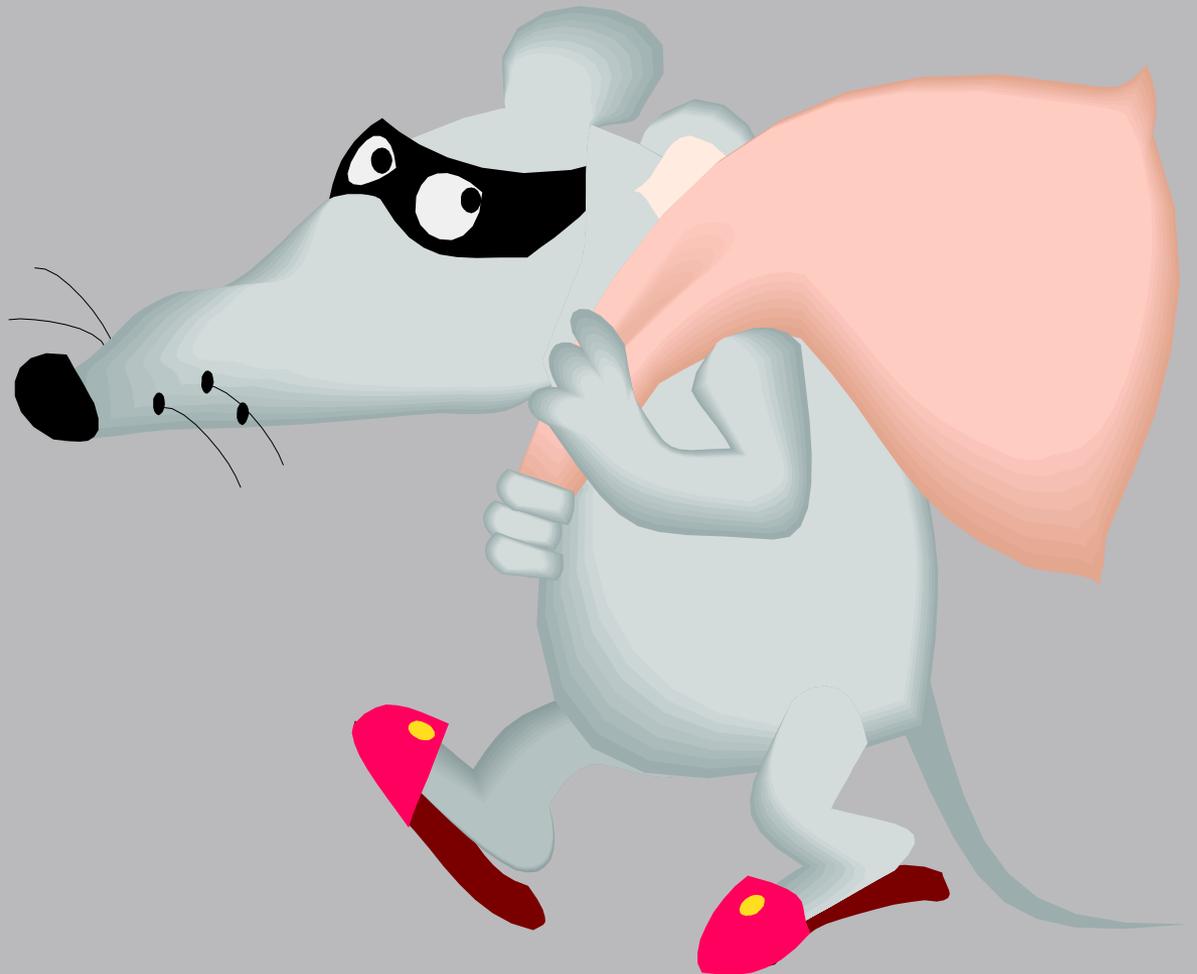
Myths about AAC

- AAC is a 'last resort' in speech language intervention
- AAC hinders or stops further speech development
- Children must have a certain set of skills to be able to benefit from AAC

Myths about AAC

- Speech-generating AAC devices are only for children with intact cognition
- Children have to be a certain age to be able to benefit from AAC

No piece of equipment in an of itself eliminated delay in language development.



