

NCSC Communication Tool Kit

Module 4

Selecting AAC

Judith L. Page, PhD, CCC-SLP
Jane O'Regan Kleinert, PhD, CCC-SLP
Jacqui Kearns, EdD
Lou-Ann Land, MEd
McKenzie Calhoun, BHS
Katie Rush, BHS

Produced by:

University of Kentucky,

in partnership with the National Center State Collaborative (NCSC)

The contents of this product were developed under a grant from the Department of Education (PR/Award #:H373X100002, Project Officer, Susan.Welgert@Ed.gov). However, the contents do not necessarily represent the policy of the Department of Education and no assumption of endorsement by the Federal government should be made.



National Center and State Collaborative

Welcome to the NCSC Communication Tool Kit module 4 selecting AAC.

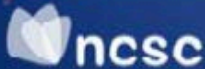
Module 4- Selecting AAC



In this module, we discuss the selection and use of Augmentative and Alternative Communication systems or AAC. This is module number 4 in the communication tool kit series.

Module Outcomes

- What Is AAC?
- Why do we use AAC?
- Who is a candidate for AAC?
- What does AAC look like?
- How do we use AAC?

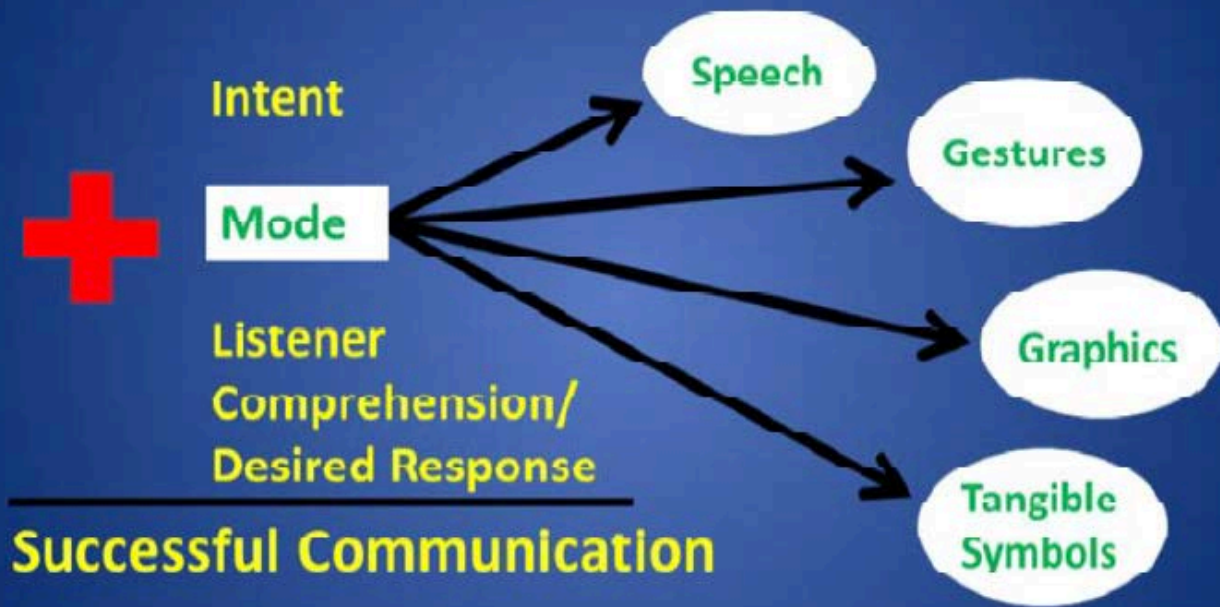


National Center and State Collaborative

3

Provision of augmentative and alternative communication is a vital element in the development of communication competence for students with significant disabilities. In this module we will present an overview of AAC by providing a definition of AAC, explaining why AAC may be selected to support a given student's communication and discussing the characteristics of individuals who are candidates for the use of AAC. Following this foundational information, we will familiarize you with some of the various forms of AAC and finally demonstrate how AAC can be used with students with significant disabilities.

