

*Special Education  
... a service, not a place.*

**The  
Educational  
Aspects of  
Autism  
Spectrum  
Disorders**

September 2003

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# **The Educational Aspects of Autism Spectrum Disorders**

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# Introduction

We know more today than ever before about autism spectrum disorders. Research continues to uncover information about the possible causes of autism (*Mental Health: A Report of the Surgeon General*, 1999). The *Diagnostic and Statistical Manual for Mental Disorders - Fourth Edition - Text Revision* (DSM-IV-TR) is the diagnostic manual used to classify disabilities. It provides refined definitions of autism spectrum disorders. More attention is being devoted to early diagnosis and early intervention. Furthermore, there is increased awareness of the need for specifically designed interventions for the many learning differences of children with autism spectrum disorders.

Because of these ongoing developments, researchers and other professionals are able to provide us with more information about what autism spectrum disorders are (or are not) and what to do (or not to do) about it. However, the issues remain multifaceted and complex to many of us who are involved on a day-to-day basis with children and youth with autism spectrum disorders.

As parents, teachers, speech-language pathologists, school psychologists, and the other specialists involved in the educational aspects of autism spectrum disorders, we need to know how we can enable individuals with autism to reach their fullest potential. We need to decipher the myriad of educational information to determine how to enhance each child's life as the child experiences the world around him or her. For everyone involved in the daily lives and education of children with autism spectrum disorders, it is critical to remember that ***no two children are alike***.

## Purpose

The purpose of this manual is to: 1) assist in providing information about educating students with autism spectrum disorders; and 2) assist in planning the educational program for students with autism spectrum disorders to include parents, teachers, speech-language pathologists, school psychologists, and others involved in the instructive development of children with autism spectrum disorders.

The following questions will provide direction for the content of this manual:

- Where do parents start when a diagnosis is made?
- What are Autism Spectrum Disorders (ASD)?
- What are the indicators of an appropriate educational program?
- What are the various methodologies or intervention strategies available to parents and educators?
- Where can parents and educators find additional information on autism spectrum disorders?

This manual will not answer all the questions you may have as a parent, a teacher, or a professional involved in the education of children with autism spectrum disorders. Rather, it will provide a structured approach to deciphering the volumes of information available as you consider what educational method, or combination of methods, will meet the needs of the child with an autism spectrum disorder. There are multiple factors involved in the diagnosis and treatment of children with autism spectrum disorders, and each individual with an autism spectrum disorder will exhibit a variety of characteristics in the various areas along the continuum. Keys to determining how to help each individual with an autism spectrum disorder reach his or her potential are the ongoing identification of his or her needs and providing an individualized educational program designed specifically to meet those needs.

*No two children are alike.*

# Getting Started: Strategies for Parents

A diagnosis for one's child carries a wide range of reactions or feelings for the parents and family members of that child. Among these feelings are denial, guilt, anger, fear, and confusion. It is important for you to know you are not alone, and to recognize your feelings and work through them as you search to comprehend the significance of the diagnosis, determine needed services, and obtain support for you, your child, and other family members.

The Indiana Resource Center for Autism (IRCA) describes the following strategies that may be helpful in translating or deciphering all the information available as you make decisions about your child's needs as well as your needs as a parent(s) and the needs of your family.

*Strategy 1:* Learn as much as possible about autism spectrum disorders and your child's particular diagnosis.

- When you first become aware of your child's diagnosis, it is important to learn as much about the diagnosis and how it affects your child as you can.
- The Washington State Autism Outreach Project (toll free phone: 1-888-704-9633) has a lending library with hundred of books, videos, and curriculum materials spanning the autism spectrum with an array of resources in both English and Spanish.
- The Washington State Autism Outreach Project staff will also respond to questions and provide resource information about parent support groups and associations, autism consultants, recreational opportunities, government services, medical providers, higher education, research, early intervention, educational interventions and training opportunities.
- The Washington State Autism Outreach Project website, <http://autism.esd189.org>, provides information on educational interventions and links to national and local resources related to autism spectrum disorders.

