CHARACTERISTICS OVERVIEW CHART

<table>
<thead>
<tr>
<th>Verbal Skills</th>
<th>Grade Levels</th>
<th>Cognitive Level</th>
<th>Areas Addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ Nonverbal</td>
<td>☑ PK</td>
<td>☑ Classic</td>
<td>☑ (Pre)Academic/Cognitive/Academic</td>
</tr>
<tr>
<td>☑ Mixed</td>
<td>☑ Elementary</td>
<td>☑ High Functioning</td>
<td>☑ Adaptive Behavior/Daily Living</td>
</tr>
<tr>
<td>☐ Verbal</td>
<td>☑ Middle/High</td>
<td>☑ Behavior</td>
<td>☑ Communication/Speech</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>☑ Social/Emotional</td>
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</tbody>
</table>

BRIEF INTRODUCTION

Individuals with autism have a wide variety of communication challenges or skill deficits. Augmentative and alternative communication interventions are employed in order to improve their ability to communicate successfully with others.

DESCRIPTION

Augmentative and alternative communication (AAC) is defined as the supplementation or replacement of natural speech and/or writing using aided and/or unaided symbols. In other words, it refers to the use of aided symbols that require a transmission device. It is also the field or area of clinical/educational practice designed to improve the communication skills of individuals with little or no functional speech (Hourcade, Everhart Pilotte, West, & Parette, 2004; Lloyd, Fuller, & Arvidson, 1997). Examples of AAC include:

Unaided AAC:

- Sign language (see Sign Language section)
- Gestures

Aided AAC:

- Low Technology:
  - *Communication symbols*: This is a series of symbols that represent various types of communication. This includes the Picture Exchange Communication System (PECS) (see Picture Exchange Community System in this document).
  - *Picture Exchange Communication System* (see PECS).
  - *Choice/communication boards* (see Choice Making, Visual Environmental Supports):
    These may be commercial or handmade and use a picture communication system...
(PCS) or other symbols, photographs, etc. Two or more symbols are placed on the board and the student uses this as a means of communication.

Note: Many of the visuals shown here use Boardmaker Symbols (Mayer-Johnson; www.mayer-johnson.com).

### ILLUSTRATION 1: SAMPLE LANGUAGE BOARD

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I want</td>
<td>comb</td>
<td>long</td>
<td>short</td>
<td></td>
<td></td>
</tr>
<tr>
<td>put</td>
<td>brush hair</td>
<td>haircut</td>
<td>ribbon</td>
<td>curly</td>
<td>pretty</td>
</tr>
<tr>
<td>on</td>
<td>hair book</td>
<td>scissors</td>
<td>hair spray</td>
<td>straight</td>
<td>hurt</td>
</tr>
<tr>
<td>tie</td>
<td>barrette</td>
<td>look in mirror</td>
<td>messy hair</td>
<td></td>
<td>stop</td>
</tr>
<tr>
<td>knot</td>
<td>hairbrush</td>
<td>hair curler</td>
<td>scarf</td>
<td></td>
<td>finished</td>
</tr>
</tbody>
</table>

From www.joannecafiero.com. Used with permission.

### ILLUSTRATION 2: SAMPLE COMMUNICATION SYSTEM

From Henry, S. Used with permission.
ILLUSTRATION 3: TURN-TAKING COMMUNICATION BOARD

• Light/Mid Technology:
  ▪ Static display voice output communication devices: A static display electronic communication device contains a fixed set of pictographs and/or words. These displays are usually called overlays and may be printed on paper or other material. The overlays are physically changed by the user or an assistant when a different display is required.
  ▪ Single-message voice output communication devices: These voice output devices (i.e., Big Mack) provide a singular message (i.e., voice output switches) and typically include an easy-to-use recording device.