Defining Communication



National Center and State Collaborative

In order to define AAC, we must first revisit our definition of communication, which was discussed in earlier modules. As you will recall, successful communication requires an intent or reason to communicate, a *mode or form* to express the intent, and a listener who understands and provides the desired response. In this module we will focus on the *communication mode*. There are many, many modes or ways to express oneself. Although most individuals use oral speech, we can also communicate with gestures, graphics or even tangible symbols.

Alternatives to Speech



National Center and State Collaborative

5

There are a number of students for whom speech is not a viable option. This does not mean that they do not communicate however!! Fortunately for these students augmentative and alternative communication is a viable option to speech and has become more accessible and efficient over the last several years. This module is designed as a means for you to become familiar with augmentative and alternative communication and it benefits for students with significant disabilities. It will be important to remember, however, that AAC is not a communication program in and of itself. Rather it is a *form* that is used for expressive communication when speech is not available or is unintelligible.

We are now ready to discuss the definition of AAC.

What is AAC?

Augmentative and alternative communication is used when an individual is unable to produce intelligible oral speech.



Augmentative: a form of communication to supplement or clarify *existing* oral speech



Alternative: a form of communication used by individuals unable to produce oral speech



National Center and State Collaborative

6

As we just stated, AAC is used when oral speech is not a viable option for a specific individual. Remember, AAC really encompasses two terms: augmentative communication and alternative communication. We use the term augmentative communication when the form is used to supplement or clarify existing oral speech. We use the term alternative communication when the form is used by an individual who is unable to produce any useful oral speech. Dependent on the specific student's development, use of AAC may be temporary or long term. But in all cases it is not only a support to communication but also a gateway to increased participation in academics, social and peer interactions and more successful post-school outcomes.

Quiz Question #1

Augmentative communication is a form of communication used to clarify or supplement existing oral speech.

- ☐ A) True
- ☐ B) False



National Center and State Collaborative

Submit

Clear

7

Module Outcomes

- What Is AAC?
- Why do we use AAC?
- Who is a candidate for AAC?
- What does AAC look like?
- How do we use AAC?



National Center and State Collaboration

Now that we understand *what* AAC is, we need to discuss *why* AAC may be selected for a specific student.

Why Do We Use AAC?

- ❖ Provide an immediate means to communicate
- ❖ Facilitate language development
- ❖ Enable social interactions
- ❖ Provide a means to participate in academic assessments
- ❖ Support full inclusion
- ❖ Facilitate healthcare access
- ❖ Help provide safety from abuse
- ❖ Improve post-school outcomes



National Center and State Collaborative

9

We have noted that all students communicate regardless of their level of disability. Many times, however, our students use idiosyncratic forms of communication that are not easily understood by others. This leads to frustration and confusion by both the student and family, teachers and peers. Introducing AAC can provide an *immediate* means to communication. There is no need to wait for the development of prerequisite skills; instead we need to choose an AAC system that matches the student's current skills. If we do this, the student can communicate intents *NOW!* In addition, research has shown that the use of AAC can facilitate language development and enable social interactions. When a student is able to communicate via AAC, participation in academic assessment and inclusionary settings is also facilitated.

Research tells us that the ability to communicate is an important factor in positive post school outcomes, which must include greater access to health care and a means to avoid abuse.

The importance of providing AAC cannot be underestimated for our students with significant disabilities

Quiz Question #2

Which of the following may be facilitated by the use of AAC?

- ☐ A) Social interactions with peers
- ☐ B) Language development
- ☐ C) Participation in academic assessments
- ☐ D) All of the above



National Center and State Collaborative

Submit

Clear

10

Module Outcomes

What Is AAC?

Why do we use AAC?

Who is a candidate for AAC?

What does AAC look like?

How do we use AAC?