*Strategy 2:* Seek to understand the laws, government service agencies and the acronyms they use, therapies and the abbreviations they use, the array of educational approaches, as well as the medical and educational terms. (You will encounter some of those acronyms, abbreviations, laws, agencies and associated terms in this manual.)

- Others have been down this road and can help unravel the web of laws, agencies, services, and resources.
- There are organizations – local and national – that provide support and advocacy for persons with autism spectrum disorders and their families. The Washington State Autism Outreach Project can provide the names of contact persons for these organizations and other pertinent information as well.

- Support groups for families of children with disabilities also exist in many locales. They can assist in identifying types and availability of services in your area. They can also provide comfort, acceptance, support, and understanding of issues as your child progresses through each stage of life. Even if you choose not to actively belong to a support group, making an initial contact can provide valuable information.

*Strategy 3:* Children with autism spectrum disorders can and do learn! Learn to participate in the important decisions surrounding your child's education, whatever the age of your child.

- The Individuals with Disabilities Education Act (IDEA) is a federal law providing for the education of children with disabilities. Part C of IDEA provides for early identification and intervention for birth to three year olds with disabilities. In Washington State, the Infant Toddler Early Intervention Program (ITEIP) is responsible for administering the state system of early intervention services. The state lead agency is the Department of Social and Health Services (DSHS).
- IDEA also provides for the education of eligible special education students ages three to 21 years. Local school districts serve preschool and school age children with autism.
- IDEA provides for families to be actively involved in making decisions about their children's education. Learning your rights under the law will facilitate your understanding of the process and make it easier for you to participate in the decision-making process. In Washington, state regulations addressing special education are at chapter 792-172 WAC (Washington Administrative Code).
- Each school district has a set of procedures, which are available upon request, outlining the district's implementation of state special education rules.

*Strategy 4:* Keep records.

- Record keeping will facilitate the process of accessing services for your child with an autism spectrum disorder.
- The numerous professionals you will see as your child matures will need to know specific information. Keeping records of his or her developmental history will provide important diagnostic and evaluation information that can influence the educational process even into adulthood.
- Organizing the information in a concise manner will not only help you remember the information, but it will also make it easier for professionals to access and utilize it. This is particularly true as your child gets older and the amount of information increases.

*Strategy 5:* Identify your child's needs, your needs as a parent(s), and your family's needs.

- Each family is different as is each child with an autism spectrum disorder. The needs of your child and of your family will change as the child matures.
- At various times, the services you need will differ. Some examples of the services individuals with autism spectrum disorders and their families may require include: physical, occupational, and speech-language therapy, residential programs, medical and dental care, financial assistance programs, advocacy, legal information, respite care, sibling support and family support, and education, socialization, recreation, and vocational needs.
- Accessing needed services may differ from community to community. The Washington State Autism Outreach Project can assist in locating critical agencies, supports, and resources.

*Strategy 6:* Take time for all family members to rejuvenate!

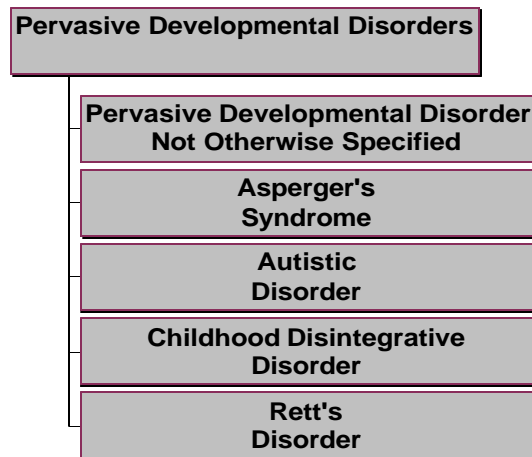
- Parents and families have a great deal to learn. It can be challenging to balance routines, schedules, and plans; however it is important that all family members feel accepted, supported, and valued.
- Establish time for all family members to revitalize and gain perspective. You will all have ups and downs, so it is important to keep things in perspective, and to take time for yourselves to reduce the stress that is common when parenting any child, including your child with an autism spectrum disorder.
- Laugh together to relieve pressures and strain.