• High Technology:
  ▪ Dynamic display voice output communication devices (VOCA): These dynamic, computer-based interfaces can include synthesized (computer-generated) speech to aid individuals who are unable to use natural speech to meet their communication needs. These electronic devices can generate printed and/or spoken text.
**Brief Example**

Ginny, a 4-year-old girl with autism who has limited verbal skills was assessed by the school speech-language pathologist and other members of the multidisciplinary team, who determined that a natural aided communication board might increase her initiations and responses with peers. Ginny and her peers were taught to use the communication board, and within six weeks of its introduction, Ginny’s communication with peers had increased by 70%.

**Summary**

A variety of AAC devices offer individuals who have limited or few communication skills opportunities to become more independent within their environments.

**Research Table**

<table>
<thead>
<tr>
<th>Number of Studies</th>
<th>Ages (year)</th>
<th>Sample Size</th>
<th>Area(s) Addressed</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>64*</td>
<td>1-20</td>
<td>293</td>
<td>Functional language use, behavior change, skill acquisition, sound/symbol association, imitation, requesting, social interaction</td>
<td>+</td>
</tr>
</tbody>
</table>

*Note: This number includes studies cited in integrated reviews of literature by Gevarter, et al. (2013); Ganz et al. (2011); Millar, Light, and Schlosser (2006); and Van Der Meer and Rispoli (2010), which reviewed some overlapping studies. See additional studies under Picture Exchange Communication System.

**Studies Cited in Research Table**

   This study involved three male participants, ages 3–4 years old, with a diagnosis of autism. The study was conducted in a university-based clinic. The intervention measured signs per minute and percentage of intervals with a sign, gesture, or word during each condition. The intervention was conducted in three phases: Phase I involved playing with toys from Cupboard A and the clinician modeling use of Key Word signing (KWS). Specifically, the clinician asked “Do you want MORE?” while signing “more”; Phase II involved the clinician modeling KWS with toys from Cupboards A and B, but not C; Phase III involved the clinician modeling KWS for toys from all three cupboards. The results of the study indicate that all three participants acquired signs and generalized some core signs across the different play activities. The results also indicate KWS may increase participants’ use of spoken words and gestures.

This study involved two participants, a 10-year-old boy and 11-year-old girl, diagnosed with autism. The intervention was conducted in the dining room at the table at the male participant's house and in a special education classroom at the female participant's school. The study evaluated the effectiveness and participant preference for the following forms of AAC: speech-generating device (SGD), manual sign (MS), and picture exchange (PE). The communicative categories measured for each participant were as follows: greetings, want requests, item requests, questions, and etiquette. The results of the study indicated that one participant showed preference for PE and the other for SGD. Both participants demonstrated varying increases from baseline to intervention for each form of AAC, but overall displayed acquisition of the skills for each mode of communication (PE, SGD, MS).


This meta-analysis of single-case research studies reviewed 28 studies that compared the following: non-electronic picture systems to speech generating devices (SGD); aided AAC, such as picture exchange and SGD, to unaided AAC systems (manual sign); and AAC to speech-language interventions. Studies included in the review were coded for: 1) effectiveness; 2) the rate of skill acquisition; 3) participants’ preference for systems; 4) number of vocalizations and/or problem behavior; and 5) generalization and maintenance across partners, environments, and time. Results suggest clear differences between communication systems are rare. This study suggests that communication systems should be based on the individual's preference, skills, and goals.


This study involved three participants, ages 3 to 6 years old, all diagnosed with autism. The intervention was conducted in the homes of two participants and in an empty room at the school of the third participant. The study compared the effects of PECS and sign language on acquisition of manding (requesting). All participants learned to mand with PECS but not with sign language. The authors note that possible limitations of the study include overly difficult signs for the participants and a lack of imitation skills in the participants, both of which could have decreased the effectiveness of the sign language intervention.