National Center and State Collaborative

11

Now we know what AAC is and why we might use it, our next question is who is a candidate for AAC?

Who is a Candidate for AAC?

Any student regardless of:

- ❖ Age
- ❖ Developmental or Cognitive Level
- ❖ Physical Challenges
- ❖ Language Level
- ❖ Sensory Functions



National Center for State Collaboration

12

There is an easy answer to the question, who is a candidate for AAC? The answer to the question is anyone who lacks intelligible oral speech, either temporarily or long term. That means that any student who lacks intelligible oral speech (even just in limited situations) regardless of age, developmental or cognitive level, physical challenges, language level, or sensory functions should be provided the opportunity to learn to use AAC for communication. We don't wait for 'readiness'. We don't wait until the student has reached a certain age. We start now. The research tells us that using AAC does not interfere with a student's ability to learn to speak. In fact, the research suggests that, for children with the physical and sensory capability to use oral speech, using AAC actually facilitates their development of speech and language.

It Takes a ~~Village~~ Team!



It is important to remember that developing an AAC system for any student requires a team approach. That team should include, at a minimum, the Speech/Language pathologist, the teacher, the student and the student's family. If available, an assistive technology (AT) specialist offers important resources to the team. Many school districts have AT specialists as well as AAC materials and instruments for use by classrooms and students. Other important members of the team will be determined by the student's specific needs in areas such as motor skills, requiring input from PT and/ OT, and vision, requiring input from a vision specialist and others. Only when the student's strengths and challenges are considered, can appropriate decisions regarding the use of AAC be made.

Quiz Question #3

Which of the following is a prerequisite for beginning use of augmentative communication?

- ☐ A) Age 5 or above
- ☐ B) Receptive language skills
- ☐ C) Object permanence
- ☐ D) None of the above



National Center and State Collaborative

Submit

Clear

14

Module Outcomes

- What Is AAC?
- Why do we use AAC?
- Who is a candidate for AAC?
- What does AAC look like?
- How do we use AAC?



National Center for Science and State Collaboration

15

Once we know why we use AAC and who is a candidate, the next question we must look at is what does AAC look like, or what forms does it take.

Levels of Aided Communication

❖ No Tech

❖ Non-electronic

❖ Low Tech

❖ Simple Electronics

❖ High Tech

❖ Sophisticated Electronics



National Center and State Collaborative

16

Narrator: The simplest of the aided devices are classified as no tech.

These are the least expensive devices and are frequently hand made with readily available materials. We recommend that every student have at least one no tech device as a back-up regardless of how complex their primary communication instrument is.

The next level up are low tech communication instruments. These instruments use simple electronics, are usually battery operated, and are typically limited to preprogrammed messages.

The most sophisticated devices are high tech. These computer-based devices allow users to generate their own messages. Because of their sophistication, they allow for a wide array of access options for users with the most severe physical disabilities. These devices tend to be expensive and may require training for programming and use.

Method of Access

Direct selection

Scanning



National Center and State Collaborative

17

When we select an AAC system for a student, the first thing we must consider is whether or not the student has the ability to directly access the system. We call this direct selection. Direct selection can be accomplished by actually touching or pointing to the selected item or symbol. Students typically use their finger or hand or some type of pointing device, like a head pointer, to make their selection. Students may select items on anything from a no tech communication board to a high tech system that has spoken and/or printed output. Some students may need to point with their eyes, using an eye gaze board. Eye gaze boards range from simple clear plastic board held up between the speaker and the listener to very sophisticated electronic boards that actually track eye movements. Let's look at an example of a student using direct selection to access a device. Watch as he touches the device to answer his teacher's question.

Method of Access: Direct selection



National Center and State Collaborative

18

Teacher: What's the meaning of the word "awake"?

Teacher: What's the meaning of the word "awake"?

