

Functional Communication Training

This is an alternate version of the characteristics overview chart on the next page. It is provided for accessibility.

Verbal skills

- Nonverbal
- Mixed

Grade Level

- PK
- Elementary
- Middle/High


Cognitive Level

- Classic
- High Functioning

Areas Addressed

- Behavior
- Communication/Speech
- Social/Emotional

Functional Communication Training

 Verbal Skills	Grade Levels	Cognitive Level	Areas Addressed
<input checked="" type="checkbox"/> Nonverbal	<input checked="" type="checkbox"/> PK	<input checked="" type="checkbox"/> Classic	<input type="checkbox"/> (Pre)Academic/ Cognitive/Academic
<input checked="" type="checkbox"/> Mixed	<input checked="" type="checkbox"/> Elementary	<input checked="" type="checkbox"/> High Functioning	<input type="checkbox"/> Adaptive Behavior/ Daily Living
<input type="checkbox"/> Verbal	<input checked="" type="checkbox"/> Middle/High		<input checked="" type="checkbox"/> Behavior
			<input checked="" type="checkbox"/> Communication/Speech
			<input checked="" type="checkbox"/> Social/Emotional



Brief Introduction

The majority of students with autism (AU) experience social and communication challenges that require direct intervention. Strategies that are positive and fit within the child's typical environments have been shown to increase student skills in this area.



Description

Functional communication is a positive behavior support (PBS) intervention designed to reduce problem behaviors by replacing them with meaningful or functional communication – whether verbal or gestural. In other words, rather than students having a tantrum or displaying other disruptive behaviors when frustrated at not getting their needs met, they communicate their needs in a more socially acceptable way through the use of words, alternative communications systems, such as the Picture Exchange Communication System (PECS), or gestures, such as pointing.

The emphasis of the communication is on functionality as opposed to form. Functional communication training relies on an accurate understanding of the function behind the problem behavior (attention seeking, access to preferred items, escape/avoidance, etc.) in order to effectively eliminate it.



Steps

The following steps should be used when implementing a functional communication approach.

- I. Identify why the behavior is occurring of the problem behavior through (a) interview with the student, teachers, and parents; (b) observation of the student on several occasions in a variety of settings; and

(c) collection of data regarding the frequency and specific circumstances under which the behavior/s occur. At this point a hypothesis is formed about the cause or function of the behavior.

2. Match the function of the behavior to the message of the alternative communication that will be taught. For example, if the function of a student's tantrum is determined to be escape/avoidance, offer the student an effective way to signal the need for a break.
3. Prompt the use of the communication and reinforce the desired behavior with the desired outcome (attention, access to preferred items, breaks). Use ABA/PBS and other strategies to support the communication of individuals with AU (see Applied Behavior Analysis/Positive Behavior Supports, Environmental Supports).
4. Ignore the problem behavior and prompt the use of the appropriate communication.



Brief Example

Andrew is a 10-year-old with AU who has few verbal skills and communicates by using objects instead of pictures. His speech-language pathologist and parents wanted to provide additional communication options for him at home and at school. Andrew's speech-language pathologist created a "What Did You Do in School Today?" packet that contained actual items representing Andrew's day. At the end of the day, Andrew and his paraprofessional reviewed the packet, and when Andrew got home, his parents and he were able to communicate about the day's events by referring to the objects in the packet. One of Andrew's "What Did You Do in School Today?" packets appears here.



From Savner, J. L., & Myles, B. S. (2000). *Making visual supports work in the home and community for individuals with Asperger Syndrome and autism*. Shawnee Mission, KS: Autism Asperger Publishing Company. Reprinted with permission.



Research Table

# of Studies	Ages (years)	Sample Size	Area(s) Addressed	Outcome
31*	4-14	50	Functional communication training, reduction of problem behaviors, picture schedules, gestural communication	+

*Note: Includes meta-analysis, but does not include other interventions identified simply as behavioral in the research article even though they used the functional communication training steps.