This study involved four children, ages 6 to 13 years old diagnosed of autism or developmental disability. The study was conducted in a Dutch Childcare Facility for children with developmental disabilities. The interventions were carried out in a small therapy room near the children's main classrooms. The study compared acquisition, maintenance, and preference for three modes of AAC. Participants were taught requests for preferred items using speech generating device (SGD), picture exchange (PE), and manual signs (MS). Preference for the AAC devices was measured for each participant. During intervention, all
four children learned to request using PE and the SGD, but only two also reached criteria with MS. Three children chose SGD most often and one chose PE most frequently.


This study compares three communication methods for children with autism having limited spoken language: picture exchange communication system (PECS), manual signs (MS), and electronic speech-generating devices (SGD). Seventeen out of twenty-one children learned to make requests. Results suggest SGDs may be easier for children with autism to learn to use.


This study evaluated the PECS training structure with seven males, ages 4 to 10 years old diagnosed with developmental or language disorders. The interventions were implemented in a therapy room in the participants’ school, and conducted 2–4 times a day, 2–3 days per week. The dependent variable was the percentage of correct independent PECS exchanges in a 10 trial session. The experiment was designed with multiple phases: 1) Participant independently released PEC into staff hands; 2 & 3) Participant removed picture from binder and hand it to staff; 4) Participant placed “I want” card and picture onto a sentence strip and hand it to staff; 5) Participant responded to experimenter’s question, “What do you want?” by completing the steps of phase 4; 6) Participant responded to the experimenter’s question of either “What do you want?” or “What do you see?” by completing the steps of phase four. The entire protocol was taught to mastery to each participant in 520 or fewer trials, which supports the claim that PECS can be trained in a relatively short time.


This study evaluated the effects of teaching advanced operations on an iPod-based speech-generating device (SGD) on the communication skills of two adolescents with autism. The effects of the teaching program were evaluated across two intervention conditions. The procedures used for teaching included response prompts, prompt fades, and differential reinforcement. The first intervention taught the students how to navigate between two screen pages and, through a multiple step procedure, request preferred stimuli. The second skill taught students to unlock the iPod before accessing their correct screens. Results indicated both procedures increased number of correct trials for each condition.


Three children with severe autism ages 4–12 participated. The study compared requesting using PECS to requesting using a Speech Generating Device (SGD). Results suggest that both PECS and SGD were equally effective and appropriate for improving communication skills in these individuals.

This study evaluated natural social interactions for students with disabilities who use augmentative and alternative communication (AAC) in general education classrooms. The participants were 16 students with autism and/or intellectual disabilities who used AAC. Observation of participants revealed frequent interaction with staff, but not with peers, even when they were in close proximity. Observation revealed that students who used AAC infrequently initiated communication with peers and adults. Participants relied more on facial expressions and gestures than their AAC devices.


This study evaluated differential reinforcement of alternative behavior (DRA) plus prompting to increase peer-directed mands for preferred items using a picture exchange communication system (PECS). Two nonvocal individuals with autism participated. Independent mands with a peer increased with the implementation of DRA plus prompting for both participants. In addition, peers engaged in brief social interactions following the majority of mands for leisure items. These results suggest that teaching children to use PECS with peers may be one way to increase manding and social interactions in individuals with limited or no vocal repertoire.


This study tested the effects of PECS on social-communicative skills in children with autism, concurrently taking into account standardized psychometric data, standardized functional assessment of adaptive behaviour, and information on social-communicative variables coded in an unstructured setting. Eighteen preschool children (mean age = 38.78 months) were assigned to two intervention approaches, i.e. PECS and Conventional Language Therapy (CLT). Both PECS (Phases I-IV) and CLT were delivered three times per week, in 30-min sessions, for six months. Outcome measures included the Autism Diagnostic Observation Schedule (ADOS) domain scores for Communication and Reciprocal Social Interaction; Language and Personal-Social subscales of the Griffiths' Mental Developmental Scales (GMDS); Communication and Social Abilities domains of the Vineland Adaptive Behavior Scales (VABS); and several social-communicative variables coded in an unstructured setting. Results demonstrated that the two groups did not differ at Time 1 (pre-treatment assessment), whereas at Time 2 (post-test) the PECS group showed a significant improvement with respect to the CLT group on the VABS social domain score and on almost all the social-communicative abilities coded in the unstructured setting (i.e. joint attention, request, initiation, cooperative play, but not eye contact). Results suggest that PECS intervention (Phases I-IV) can improve social-communicative skills in children with autism. This improvement is especially evident in standardized measures of adaptive behavior and measures derived from the observation of children in an unstructured setting.