What are the Prerequisites for Using AAC?

NONE

!

- AAC intervention is the **process** of enhancing and optimizing daily functional communication across all communicative contexts.
- This process **takes time**, as well as hours of work by the augmented communicator and the team of stakeholders providing and supporting the needed intervention and follow-up activities and services.

- Developing or re-developing functional communication skills involves the use of **multi-modal communication strategies**, based on each individual.
- That is, an augmented communicator may learn to communicate using **varied approaches** including speech, communication boards, signs, gestures and high-tech devices.

Details, details, details

Coming to understanding the 'terms' of AAC

Range of AAC



Augmentative communication includes a *wide range of "technology"* from no-tech options such as use of manual sign language to high-tech complex, computerized speech generating communication devices.

Range

- ⦿ AAC **unaided** and **aided** range of technology used as an AAC intervention. (HILL)

Description of Interventions	Unaided	Aided		
	No-Tech	Low Tech (no power)	Light Tech	High Tech
Vocalization		Picture Exchange	Light pointer	Dedicated and non-dedicated
Gestures		Symbol/Alphabet board	Voice output switches	
Signs		Communication notebook	Simple powered displays	Electronic computer-based voice output systems
Eye Blinks		Headstick		

FEATURES



AAC Device Features

Generally, the selection of the "*most appropriate*" communication system is a **process of matching the abilities and needs of the user to the "features" of the AAC device**. That is the meaning of providing the 'best fit'.

The following features of the AAC device or system should be considered:

- Communication potential
- Access options
- Symbol system(s)
- Display
- Device Output
- Portability
- Compatibility
- Dedicated or computer-based
- Durability and support
- Cost

Displays

- **Static** – does not change (you do the work)
- **Dynamic display** -
 - There are several methods for "navigating" through a the vocabulary available through a dynamic display.
 - The display changes as different items are activated

Three basic methods are used to represent language in AAC systems.

- **single meaning pictures** - each picture means one word.
- **alphabet-based systems** - spelling, word prediction, and letter codes
- **semantic compaction** - based on multi-meaning icons

Romich, Vanderheiden & Hill, 2000

Vocabulary



Core and Fringe Vocabulary

# of Core Words	% of Total Words Communicated
50	40 – 50%
100	60%
200	70%
400	80%

Core Vocabulary

Preschool Non Disabled Children Vocabulary

- <http://aac.unl.edu/VLN/ONAACCU2.html>

Dolch Word lists

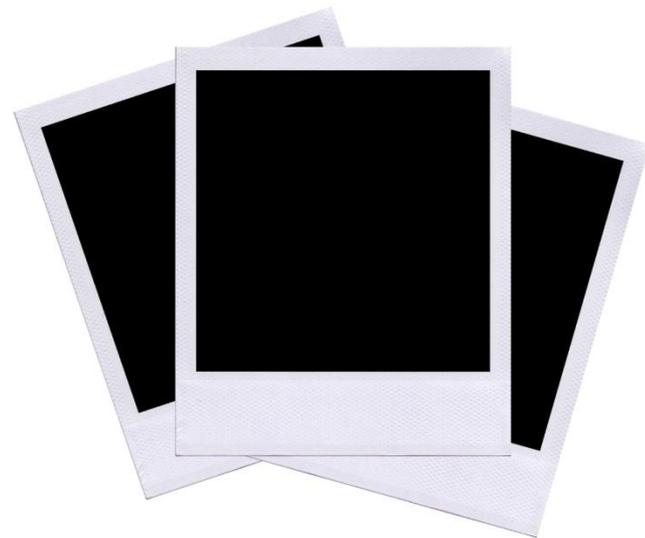
- <http://www.kidzone.ws/dolch/index.htm>

Toddlers' Vocabulary Arranged by Frequency

REFERENCE: Banajee, M., Dicarolo, C., & Stricklin, S. B. (2003). Core vocabulary determination for toddlers. *Augmentative and Alternative Communication*, 19, 67-73.