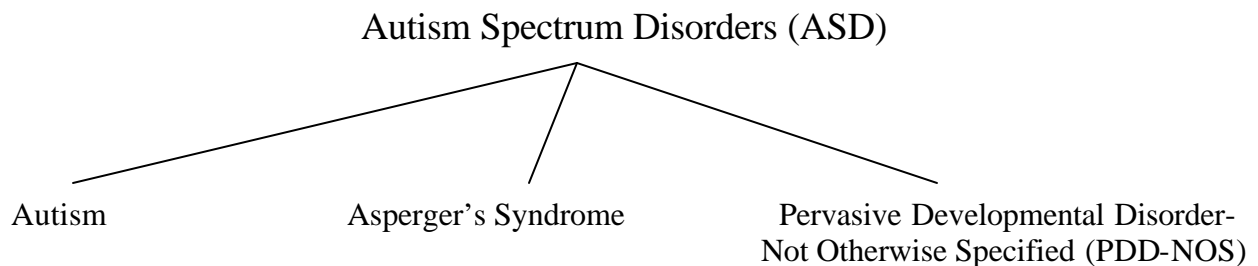
# Autism Spectrum Disorders

Basic to the determination of approaches and methodologies in treatment for each child with an autism spectrum disorder is an understanding of that child's unique strengths and specific learning needs. Therefore, we will begin by defining autism spectrum disorders.

Autism spectrum disorders are a set of disability groups included in the DSM-IV-TR under the heading of Pervasive Developmental Disorders. Pervasive Developmental Disorders are characterized by severe and pervasive impairment in several areas of development, including reciprocal social interaction skills, communication skills, or the presence of stereotyped behavior, interests, and activities. Below are the five disability groups included under the umbrella of Pervasive Developmental Disorder.



Autism spectrum disorders include three of the five Pervasive Developmental Disorders which are autistic disorder, asperger's syndrome, and pervasive developmental disorder-not otherwise specified. The term, autism spectrum disorder, implies that the three disorders share common characteristics, but also have unique qualities that allow for a differential diagnosis of each. Consequently, the severity of impairment varies within and across each individual diagnosed with an autism spectrum disorder.



## Autism/Autistic Disorder

Children with autism have significant difficulties in social interaction, expressive and receptive communication and exhibit restricted, repetitive and stereotyped patterns of behavior, interest,

and activities. Onset of autism is evident before age three, with evidence of delays or abnormal functioning in social interaction, language, or symbolic play.

## **Asperger's Syndrome**

Children with Asperger's Syndrome have significant difficulties in social interaction and exhibit restricted, repetitive and stereotyped patterns of behavior, interests, and activities. Asperger's syndrome causes clinically significant impairment in social, occupational or other important areas of functioning. In contrast to Autistic Disorder, people with Asperger's Syndrome do not display clinically significant delays in language acquisition, although there may be deficits in the practical use of language and social-communication skills. Additionally, students with Asperger's Syndrome do not demonstrate cognitive delays during the first three years of life.

## **Pervasive Developmental Disorder-Not Otherwise Specified (PDD-NOS)**

The category of Pervasive Developmental Disorder-Not Otherwise Specified is used when a child does not meet the criterion for other disabilities, but does display a severe and pervasive impairment in the development of social interaction or communication skills, or the presence of restricted, repetitive, and stereotyped patterns of behavior, interests, and activities.

## **Educational Definitions**

Autism is one of the disabilities specifically defined in the federal Individuals with Disabilities Education Act (IDEA) and the Washington Administrative Code (WAC) 392-172-146.

**WAC 392-172-146 Definition and eligibility for autism** Autism means a developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age three, that adversely affects a student's educational performance and requires specially designed instruction. If a student manifests characteristics of autism after age three, that student still could be diagnosed as having autism if the criteria in this section are satisfied.

Other characteristics often associated with autism are engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines and unusual responses to sensory experience.