This study evaluated the acquisition of, as well as the preference for, manual signing (MS), picture exchange (PE), and speech-generating devices (SGDs) in four children with autism, ages 5–10 years old. The intervention was conducted in the dining room of the family home for three of the participants, and in a special education classroom of a public school for one participant. Preferred materials were placed out of reach and materials for PE and SGD were placed in front of children. PE, SGD, and MS were rotated randomly. Participants could press the icon to request on the SGD, pick up the picture of a ball for PE, or sign for ball with their hands for MS. Participants demonstrated acquisition of functional communication skills, two participants across all three modes, one with SGD, and one with PE. The results indicate that participants may prefer a certain mode of AAC and this preference may predict successful acquisition of communication skills.


The aim of this study was to develop and evaluate an instrument—the Responsive Augmentative and Alternative Communication Style (RAACS) scale Version 2—to assess the communicative style of parents as they interact with their children using augmentative and alternative communication (AAC). This scale was used to analyze play interactions between 43 parents and 28 children with different diagnoses (including Down syndrome, autism, cerebral palsy, and intellectual disability), aged between 12 and 60 months. Parent-child interactions were observed both before and after parent participation in ComAlong, a training course on using responsive communication and AAC to support interaction with children. Based on an analysis of the results, Version 3 of the RAACS scale was developed and is recommended for future use. Analyses of Version 3 showed acceptable inter- and intra-coder reliability and excellent internal consistency.


The purpose of this investigation was to meta-analyze the single case research on the use of aided AAC with individuals with autism spectrum disorders (ASD). Twenty-four single-case studies were analyzed via an effect size measure, the Improvement Rate Difference (IRD). Three research questions were investigated concerning the overall impact of AAC interventions on targeted behavioral outcomes, effects of AAC interventions on individual targeted behavioral outcomes, and effects of three types of AAC interventions. Results indicated that, overall, aided AAC interventions had large effects on targeted behavioral outcomes in individuals with ASD. AAC interventions had positive effects on all of the targeted behavioral outcome; however, effects were greater for communication skills than other categories of skills. Effects of the Picture Exchange Communication System and speech-generating devices were larger than those for other picture-based systems, though picture-based systems did have small effects.

This investigation involved a meta-analysis of the single-case research on the use of aided AAC with individuals with AU investigating the differential impacts of AAC by participant characteristics. Results indicated that participants with ASD and no additional diagnoses had better outcomes than others and that participants with ASD and developmental disabilities outperformed participants with ASD and multiple disabilities. Further, preschool-aged participants had better outcomes than elementary-aged and secondary-aged participants. Participants in all diagnostic categories and age ranges had moderate or better effects.


Twenty-three studies involving the use of speech-generating devices were reviewed. Only children between ages 3- and 16-years-old with an ASD were included in the synthesis of results (51 children total). The authors reported that 86% of the studies showed a positive outcome (increased use of device, learning of communication skill, etc.), while 78% of studies used a convincing experimental design. The most commonly reported method of teaching the use of the devices was behavior-analytic instruction, followed by naturalistic procedures such as incidental teaching.


The researchers investigated whether 57 toddlers who had participated in an earlier study to teach either language or the use of a speech-generating device would then generalize their increased use of those communicative activities to naturalistic interactions with their parents outside of therapy. Pre-post therapy observations indicated that children did increase their use of target communications in natural interactions, and that the amount on increase was positively associated with amount of improvement seen in last therapeutic session.