The core words on this list comprise 96.3% of the total words used by toddlers in the study conducted by Banajee, Dicarolo, and Stricklin.

	Words	Percentage
1.	I	9.5
2.	no	8.5
3.	yes/yeah	7.6
4.	the	5.2
5.	want	5.0
6.	is	4.9
7.	it	4.9
8.	that	4.9
9.	a	4.6
10.	go	4.4
11.	my	3.8
12.	mine	3.8
13.	you	3.2
14.	what	3.1
15.	on	2.8
16.	in	2.7
17.	here	2.7
18.	more	2.6
19.	out	2.4
20.	off	2.3
21.	some	2.3
22.	help	2.1
23.	all done/finished	1.0
	TOTAL	96.3%



Fewer than 5 percent of all words used by toddlers are picture producers

Banjee, Dicarlo & Stricklin, AAC, 2003

Fringe Example



■ Cookies –

- <http://www.youtube.com/watch?v=E8aprCNnecU>
- I like **you** when **you** give **me** cookies. **Yeah**. **No**. Because I like **you**, only like **you** get cookies for **me**. **Yeah**, I love **you** too, but I don't like **you** all **the time**. –
- 16/36 – 44%

To CONSIDER!



Communicative Functions and Means

Considerations

- Can child **intentionally** communicate?
- Can child use different means of communications?

Communication Skill Development

Communication should be taught:

- In a natural environment
- With a focus on the learner
- To promote communication in a functional way

To be successful, any technique needs to include a

- caring atmosphere,
- multi-modality communication and
- multicomponent communication and
- encourage the closeness and worth of the individual
- Readiness to learn
- Joint attention/ shared focus
- Auditory signals
- Child Centered Activities – Parent guided
- Natural consequences
- Consistent motor planning
- Core vocabulary

Strategies

- Time delay
- Sabotage
- Out of reach
- Inadequate portions
- Choice making

AAC services

an extension of U of L WCEC AAC clinic

Giving everyone the opportunity to communication



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<https://sites.google.com/site/aacatuofl/home>

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Upcoming Events:

KATC Webinar

- May 3rd
- 12 to 1 PM

Click the link to join

<http://louisville.edu/education/kyaut/-registration-form>

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Join us for a Webinar on May 18

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Louisville AAC Providers

Augmentative and Alternative Communication

Augmentative and Alternative Communication (AAC) systems help individuals who have significant difficulties using spoken words or written text to communicate successfully. These systems can be used on a short or long term basis depending on the needs of the individual.

There are many reasons people may have difficulty speaking and/or writing. These include developmental delays such as cerebral palsy, autism, mental retardation, and childhood apraxia of speech, as well as acquired disorders such as traumatic brain injury, and/ or multiple sclerosis.

An estimated two million Americans, 1.3% of the population, have a communication impairment to the extent that they are unable to use speech and/or handwriting to meet their daily communication needs. These individuals require the services of a speech-language pathologist who specializes in AAC.

WIKI page

<http://aac123.wikispaces.com/>

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AAC123

The purpose of this WIKI is to provide active information regarding AAC. The page links on the left give updated sites regarding apps, vendors, therapy supports as well as general webpages about AAC. If you are interested, information about the University of Louisville's AAC Clinic is also included.



Please feel free to comment, add to or just enjoy this site.

This list is not exhaustive and inclusion does not imply endorsement of the organization or the context of the Web site by ASHA.

- [AAC Institute](#)
- [International Society for Augmentative and Alternative Communication](#)
- [Rehabilitation Engineering and Assistive Technology Society of North America](#)
- [Rehabilitation Engineering Research Center on Communication Enhancement](#)
- [State Assistive Technology Programs](#)
- **See Also:**
- [AAC: Information for AAC Users](#)
- [AAC: Benefits of Speech-Language Pathology Services](#)
- [Augmentative Communication: A Glossary](#)
- [AAC: More Than Three Decades of Growth and Development](#)
- [Augmentative and Alternative Communication Decisions](#)