The term does not apply if a student's educational performance is adversely affected primarily because the student has an emotional/behavioral disability, as defined in this chapter. The category of autism includes students with pervasive developmental disorders.

It is important to recognize that a diagnosis of autism, Asperger's syndrome or PDD-NOS alone is not enough to qualify as a special education student. WAC 392-172-035 (2) states the following:

Special education student means any student, enrolled in school or not,

- (i) who has been identified as having a disability,
- (ii) whose disability adversely affects the student's educational performance, and
- (iii) whose unique needs cannot be addressed exclusively through education in general education classes with or without individual accommodations and is determined to be eligible for special education services...

## **Characteristics Associated with Autism Spectrum Disorders**

Autism spectrum disorders are disabilities with many variations in symptoms or behavior characteristics. Furthermore, people with autism spectrum disorders vary widely in abilities, intelligence, and behaviors across those indicators. That is, some or all of the characteristics associated with autism spectrum disorders may be observed in a range of mild to very severe forms. For example, some children do not speak; others have limited language. Those with more advanced language skills tend to use a small range of topics, as well as have difficulty with abstract concepts and pragmatic language skills. Repetitive play skills, a limited range of interests, and impaired social skills are generally evident as well. Unusual responses to sensory information such as loud noises, lights, and certain textures or food or fabrics are also common. Because the three disability groups included in autism spectrum disorders are syndromes (i.e., a collection of symptoms), different children experience distinct characteristics with varying degrees of impairments. Each child is at different developmental levels from other children. Each child will be ready to learn certain skills at different ages.

Among all the possible behavior characteristics in autism spectrum disorders, *some common behaviors do occur*. It is important to be familiar with those as a basis of understanding their impact on educational programming. While *not all of these characteristics will be the same in all diagnosed cases*, they will include difficulties in the areas of social interaction, communication, sensory processing, and learning new skills. The table on pages 9-10 provides a quick look at some of the common behavior characteristics observed in infants and children with autism spectrum disorders. It should be noted that the table is neither all-inclusive nor is it intended to be used for diagnostic reasons. The characteristics will vary at different ages for individual children with autism spectrum disorders. Characteristics commonly associated with autism spectrum disorders are not exclusive to autism, Asperger's, or PDD-NOS and could appear in individuals diagnosed with other disabilities.

## **Other Considerations in Autism Spectrum Disorders**

Although there are no specific known causes of autism spectrum disorders, current research indicates the primary cause is some form of biological or neurological disorder. Autism spectrum disorders are not considered a mental illness, and there is no credible evidence supporting the notion that deficient or improper parenting can cause autism spectrum disorders. Other factors can be associated with or found in conjunction with autism. These include conditions such as variable cognitive impairments, fragile X syndrome, seizure disorders, mental illness, attention deficit hyperactivity disorder, anxiety, depression, and obsessive-compulsive disorders.

The scientific community continues its efforts to discover answers to the questions yet unanswered about autism. As we learn more from their efforts, and as we gain more insights from their research, better educational programming for persons with autism spectrum disorders will follow.

## COMMON CHARACTERISTICS IN AUTISM SPECTRUM DISORDERS

### Social Characteristics

### Communication Characteristics

<ul style="list-style-type: none"> <li>• Exhibits poor eye contact.</li> <li>• May not differentiate between strangers and those seen every day or show anxiety towards strangers.</li> <li>• May have a narrow range of emotions— inappropriate displays.</li> <li>• May not enjoy games like peek-a-boo or patty cake.</li> <li>• May not show an awareness of others. Often demonstrate little or no interest in establishing friendships.</li> <li>• Does not often initiate/sustain play with peers or join groups.</li> <li>• May lack understanding of social cues.</li> <li>• May laugh, giggle or scream inappropriately.</li> <li>• May lack understanding of how others feel/express moods.</li> <li>• May relate to people with difficulty- lack imaginative play.</li> <li>• May have strange fears or lack fear of real danger.</li> <li>• May display emotions inappropriately.</li> <li>• May have difficulty reciprocating emotionally and socially.</li> </ul>	<ul style="list-style-type: none"> <li>• Little smiling or bland face.</li> <li>• May be unusually quiet.</li> <li>• Does not respond to name or may appear not to hear.</li> <li>• May appear to not attend to someone talking to them.</li> <li>• May not babble and coo.</li> <li>• Language may be delayed.</li> <li>• May have echolalia, either immediately or later repeating words or phrases they hear.</li> <li>• Used to say a few words, but now does not.</li> <li>• Often have trouble imitating or using nonverbal gestures and appropriate facial expressions to communicate.</li> <li>• May have difficulty initiating interaction with others.</li> <li>• May appear not to be interested in communicating with others.</li> <li>• May not imitate or demonstrate functional and pretend play.</li> <li>• Does not point or wave bye-bye.</li> </ul>
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### Behavior Characteristics