Three boys (two with ASD) were taught to emit a vocal request in conjunction with a previously learned manual sign when requesting an item using a prompt-delay + vocal model + shaping procedure to reinforce successive approximations of a vocal request in a multiple-baseline-across-participants design. One of the two participants with ASD showed an increase in both unprompted and prompted use of the vocal request following the introduction of the prompting and shaping procedures, while the other participant only showed a slight increase in prompted vocal requests.

21. Banda, D.R., Copple, K.S., Koul, R.K., Sancibrian, S.L., & Bogschutz, R.J. (2010). Video modeling interventions to teach spontaneous requesting using AAC devices to individuals with autism: a preliminary investigation. *Disability and Rehabilitation, 32*(16), 1364-1372. This study reported the evaluation of video modeling to teach requesting using a speech-generating device to two young adult participants with ASD (ages 17 and 21). In a multiple-baseline-across-participants design one of the young men began making spontaneous requests with the SGD following the introduction of the video model intervention but the second young man did not.

22. Lal, R. (2010). Effect of alternative and augmentative communication on language and social behavior of children with autism. *Educational Research and Reviews, 5*(3), 119-125. The purpose of the study was to evaluate the effect of the Makaton Vocabulary AAC program with a small sample of eight children with ASD in India. Using a pre-post design and experimenter developed measurement surveys; the results suggest that following 12 sessions of interventions the eight children showed higher ratings on both word recognition and social behavior scales.

23. Franco, J. H., Lang, R. L., O’Reilly, M. F., Chan, J. M., Sigafoos, J., Rispoli, M., & Franco, J. H. (2009). Functional analysis and treatment of inappropriate vocalizations using a speech-generating device for a child with autism. *Focus on Autism and Other Developmental Disabilities, 24*(3), 146-155. The purpose of this study was to extend the research on functional communication training by examining the use of a speech-generating device for a 7-year-old child with autism and no spoken language who demonstrated inappropriate vocalizations that served multiple functions. The child was taught to discriminate among multiple options on the device and then to choose an appropriate message in two generalization settings. When the device was available, the child reduced his inappropriate vocalizations across all settings and increased his engagement in appropriate activities and interactions with others.

24. Gregory, M. K., DeLeon, I.G., & Richman, D.M. (2009). The influence of matching and motor-imitation abilities on rapid acquisition of manual signs and exchange-based communicative responses. *Journal of Applied Behavior Analysis, 42*(2), 399-404. Matching and motor imitation skills were assessed for six children with autism (7 to 17 years of age), followed by training to request the same set of preferred items using exchange-based communication and manual signs. Three participants displayed both skills and rapidly acquired both communicative response forms. Three others displayed neither skill; one mastered exchange-based responses but not manual signs, and neither of the other two easily acquired either response form.

The purpose of this study was to compare two conditions for teaching two children with autism (ages 4 and 5) who used augmentative and alternative communication (AAC) to point to the printed letter that corresponded to two spoken letter sounds. In one condition (gradual array), the printed letter was first presented in isolation and then distracter letters were gradually introduced. In the other condition (fixed array), the printed letter was immediately presented in combination with seven distracter letters. Results revealed that the fixed array condition resulted in a faster rate of acquisition of target skills for both participants.


The purpose of this study was to examine the effects of FCT and a VOCA on the challenging behavior and language development of a 4-year-old girl with autism. The participant's mother implemented modified functional analysis (FA) and intervention procedures at home. A multiple probe design across activities was used to analyze intervention effectiveness. FCT with a VOCA successfully decreased challenging behavior and increased VOCA use. A secondary analysis revealed increased pronoun use.


