



## EBP DATABASE

The EBP database is designed to help you in the EBP selection process. First, select the relevant age range and choose the domain you are targeting. Next, click "Apply". The information will be presented in two ways.

On the right side of the screen you will see all of the included articles that target your selected age range and domain, along with the associated EBPs.

On the left side of the screen you will see the menu of EBPs that have proven effective in addressing the selected outcome for the targeted age range. You will also see the number of articles associated with each EBP in parentheses after the EBP. You can click the EBP to see the articles that contribute to the evidence base for each practice.

CLEAR

## https://ncaep.fpg.unc.edu/ebp-database





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Age	Domains
6-11.9 years	Communication CLEAR
	Displaying 1 - 40 of 181
EBP	A Social Stories <sup>***</sup> intervention package for students with autism in inclusive classroom settings
Antecedent-based interventions (3)	A social stories - intervention package for students with autism in inclusive classroom settings Age(s): 36-71.9 months (3-5.9 years), 6-11.9 years
Augmentative and	Domain(s): Challenging/interfering behavior, Communication, Social
alternative communication (24)	EBP(s): Social narratives, Social Stories™
Cognitive behavioral	A comparison of existing and novel communication responses used during functional communication training
instructional strategies (5)	Age(s): 6-11.9 years, 12-14.9 years
Differential reinforcement	Domain(s): Challenging/interfering behavior, Communication
(9)	EBP(s): Functional communication training
Direct Instruction (2) Discrete trial training (11)	A comparison of the effects of organismic and setting variables on the social interaction behavior of children with developmental disabilities and autism

## **FREE High Quality Training: Autism Focused Intervention Resources and Modules** (AFIRM)

Designed to help you learn the step-by-step process of planning for, using, and monitoring EBPs with learners with ASD from birth to 22 years of age



AFIRM Modules are designed to help you learn the step-by-step process of planning for, using, and monitoring an EBF with learners with ASD from birth to 22 years of age. Supplemental materials and handouts are available for download.

Visit the Learn with AFIRM section to find out more.

Available EBP Modules

There's a Learning Module for most of the **28 EBPs Includes Parent Resources!** 

Autism Focused Intervention AFIRM **Resources and Modules** 

www.captain.ca.gov http://afirm.fpg.unc.edu/afirm-modules





The SELPA Content Lead-ASD funded the development of these four newest EBPs

We thank the AFIRM researchers and developers for their amazing work!

# THE NEED FOR IMPLEMENTATION SCIENCE PAGE 50

"Some practitioners will be able to take the translated information about EBPs and directly apply it in their classrooms, but **Implementation Science** informs us that additional steps are needed for most practitioners.

Professional development, such as coaching, and organizational support are all factors that may be necessary for closing the last link of the research to practice gap."



# INTERVENTION FACT SHEETS AVAILABLE FOR EACH OF THE 28 EBPs

Name of EBP		Augmentat	tive and Alter	native Commu	nication (AA	C)	
Definition of i	Augmentative and Alternative Communication (AAC) interventions use : a system of communication that is not verbal/vocal including aided and u systems. Unaided communication systems do not use any materials or to and gestures). Aided communication systems include low tech systems ( pictures or pointing to letters) and extend to high tech speech generating applications that allow other devices (i.e., phones, tablets) to serve as SG AAC use are also included in this category (e.g., Aided Language Modelin EBPs such as prompting, reinforcement, visual supports, and peer-mediat • Manualized Interventions Meeting Criteria: Picture Exchange Commu Bondy and Frost, 1985). Ayce Ranges		and unaided communication or technology (e.g., sign langua ems (e.g., exchanging objects,/ rating devices (SGDs) and as SGDs. Methods of teaching odeling) which may include othe rediated interventions.				
				Age Ra	nges		
Outcome Area	15	0-2 Toddlers	2-5 Preschoolers	6-17 Bementary School	12-14 Middle School	High School	19-22 Young Adults
	Communication	1	1	1	1	1	
$ \Rightarrow $	Social	1	1	1		1	
(D-4	Joint attention	1	1	1			
	Play	1	1	1			
	Cognitive			-			
	School readiness						
	Academic/ Pre-academic		1	1			
	Adaptive/ self-help						
SIN OF	Challenging/ Interfering behavior			1			
0.2	Vocational						
	Motor					1	
633	Mental health						
23	Self- determination						