### Learning Characteristics

<ul style="list-style-type: none"> <li>• May dislike being held or stiffen when held.</li> <li>• Exhibits repetitive body movements such as hand or finger flapping or rocking.</li> <li>• May be extremely sensitive to some auditory stimuli.</li> <li>• May not respond to some auditory stimuli.</li> <li>• May exhibit stereotyped and repetitive use of language or idiosyncratic language.</li> <li>• May persevere on certain activities.</li> <li>• May demonstrate persistent preoccupation with parts of objects.</li> </ul>	<ul style="list-style-type: none"> <li>• Will perform unevenly within and across skill areas, sometimes demonstrating exceptionality in some areas.</li> <li>• Resists changes in the learning environment.</li> <li>• Has difficulty waiting or using unstructured time.</li> <li>• May not generalize skills to other settings.</li> <li>• Has problems with abstract and conceptual thinking; requires concrete interactions.</li> </ul>
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<ul style="list-style-type: none"> <li>• May resist changes in routines; unreasonable insistence on following routine.</li> <li>• May lack fear of real danger.</li> <li>• May explore environment by inappropriate methods such as licking, smelling, handling</li> <li>• Avoids looking at other people.</li> <li>• Avoids contact with other people, preferring to touch objects.</li> </ul>	<ul style="list-style-type: none"> <li>• Uses and interprets speech literally; doesn't usually read facial expressions, body language or other social cues.</li> <li>• May be impulsive or compulsive or perseverate on certain activities; behavior is inconsistent.</li> <li>• May be distracted by auditory or visual stimuli.</li> <li>• Has trouble with organizational skills, planning, or making choices.</li> <li>• Relies on learned routines, cues, and other learned patterns.</li> </ul>
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*References:*

American Psychiatric Association, *Diagnostic and Statistical Manual for Mental Disorders-Fourth Edition-Text Revised (DSM-IV-TR)*, Washington D. C., 1994.

Indiana University, Indiana Resource Center for Autism, "Factors Associated with Autism," *Autism Training Sourcebook*, University Affiliated Program of Indiana, 2853 E. 10<sup>th</sup> St., Bloomington, IN 47408-2607, pp. 16-17, <<http://www.isdd.indiana.edu/~irca>>.

New York State Department of Health, Early Intervention Program, *Clinical Practice Guideline, Report of the Recommendations, Autism/Pervasive Developmental Disorders, Assessment and Interventions for Young Children (Age 0-3 Years)*, Publication No. 4217, Tower Bldg., Room 208, Empire State Plaza, Albany, NY 12237-0618, 1999, <[www.health.state.ny.us/nysdoh/eip/index.htm](http://www.health.state.ny.us/nysdoh/eip/index.htm)>.

*Training and In-service Autism Module*, Compiled by the Gateway Society-Services for Persons with Autism, 4807 Georgia Street, Delta, BC V4KT21.



## **Educational Programs**

The overall goal of educational programs for all students, including students with disabilities, is for a life with independence and functioning within the community. Reaching this goal requires an education based on the individual needs of the child/student. Setting the individual goals for each child requires realistic assessment of present levels of ability, as well as identification of learning deficits. In other words, what can the child with an autism spectrum disorder do now, what skills does the child excel in, what skills can be enhanced, and what skills does the student need to be able to seek employment and live in the community in adulthood? Is there improvement in the child's social and language development? Are the negative behaviors being addressed? What kind of program does it take to accomplish the overall goal?