This study investigated the effects of a peer network strategy on the duration of social interaction and social-communicative skills for three students with classic autism (ages 6 and 7). Typical peers received training on social skills. The target students with autism received training in the use of an augmentative communication system along with two training sessions in social skills with their peer network. Feedback and reinforcement for appropriate behaviors and interaction continued throughout the intervention phases. Results showed increased social interaction time and use of the augmentative communication system for the three students, with increased expressive language for the three students.


This study explored the use of a computer-based requesting system, employing animated graphics and touch-sensitive screen input, with three girls with Rett syndrome (characterized by severe motor disorder, impaired cognitive function, and language disorder). All three girls displayed increased item requesting when provided computer-based requesting instruction, and two exceeded training criteria.


Three 4-to 5-year-olds with autism participated in this study to determine whether instruction along with a voice output communication aid (VOCA) would improve their ability to make requests. All three participants showed substantial increases in their ability to request preferred items successfully using the combined interventions over the 12 sessions of the study.
Two 4-year-olds with autism participated in this study to determine the efficacy of aided language modeling (ALM; PCS and natural language strategies) to improve their receptive language symbol comprehension and production. Results indicated that ALM was an effective intervention for increasing both symbol comprehension and production, and the effects were maintained over the 37 sessions of the study.

This article reviewed 23 studies involving 28 participants, ages 2-18, to determine the effects of AAC on the speech production of individuals with developmental disabilities. While none of the studies showed a decrease in speech production, overall, the results were mixed, with some showing little or no gains.
*Note*: Participants with exceptionalities other than autism and those over 21 years of age in the original study were not included here.

Five students with autism, ages 5-6 years, participated in this study to determine whether the introduction of pictures along with verbal directions would increase the rate of correct responses. Results showed no significant difference in the acquisition of commands with or without pictures; however, there were significant improvements in maintenance and generalization of the acquired commands with the use of pictures over 16 sessions.

Two students, ages 16 and 20 years, participated in this study to determine whether the use of voice output communication aids (VOCA) would repair ineffective communication interactions and initiate first communications. Over the 30 sessions of the study period, both participants showed effective use of VOCA to repair communication and also spontaneously began to use VOCA to initiate communication.

One 13-year-old boy with autism participated in this study using communication boards, picture communication systems (PCS), and natural aided language by classroom staff to increase functional language. Results showed substantial increase in functional language as well as PCS over the 22-month study period.

This study involved one 14-year-old with autism and other cognitive disabilities. The purpose was to determine whether or not the availability of voice output communication aids (VOCA) and PCS could individually or jointly increase requests. While the VOCA was the preferred methodology, there was rapid acquisition and use of both approaches to increase requests.


This study included four children diagnosed with autism between the ages of 4 and 5 years who received assistive technology supports over a 5-year period in a public school environment. The study examined the effects of assistive technology support, specifically voice output communication aid (VOCA) and naturalistic teaching procedures in the context of established classroom routines. Data showed an increase in communicative interactions using VOCAs. Communicative behaviors remained stable during the two naturalistic teaching sessions measured (snack and play times). Results supported multiple communicative functions by the children using VOCAs, including requests, yes/no responses, statements, and social comments.

**REFERENCES**


**Organizations Recognizing Intervention As Evidence Based**

National Professional Development Center on Autism Spectrum Disorders: [http://autismpdc.fpg.unc.edu/](http://autismpdc.fpg.unc.edu/)
RESOURCES AND MATERIALS

- AAC Institute: [http://www.aacinstitute.org/](http://www.aacinstitute.org/)
  This is a resource for all who are interested in enhancing the communication of people who rely on augmentative and alternative communication.

  This site provides free therapy and instructional tools and ideas from Dr. Caroline Musselwhite & Julie Maro.

  Free manual communication board resources.

  The AT Basic Modules provide general assistive technology information on a variety of related uses for elementary students with disabilities. They include links to tutorials on the setup and use of several products as well as links to related resources.

  This is a research summary of peer-reviewed research with strong scientific designs.