- Agius, M. M., & Vance, M. (2016). A comparison of PECS and iPad to teach requesting to pre-schoolers with autistic spectrum disorders. Augmentative and Alternative Communication, 32(1), 58-68. https://doi.org/10.3109/07434618.2015.1108363
- Ali, E., MacFarland, S. Z., & Umbrett, J. (2011). Effectiveness of combining tangible symbols with the Picture Exchange Communication System to teach requesting skills to children with multiple disabilities including visual impairment. Education and Training in Autism and Developmental Disabilities, 44(3), 425-435.
- Almirali, D., DiStefano, C., Chang, Y.-C., Shire, S., Kaiser, A., Lu, X., Nahu m-Shani, I., Landa, R., Mathy, P. & Kasari, C. (2016). Longitudinal effects of adaptive interventions with a speech generating device in minimally verbal children with ASD. Journal of Clinical Child & Adolescent Psychology, 45(4), 442-456. https://doi.org/10.1080/15374416.2016.1138407
- Alzrayer, N. M., Banda, D. R., & Koul, R. (2017). Teaching children with autism spectrum disorder and other developmental disabilities to perform multistep requesting using an iPad. Augmentative and Alternative Communication, 33(2), 65-76. https://doi.org/10.1080/0743461 8.2017.1306881

- Definition of the Intervention
- Age Range
- Outcome Areas
- References (specific articles that provide the evidence for the efficacy of the practice)



## AFIRM VIDEOS of Evidence-Based Practices https://afirm.fpg.unc.edu/afirm-videos

AFIRM Modules COVID-19 Toolkit	Earn CE Credits Selecting EBPs	Resources
FIRM Videos		
ect a key word to search for AFIRM videos or filter AFI	RM videos by category.	
yword Search	in the second	
		_ Videos
Browse by Module	Browse by Module Lesson	
Antecedent-based Intervention	Lesson 1 - Basics	
Cognitive Behavior Intervention	Lesson 2 - Planning for the Practice	for most
Differential Reinforcement	Lesson 3 - Using the Practice	tor most
Discrete Trial Training	Lesson 4 - Monitoring Progress	
Exercise	Additional Materials	
Extinction		
Functional Behavior Assessment	-	
Functional Communication Training		
Modeling		of the 28
Naturalistic Intervention		
Parent Implemented Interventions		
Peer-Mediated Instruction and Intervention		
Picture Exchange Communication System Pivotal Response Training		EBPs
Prompting		
Response interruption and Redirection		
Reinforcement		
Scripting		
Self-management		
Social Narratives		
Social Skills Training		
Structured Play Groups		
Task Analysis		
Technology-aided Instruction and Intervention		
the state of the s		

# Implementation Checklist Ensures Fidelity

- Used to assist with planning for EBP use
- Helps implementers self reflect on fidelity of use
- Helps coaches give objective feedback
- Helps to prevent drift

	Implementation Checklist			A	AC	
	Observation: Date: Observer's initials:	1	2	3	4	5
	STEP 1: PLANNING	-	-	-	-	-
Before you start, have	1.1 Determine if an AAC assessment may be appropriate for a learner					
you?	1.2 Conduct an AAC assessment					
I Identified the target goal/behavior/skill?	1.3 Discuss technology and AAC preferences with family and learner		T			
Collected baseline	1.4 Identify available AAC resources					
data through direct observation?	1.5 Select additional EBPs for teaching use of the AAC system					
Established a target	1.6 Plan opportunities for the learner to use AAC					
goal or outcome that clearly states when	1.7 Identify and train team members					
the behavior will	1.8 Prepare and have materials ready and available					
occur, what the target goal or outcome is, and how team	STEP 2: USING					
members and/or observers will know	2.1 Teach learner to use AAC device					
when the skill is mastered?	2.2 Understand formalized AAC teaching approaches					
If the answer to any of	2.3 Give reinforcement				1	
the above questions is 'No,' review the	2.4 Ensure consistent use of AAC across settings					
process of how to select an EBP .	STEP 3: MONITORING					
	3.1 Collect and analyze data					
	3.2 Monitor use of AAC across settings				Γ	
	3.3 Troubleshoot issues (if needed)					
	3.4 Determine next steps based on learner progress					

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## **ONLINE LEARNING MODULES** JUST FOR PARAEDUCATORS, TOO!

## AFIRM Autism Focused Intervention Resources & Modules



## https://afirm.fpg.unc.edu/afirm-modules

#### AFIRM for Paraprofessionals: Simulated E-Learning





## AFIRM Evidence-Based Practice AAC Brief Packet



Autism Focused Intervention Resources & Modules

AAC EVIDENCE-BASED PRACTICE BRIEF PACKET: AUGMENTATIVE & ALTERNATIVE COMMUNICATION

UNC Frank Porter Graham Child Development Institute Autism Focused Intervention Resources & Modules Nowell, S., Sam, A., Waters, V., Dees, R., & AFIRM Team, 2022

### UNC FRANK PORTER GRAHAM CHILD DEVELOPMENT INSTITUTE



The National Professional Development Center on Autism Spectrum Disorder



# Overview

- 1. Basics of AAC (Lesson 1): Describes AAC and how it can be used with learners with autism, as well as who can use the AAC and its evidence-base from the 2020 NCAEP EBP Report (Steinbrenner et al., 2020).
- 2. Planning for AAC (Lesson 2): Provides concrete steps and examples of how to plan for using AAC.
- **3.** Using AAC (Lesson 3): Provides concrete steps and scenarios of how practitioners and family members can use principles of AAAC.
- **4. Monitoring AAC** (Lesson 4): Provides steps for monitoring the use of AAC, such as collecting data and determining next steps for the learner with autism.
- 5. Resources and Tools: Free downloadable resources and tools to support use of AAC.