Steven: "alert"

Teacher: Good job! Yay

Method of Access

Direct selection

Scanning



National Center and State Collaborative

19

Students who are not able to use any of the direct selection techniques may use a scanning system. Scanning systems typically present one choice at a time, with the student indicating when the desired choice is presented. Like the direct select systems, scanning systems may range from simple choice boards to high tech devices that use lights or sound to present the choices. Now let's watch a student who uses scanning with his communication device as he engages in a conversation with a peer.

Method of Access: Scanning



National Center for Science and State Collaborative

20

Rachel: What did you think about the refs?

Nick: (Holds down a button on his AAC device until his choice is highlighted) "The referees were bad."

Rachel: Yea, they were bad.

Representations

- ❖ Real objects
- ❖ Photos
- ❖ Iconic Pictures
- ❖ Line Drawings
- ❖ Print
- ❖ Tactile Symbols

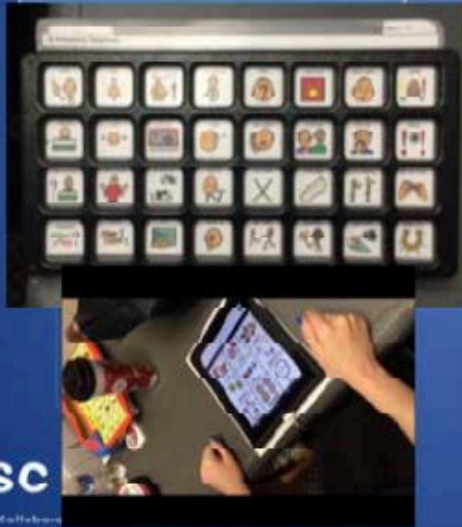


Another consideration in designing a communication system for a student is what type of symbols should be used for representing the vocabulary in the system. For some students it may be necessary to start by using real objects to represent the vocabulary choices. However using real objects is inconvenient and limits the available choices, so our goal is to move beyond real objects when possible. Other choices for representing vocabulary include photographs of real objects, iconic pictures, line drawings, (either colored or black and white), print, and tactile symbols. The tactile symbols may be particularly useful for students with visual difficulties. Of the available types of representation, print alone provides a clear link to literacy. For that reason, to help students recognize and respond to print representations, best practice suggests that the print symbol should be included with each of the other representations, so that a student always sees the printed word paired with whatever symbol they are using. Although it can be tempting to look for a hierarchy in the types of symbols used, research suggests no real hierarchy exists. Some experts in the field actually suggest beginning with the printed word for all students to provide support for literacy. What is most important is to work with the type of symbols that work best for each individual student – remembering to pair symbols with the printed word.