  The modules when completed will provide educators, other professionals, families, persons with disability, and others a convenient platform to gain the assistive technology information they need. Relevant topics to be covered are: AAC for adults, AAC for Early Childhood, AAC for School age.


  This website offers articles and other valuable information.

- “Make It Yourself” Directions. Simplified Technology by Linda Burkhart: [http://www.lburkhart.com/handouts.htm](http://www.lburkhart.com/handouts.htm)
  “Make it Yourself” directions for various items such as a talking switch, a mouse house, a switch mount with loc-line, etc. These are shared for the purpose of individual personal use. They are not intended for large-scale duplication and distribution.

This online learning center contains tools and resources for implementing AAC in schools.

- Speech Generating Devices/VOCA. Evidence-Based Practice Brief. The National Professional Development Center on ASD: http://autismpdc.fpg.unc.edu/content/speech-generating-devicesvoca
  The NPDC has developed evidence-based practice (EBP) briefs for their identified EBP. Each brief contains an overview, step-by-step directions for implementation, implementation checklist, and evidence base.

**GENERAL RESOURCES**

- Autism Internet Modules (AIM) www.autisminternetmodules.org. The Autism Internet Modules were developed with one aim in mind: to make comprehensive, up-to-date, and usable information on autism accessible and applicable to educators, other professionals, and families who support individuals with autism spectrum disorders (ASD). Written by experts from across the U.S., all online modules are free, and are designed to promote understanding of, respect for, and equality of persons with ASD.

- Evidence-Based Practice Briefs http://autismpdc.fpg.unc.edu/content/briefs

- Indiana Resource Center for Autism (IRCA) http://www.iidc.indiana.edu/index.php?pageId=32/. The Indiana Resource Center for Autism staff’s efforts are focused on providing communities, organizations, agencies, and families with the knowledge and skills to support children and adults in typical early intervention, school, community, work, and home settings.

- Texas Statewide Leadership for Autism www.txautism.net. The Texas Statewide Leadership for Autism in conjunction with the network of Texas Education Service center with a grant from the Texas Education Agency has developed a series of free online courses in autism. Please check the training page, http://www.txautism.net/trainings, for updated lists of courses, course numbers, and registration information.
  - Current courses include the following:
    - Asperger Syndrome 101
    - Augmentative and Alternative Communication and the Autism Spectrum
    - Autism for the General Education Teacher
    - Autism 101: Top Ten Pieces to the Puzzle
    - Classroom Organization: The Power of Structure for Individuals with ASD
    - Communication: The Power of Communication for Individuals with ASD
    - Futures Planning for Students with Autism Spectrum Disorder
    - Navigating the Social Maze: Supports and Interventions for Individuals with ASD
    - Solving the Behavior Puzzle: Making Connections for Individuals with ASD
    - Strategies for Working with Students with Autism in the General Education Setting:
      - Strategy 1: Understanding Students with Autism Spectrum Disorders.
Strategy 2: Get to Know the Individual Student.
Strategy 3: Create Predictability.
Strategy 6: Create a Positive Learning Community.
Strategy 8: Use Instructional Strategies That Promote Successful Learning.
Strategy 10: Develop a Plan to Address Challenging Behavior.
Strategy 11: Borrow from the Special Educator's Toolbox.
Strategy 12: Respect Each Student's Dignity and Need for Autonomy

School-Based Applied Behavior Analysis Programs for Students with Autism Spectrum Disorders:
Course 1: Introduction to Autism Spectrum Disorders, Evidence-Based Practices, and the Basics of Applied Behavior Analysis (45 minutes)
Course 2: Reinforcement and Extinction (1.5 hours)
Course 3: Challenging Behavior Assessment and Treatment (1 hour)
Course 4: Communication and Social Skills Training (1 hour)
Course 5: Instructional Strategies (4 hours)
Course 6: Classroom and Environmental Arrangement (1.5 hours)