Studies Cited in the Research Table

- Casey, S. D., & Mercial, C. L. (2006). The use of functional communication training without additional treatment procedures in an inclusive school setting. *Behavioral Disorders, 32*, 46-54.
The premise behind functional communication training is to replace maladaptive behaviors with a communicative response that is either verbal or gestural. Such responses are the functional equivalent of the maladaptive or self-injurious behavior except that they are more socially acceptable. In order for this to be successful, the communicative response must be reinforced heavily while the maladaptive or self-injurious behavior is reinforced minimally, if at all. One 11-year-old student participated in this study. Results showed a decrease in maladaptive or self-injurious behaviors.
- Drager, K., Postal, V., Carrolus, L., Castellano, M., Gagliano, C., & Glynn, J. (2006). The effect of aided language modeling on symbol comprehension and production in two preschoolers with autism. *American Journal of Speech Language Pathology, 15*, 112-126.
Two 4-year-olds with AU participated in this study to determine the efficacy of Aided Language Modeling (ALM; Picture Communication Systems and natural language strategies) to improve receptive language symbol comprehension and production. Results indicated that ALM is an effective intervention to increase both symbol comprehension and production. The effects were maintained over the 37 sessions of the study.
- Mancil, G. R., Conroy, M.A., Nakao, T., & Alter, P. (2006). Functional communication training in the natural environment: A pilot investigation with a young child with autism spectrum disorder. *Education and Treatment of Children, 29*, 615-633.
This study examined functional communication training for one 4-year-old boy over 60 sessions. Results demonstrated a reduction in maladaptive or disruptive behaviors, an increase in communication, and a reduction in response time to distracters.
- Martin, C.A., Drasgow, E., Halle, J.W., & Brucker, J. M. (2005). Teaching a child with autism and severe language delays to reject: Direct and indirect effects of functional communication training. *Educational Psychology, 25*, 287-304.
The study examined the effects of direct functional communication training, involving prompting, differential reinforcement, and error correction procedures, in teaching a 10-year-old child with AU to reject items by touching an icon. Results indicated that the training was successful at replacing pushing away with touching an icon to reject items, but it had variable effects on the other behaviors serving a rejecting function.
- Bopp, K. D., Brown, K. E., & Mirenda, P. (2004). Speech-language pathologists' roles in the delivery of positive behavior support for individuals with developmental disabilities. *American Journal of Speech-Language Pathology, 13*, 5-19.

This meta-analysis of 14 studies with 19 participants with AU examined the efficacy of functional communication training with alternative or augmentative communication as well as the use of visuals such as picture schedules. All of the studies showed positive results in reducing disruptive or problematic behaviors and improving communication. However, there were no reports of generalization or maintenance.

6. Polirstok, S. R., Dana, L., Buono, S., Mongelli, V., & Trubia, G. (2003). Improving functional communication skills in adolescents and young adults with severe autism using gentle teaching and positive approaches. *Topics in Language Disorders, 23*, 146-153.
The study examined the therapeutic intervention program for young adults with severe AU at the Oasi Institute in Troina, Sicily. The program, which integrates gentle teaching, humanistic applied behavior analysis, and functional communication training, values human interactions and provides opportunities to acquire functional skills through errorless learning activities. Eighteen adolescents with AU participated in the study. Results of an 18-month study indicated significant improvements in functional communication skills and an accompanying reduction in maladaptive/stereotypic behaviors in the environment using gentle teaching and positive approaches.
7. Delprato, D. J. (2001). Comparisons of discrete-trial and normalized behavioral intervention for young children with autism. *Journal of Autism and Developmental Disorders, 31*, 315-325.
The study examined a series of 10 controlled studies in which traditional operant behavioral procedures were compared with more recently developed normalized interventions for teaching language to young children with AU. In all eight studies with language criterion responses, normalized language training was more effective than discrete-trial training. Furthermore, in the two studies that assessed parental affect, normalized treatment yielded more positive effect than discrete-trial training.
8. Braithwaite, K. L., & Richdale, A. L. (2000). Functional communication training to replace challenging behaviors across two behavioral outcomes. *Behavioral Interventions, 15*, 21-36.
The study examined the effectiveness of an intervention that included extinction and functional communication training to reduce multiply controlled, self-injurious, and aggressive behaviors in a 7-year-old boy with AU in a school setting. Analysis of behavioral antecedents and consequences suggested that self-injury and aggression served the dual behavioral outcomes of escape from difficult tasks and access to preferred objects. Treatment consisted of teaching the boy an alternate request, while challenging behaviors were concurrently placed on extinction. Acquisition of the alternate requests was associated with a decrease to zero levels of self-injury and aggression across the two behavioral outcomes, which was maintained when a 5-second delay was implemented. Results showed that challenging behaviors with different behavioral outcomes can be replaced with functionally equivalent communication.
9. Buffington, D., Krantz, P., McClannahan, L., & Poulson, C. (1998). Procedures for teaching appropriate gestural communication skills to children with autism. *Journal of Autism and Developmental Disorders, 28*, 535-547.
Four children with AU, ages 4-6 years, participated in 72 sessions designed to increase appropriate use of gestural communication with verbal and nonverbal prompting. All participants increased their rate of appropriate responses, and generalization was reported across other environments.



References

- Bopp, K. D., Brown, K. E., & Mirenda, P. (2004). Speech-language pathologists' roles in the delivery of positive behavior support for individuals with developmental disabilities. *American Journal of Speech-Language Pathology, 13*, 5-19.
- Braithwaite, K. L., & Richdale, A. L. (2000). Functional communication training to replace challenging behaviors across two behavioral outcomes. *Behavioral Interventions, 15*, 21-36.
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Resources and Materials

- Center on the Social and Emotional Foundations for Early Learning: www.vanderbilt.edu/csefel/briefs/wwb11.html
This site provides practical information on functional communication skills used with young children with AU.
- Functional Communication Training: www.asatonline.org/resources/procedures/functional2.htm
This website discusses how to teach functional communication skills to students with AU.
- Durand, V. M. (2002). *Severe behavior problems: A functional communication training approach (Treatment manual for practitioners)*. New York: Guilford Press.
- Preis, J. (2007). Strategies to promote adaptive competence for students on the autism spectrum. *Support for Learning, 22*, 17-23.
These articles offer information on teaching functional communication skills.