Display

Forms

Organization



Grid

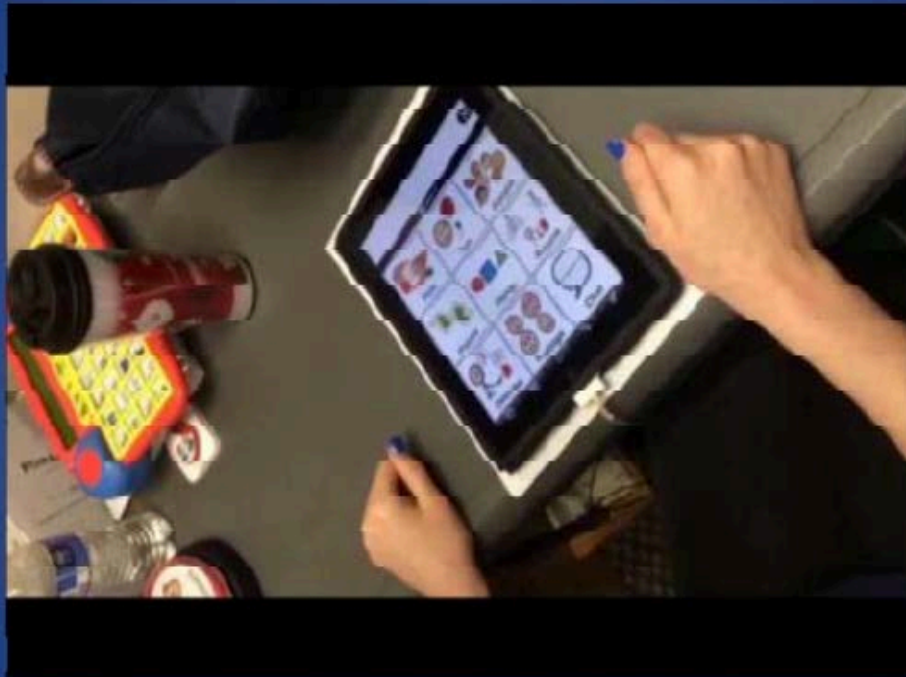
Visual Scene
Display



National Center and State Collaborative

22

Once a representation system is selected, it is necessary to decide how the symbols will be displayed. Here, technology presents us with two options: static displays or dynamic displays. As its name suggests, in a static display, the symbols remain in the same location and same order. No tech topic boards and low tech communication devices with a display that only changes when one overlay is removed and replaced with another are examples of static displays. In dynamic systems, the display changes depending on the student's selection. For example, when a student selects the symbol for 'math' on their home screen, the display might change to present an array of vocabulary appropriate for talking about math (perhaps words for numbers, equal, add, subtract, multiply, divide). As you might guess, only the high tech systems have the capability for providing dynamic screens. Lets look at an example.



National Center and State Collaborative

23

Click image to play video. Click the right arrow button on the playbar to advance to the next slide.