## ---Augmentative & Alternative Communication---

AAC

### WHAT IS AUGMENTATIVE & ALTERNATIVE COMMUNICATION?

Augmentative and alternative communication (AAC) are interventions that use a system of communication that is not verbal/vocal including aided and unaided communication systems. Methods of teaching AAC use are also included in this practice (e.g., Aided Language Modeling) and may include other EBPs such as prompting, reinforcement, visual supports, and peer-mediated interventions.

#### EVIDENCE-BASE:

Based upon the 2020 systematic review conducted by the National Clearinghouse on Autism Evidence and Practice (NCAEP), this practice is a focused intervention that meets the evidencebased practice criteria with 47 single case design studies. This practice has been effective for early intervention (0-2 years), preschoolers (3-5 years), elementary school learners (6-11 years), middle school learners (12-14 years), and high schoolers (15-18 years) with autism. Studies included in the 2020 EBP report (Steinbrenner et al., 2020) detail how this practice can be used to effectively address the following outcomes for a target goal/behavior/skill: academic/pre-academic, challenging/interfering behavior, communication, joint attention, motor, play, and social.

#### HOW IS AAC BEING USED?

Autism Focused Intervention

Resources & Modules

This practice can be used by a variety of professionals, including teachers, special educators, therapists, paraprofessionals, and early interventionists in educational and community-based environments. Parents and family members also can use this practice in the home.



Nowell, S., Sam, A., Waters, V., Dees, R., & AFIRM Team (2022). *Augmentative & Alternative Communication*. The University of North Carolina at Chapel Hill, Frank Porter Graham Child Development Institute, Autism Focused Intervention Resources and Modules. https://afirm.fpg.unc.edu/augmentative-alternative-communication





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AAC

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AAC



The National Clearinghouse on Autism Evidence and Practice has adopted the following criteria to determine if a practice is evidence-based. The 2020 EBP report (Steinbrenner et al., 2020) provides more information about the systematic review process.

Efficacy must be established through high-quality, peer-reviewed research in scientific journals using:

- At least 2 randomized or quasi-experimental group design studies, or
- At least 5 single subject/case design studies, or a
- Combination of evidence of 1 randomized or quasi-experimental group design study <u>and</u> 3 single subject/case design studies

### **OVERVIEW:**

Based upon the 2020 systematic review conducted by the National Clearinghouse on Autism Evidence and Practice (NCAEP), this practice is a focused intervention that meets the evidencebased practice criteria with 47 single case design studies. This practice has been effective for early intervention (0-2 years), preschoolers (3-5 years), elementary school learners (6-11 years), middle school learners (12-14 years), and high schoolers (15-18 years) with autism. Studies included in the 2020 EBP report (Steinbrenner et al., 2020) detail how this practice can be used to effectively address the following outcomes for a target goal/behavior/skill: academic/pre-academic, challenging/interfering behavior, communication, joint attention, motor, play, and social.

In the table below, the instructional outcomes identified by the evidence base are shown by age of participants.

	ACADEMIC	CHALLENGING	COMMUNICATION	JOINT	MOTOR	PLAY	SOCIAL
0-2			Yes	Yes		Yes	Yes
3- 5	Yes	Yes	Yes	Yes		Yes	Yes
6-	Yes	Yes	Yes	Yes		Yes	Yes
12- 14			Yes	-			
15- 18	1		Yes		Yes	1	Yes

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Augmentative & Alternative Communication For more information, please visit: https://afirm.fpg.unc.edu/

practice.

For more information, please visit <u>https://afirm.fpg.unc.edu/</u>.

#### UNAIDED COMMUNICATION SYSTEMS:

Does not use any materials or technology, only a motion of your body (e.g., sign language and gestures)

 Conventional gestures: Communicative gestures used and understood by most members of a social group. In the United States, these include actions such as shoulder shrugging, head nodding/shaking, pointing, thumbs up/down, and high fives.

 American Sign Language (ASL): A complete natural language comprised of facial expressions and hand/finger movements with the same linguistic characteristics of spoken language, often used by the deaf/hard of hearing community.