In general, we know that we must structure the classroom environment so the educational program is consistent and predictable for the student. These children are less confused and learn better in that environment. They also learn better with information presented visually as well as verbally. In so far as is appropriate, children with autism spectrum disorders should have opportunities to interact with nondisabled peers who can provide models of appropriate behavior, language, communication, social, and play skills.

Students with autism spectrum disorders should also have training in community living skills and vocational skills at the earliest possible age. They need to be taught how to interact with others and be provided opportunities to develop relationships with other students. Teaching safety habits such as crossing the street or asking for help when needed is critical to developing independence. Learning to make simple purchases and to handle money is another example of a needed skill. All of these skills may be difficult, in varying degrees, for the student with an autism spectrum disorder to learn. However, ongoing assessment of abilities along with the individualized education programs will facilitate the achievement of maximum independence for each child with an autism spectrum disorder.

The importance of family involvement in the educational program is paramount. Programs developed with the parents to carry over learning activities, experiences, and approaches from school to the home and community will facilitate generalization of those skills. Generalization to home and community is essential for each child with an autism spectrum disorder to develop maximum independence and integration into the community. There are also specialized adult support services in employment and living arrangements to support youth and adults with autism spectrum disorders to live and work with varying degrees of independence in the community.

The following sections will provide an overview of the strategies essential to implementing an effective educational program. Note, however, that these are general descriptions and that educational programs must be individualized to meet the assessed needs of each child.

*No two children are alike*

### **Quality Program Indicators**

The importance of individualizing education programs for children with autism spectrum disorders and the importance of family involvement in those educational programs cannot be

overstated. Programs will differ from child to child because of the uniqueness of autism spectrum disorders and the range of potential symptoms involved. There is consensus among researchers, practitioners, and educators that appropriate intervention begins early, usually by 30 months or earlier. Further, researchers and professionals have identified a number of strategies that are essential to implementing an effective program. The following are ten indicators in a quality educational program for children with autism spectrum disorders.

- Family involvement
- Comprehensive assessment of skills and deficits
- Plan development/clearly defined goals and objectives
- Effective teaching strategies
- Assessment of the intervention
- Structuring the environment
- Applying functional behavior assessment to problem behavior
- Transition
- Opportunities with peers
- Comprehensive team approach

### **Family Involvement**

Parent and family involvement is an essential component of the student with autism spectrum disorders' educational program. It is important for professionals and parents to agree about how often and in what format ongoing communication can best take place. Although frustrations are often inevitable, it is important for staff and parents to keep communication as positive and free of blame as possible. Professionals need to present information in a clear fashion, avoiding the use of educational or medical terminology that can be intimidating and confusing to family members. Problems experienced by family or school members should be discussed as soon as they arise and before they get out of control. To accomplish this task, teachers should involve parents in problem solving and parents should not be afraid to ask questions about any aspect of their child's program.

### **Comprehensive Assessment of Skills and Deficits**

A comprehensive assessment of a student's skills and abilities is the corner stone of a quality Individualized Family Service Plan (IFSP) for children under three and Individualized Education Program (IEP) for children/students ages three to 21. By accurately determining the student's skill, strength and deficit levels, appropriate goals and objectives can be written and accurate baselines determined.

Assessments may differ because of each child's/student's age and ability level. However, it is essential to consider the characteristics of autism spectrum disorders in completing each assessment. Thus in addition to assessment of pre-academic and academic skills, the assessment may also include pre-vocational and vocational skills, self-help and adaptive skills, communication, socialization, sensory regulation, motivation and reinforcement, behavior, fine and gross motor, play and leisure, as well as cognition.

Methods of assessment will be dependent upon individual student needs and ability level. Chapter 392-172 WAC provides a framework of the identification process and evaluation procedures. The following source provides a description of assessment tools utilized to assess

children with autism. For further information on specific assessment tools, contact the special education director in your local district.