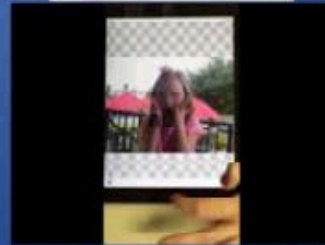
Display

Forms

Organization

Static

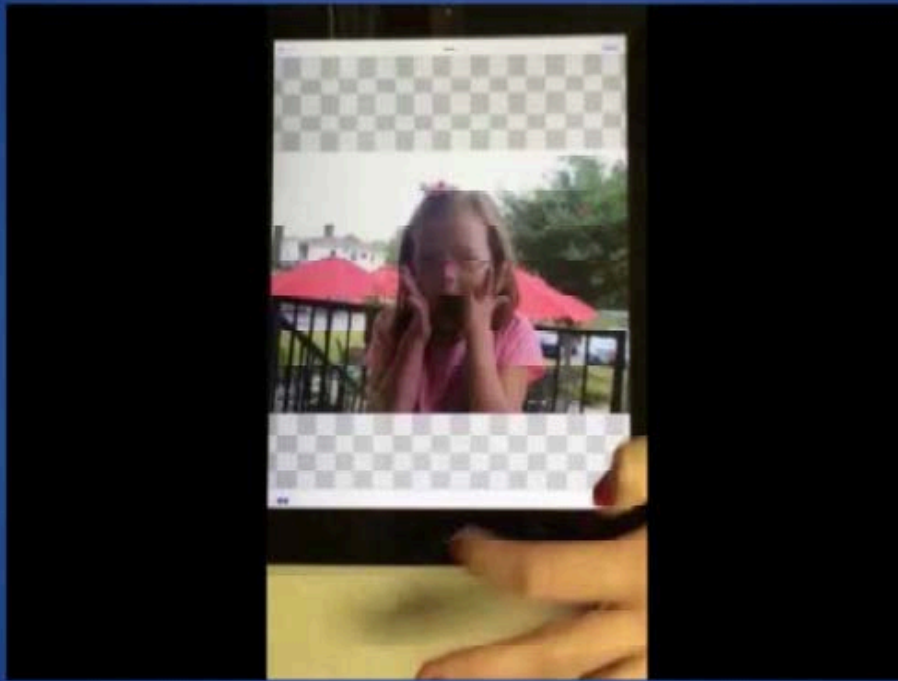
Dynamic



National Center and State Collaborative

24

In addition to deciding how the symbols will be displayed, we also need to determine how they will be organized to facilitate the student's access. Here, we have two options. The first option involves a grid display, with the symbols arranged in rows and columns. Frequently the grid is also organized by word class, with categories of words grouped together to make them easier to locate. The second, newer, option, uses a visual scene display. A visual scene display uses a picture of a common location or event (for example a classroom or a picture of a child) with several hot spots. A hot spot is a person, item, or location on the picture (for example, the child's hair bow or her face) that represents the location where the AAC device stores the word or message that hot spot represents. When the spot is touched, the device says the word or message stored there (for example, when the student touches the hair bow, the device says "I like wearing bows"). Let's look at an example



(Hand touches girls face) Ava: "My name is Ava"

(Hand touches top of head) Ava: "I like wearing bows"

Type of Output

Visual



Auditory



National Center and State Collaborative

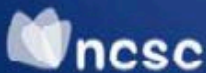
26

The final decision in designing or selecting a communication system for a student is to determine what type of output the system needs to provide – visual and/or auditory. That decision must be based on where and how the student will use the system and the student's potential communication partners. For example, if a student needs to be able to get someone's attention, a system that provides visual output alone will not meet this need. This student needs a system with auditory output loud enough to call and obtain someone's attention. Similarly, a student who will be using a system for classroom participation would also be better served by a system that provides auditory output. Neither of these students could use a no tech system exclusively, since no tech systems do not provide auditory output capabilities.

Quiz Question #4

Which of the following represents the simplest level of aided communication devices?

- ☐ A) No tech
- ☐ B) Low tech
- ☐ C) High tech
- ☐ D) None of the above



National Center and State Collaborative

Submit

Clear

27

Module Outcomes

What Is AAC?

Why do we use AAC?

Who is a candidate for AAC?

What does AAC look like?

How do we use AAC?