Informal sign use (for example, "Baby signing"): A set of simple hand gestures and movements
designed to enhance communication for children who do not use much or any spoken language. May
contain single word signs from ASL but not grammatical aspects of that language. May also include
gestures that are unique and only understood by the child and their common communication partners.

#### LOW-TECH AIDED COMMUNICATION SYSTEMS:

Aided systems that use some type of material or device. They include *low-tech systems* (e.g., exchanging objects/ pictures or pointing to letters) and extend to *mid-tech and high-tech speech generating devices* (SGDs) and applications that allow other devices (i.e., phones, tablets) to serve as SGDs.

Plcture Exchange Communication System (PECS): a formal evidence-based system of augmentative communication using picture exchange of standard images that represent words.
 Communication books & boards: Object choice board, choice board using photographs of objects/events, communication book using photographs, simple communication board using photographs, or complex communication book using symbols and letters.

#### SPEECH GENERATING AIDED COMMUNICATION SYSTEMS:

Aided systems that use some type of material or device. They include *low-tech systems* (e.g., exchanging objects/ pictures or pointing to letters) and extend to *mid-tech and high-tech speech generating devices* (SGDs) and applications that allow other devices (i.e., phones, tablets) to serve as SGDs.

 Communication buttons/switches, Speech generating keyboard, Speech generating communication boards, Speech generating device, Speech generating application on a tablet



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#### ---Assessment Checklist Worksheet--AAC

Learner's Name:
Observer(s):
Target Goal/Beha

Date/Time:

ioal/Behavior/Skill (short):

Directions: Complete this worksheet to determine if an assessment for AAC is needed

AC	SPECIFIC PLANNING:		
1.	Is the learner making little progress toward communication goals during academic or social parts of the school day?	Yes	No No
2.	Is the learner showing frustration or other negative behaviors when there are communication demands placed on them during the school day?	Yes	No No
3.	Do the learner's teachers, family, and/or peers have a hard time understanding the learner's current communication or spoken language?	Tes Yes	🗆 No
4.	Does the learner seem interested in participating in activities or communicating with others but lack the language to do so effectively?	Yes 🗌	🗖 No
5,	Does the learner show little engagement in daily activities or seem withdrawn?	Yes	No No
6,	Has the learner's family mentioned communication concerns or the desire for the student to have more effective communication?	Tes Yes	No No
7,	Does the learner seem to have matured beyond their current AAC system?	Yes 🗌	No No

If you answered yes to any of these questions, then the learner may need a more thorough assessment with your school speech-language pathologist or assistive technology specialist.

ANECDOTAL NOTES:		





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## ---Data Collection: Observations---

Learner's Name: \_\_\_\_\_ Observer(s): \_\_\_\_\_ Date/Time:

Target Goal/Behavior/Skill:

Directions: Collect data observations on the learner's communication behaviors.

Ime	Activity	Communication Partner	Communication Behavior Observed
		<ul> <li>Teacher</li> <li>Para</li> <li>Peer</li> <li>Other:</li> </ul>	
		<ul> <li>Teacher</li> <li>Para</li> <li>Peer</li> <li>Other:</li> </ul>	
		<ul> <li>Teacher</li> <li>Para</li> <li>Peer</li> <li>Other:</li> </ul>	
		<ul> <li>Teacher</li> <li>Para</li> <li>Peer</li> <li>Other:</li> </ul>	
		<ul> <li>Teacher</li> <li>Para</li> <li>Peer</li> <li>Other:</li> </ul>	

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ALCOHOL:



AAC

## ---Family Considerations---

\$12

Learner's Name:

Observer(s): Target Goal/Behavlor/Skill:

Directions: Use this sheet to guide discussion about AAC during a family meeting.

Date/Time:

### AAC CONSIDERATIONS FROM FAMILY:

 What are your hopes for the AAC device and your child's communication? Can we set some goals together and work on them both at home and at school?

2. Who is with the child most while they are at home? What types of activities does the child participate in outside of school? Who would be the best person to be trained to program the device for home use? Who interacts with the child and will need basic training on what to expect?

3. What kinds of technology do you use in your home? Who uses these devices? Who does not use them? Are there people who are more/less comfortable with technology and how can we make sure all of them can communicate with the child?

-----

4. Do you have rules about screen time and technology use at home? Can we talk about parental controls on the device and other ways to ensure your child is not misusing the device and still following your house rules? Can we troubleshoot ways to tell the other children in your home that the AAC device is different than screen time?

5. Can you think of a good place in your home to store and charge the device when it is not being used? Is this place safe from pets and other potential hazards?

6. What are your biggest concerns about the AAC device? Can we troubleshoot those concerns together and come up with a plan?