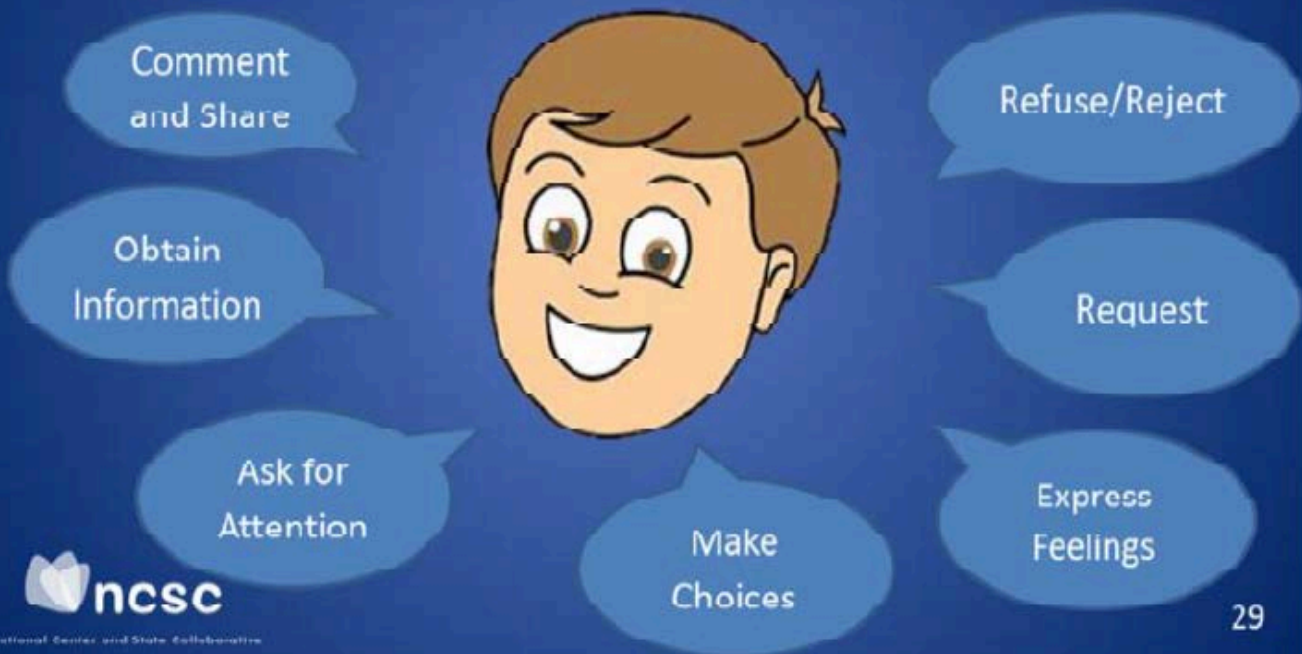


National Center on State Collaboration

28

Our last question for this module is “How do we use AAC?” The answer to this question is: we use AAC the same way we use any other form of communication - to initiate a variety of intents and to respond in a variety of situations.

Initiating Communication



Research shows that AAC users typically respond but rarely use their AAC to initiate communication. Full participation in the classroom and social settings requires the student to be able to initiate a number of different intents including: Commenting and sharing with friends, asking questions to obtain information, calling or asking for attention, indicating choices, sharing their feelings, and politely requesting and refusing. Teaching a student to use an AAC device for initiating requires both content that supports initiation and ample opportunities to practice authentic communication.

Responding to Communication



- Academic Participation



- Assessment Participation



- Social Participation



National Center and State Collaborative

30

To be effective communicators students must learn to both initiate and respond in a variety of situations. Using effective response modes will enable students to participate in academics, assessments and social interactions. Students must also be able to respond effectively to participate in learning activities in the academic curriculum. Students cannot be assessed if they do not have a consistent, readable means of responding. Finally to be active participants in peer social conversations students must be able to consistently respond as well as initiate.

Quiz Question #5

Beginning AAC users typically use their device to initiate communication intents.

- ☐ A) True
- ☐ B) False



National Center and State Collaborative

Submit

Clear

31

Module Outcomes



National Center and State Collaborative

32

In this module we have asked and answered five questions:

- In response to the first question what is AAC?, We have learned that AAC is a form of communication used when an individual is unable to produce intelligible oral speech.
- In response to the second question why do we use AAC? We have learned that it is used to:
 - Provide an immediate means to communicate
 - Facilitate language development
 - Enable social interactions
 - Provide a means to participate in academic assessments
 - Support Full inclusion
 - Facilitate Healthcare access
 - Help provide safety from abuse
 - Improve post-school outcomes
- In response to the third question who is a candidate for AAC? We have learned that any student who lacks intelligible oral speech is a candidate for AAC.
- In response to the fourth question what does AAC look like? We have learned that there are multiple forms of AAC which can be matched to the needs of the user.
- And finally in response to the fifth question how do we use AAC? We have learned that we use AAC the same way we use any other form of communication - to initiate a variety of intents and to respond in a variety of situations.

Beukelman, D.R., & Mirenda, P. (2013). *Augmentative and alternative communication: Supporting children & adults with complex communication needs* (8th ed.). Baltimore, MD: Paul H. Brookes Publishing Co.

Light, JI, & Drager, K. (2012, August 31.) Early Intervention for Young Children with Autism, Cerebral Palsy, Down syndrome, and Other Disabilities. Retrieved from: <http://aackids.psu.edu/index.php/page/show/id/14/>

Texas School for the Blind and Visually Impaired. Public education system of Texas
Retrieved from: <https://www.tsbvi.edu/tagged-resources>

THANK YOU!



Thank You. This completes Module 4: Selecting AAC. The next module, Teaching Communication Targets will provide more information on how to teach students to use AAC.