*Reference:*

California Department of Education, Special Education Division, *Best Practices for Designing and Delivering Effective Programs for Individuals with Autistic Spectrum Disorders*, Appendix B, Resources in Special Education (RiSE), P.O. Box 271, Sacramento, CA 95812-0217, 800-995-4099, 1997.

It is important to realize that assessment is an on-going process. For each child, a formalized assessment of skills must be conducted at regular intervals. The on-going assessment results are then utilized to develop and change, as needed, the IFSP or IEP.

### **Plan Development/Clearly Defined Goals and Objectives**

The key to teaching new skills, or improving emerging skills, is creating clearly defined IFSP outcomes or IEP goals and objectives that are developmentally appropriate, functional, based on the assessment results, the student's strengths and interests, and the individual characteristics of autism spectrum disorders. Chapter 392-172 WAC provides a framework of the IEP process and procedures for eligible special education students in Washington State, including the vital role of parents in the development and implementation of the IEP. Clearly, a number of factors must be considered in developing the individualized goals and objectives for students with autism spectrum disorders. Although individual goals will vary for each child based on their age, diagnosis and ability level, research has revealed that effective educational programs for students with autism spectrum disorders include goals for these students addressing communication, social development, cognitive development, problem behaviors, sensory and motor development, and adaptive behavior.

In writing clearly defined outcomes or goal and objectives, Heflin and Simpson (1998) suggest the IFSP or IEP team should ask the following:

- Have meaningful outcomes been identified for the student?
- Were family members involved in identifying goals to be reinforced at home and school?
- Are the outcomes developmentally significant?
- Are the outcomes developmentally appropriate for the child?
- Have the characteristics of the autism spectrum disorder been considered?
- Do the goals promote educational gain or merely address the symptoms of the disorder?
- Do the goals allow for generalization and maintenance of the newly acquired skills?

*References:*

California Department of Education, Special Education Division, *Best Practices for Designing and Delivering Effective Programs for Individuals with Autistic Spectrum Disorders*, Appendix B, Resources in Special Education (RiSE), Sacramento, CA, 1997.

G. Dawson, and J. Osterling, "Early Intervention in Autism," in M. J. Guralnick (ed.), *The Effectiveness in Early Intervention*, Paul H. Brooks Publishing Co, Baltimore, MD, 1997, pp. 307-326.

J. Heflin and R. Simpson, "Interventions for Children and Youth with Autism: Prudent Choices in a World of Exaggerated Claims and Empty Promises. Part II: Legal/Policy Analysis and Recommendation for Selecting Interventions and Treatments," *Focus on Autism and Other Developmental Disabilities*, 1998, Vol. 13, No. 4, pp. 212-220. Copyright 1998 by PRO-ED, Inc. Reprinted with permission.

National Research Council, Committee on Educational Interventions for Children with Autism, *Educating Children with Autism*, Catherine Lord and James P. McGee (eds.), Division of Behavioral and Social Sciences and Education, National Academy Press, Washington, D. C., 2001, <<http://www.nap.edu>>.

A review of goals and objectives would not be complete without a discussion of the importance of programming for the generalization and maintenance of newly acquired skills. Generalization is the ability to demonstrate a learned behavior or skill in a new or novel way, setting, environment, time or date, or among different individuals and materials. Maintenance, on the other hand, is the ability to demonstrate a skill over time. The ability to generalize and maintain meaningful skills that can be practiced and utilized within as well as outside of the classroom is essential to the success of each student's program. Meaningful tasks enhance the student's independence, give more opportunity for personal choice, and allow for more freedom in the community. Thus, the classroom teacher needs to work closely with the student's family as well as the support staff to ensure that new skills and desired behaviors can be practiced and reinforced in all settings, at home, at school, and in the community.

### **Effective Teaching Strategies**

The following section provides practical, low-tech strategies for teaching students with autism spectrum disorders as well as a list of helpful resources. When choosing an intervention or teaching strategy, remember that no single approach is likely to be right for every child; rather, teachers may need to utilize a wide variety of teaching strategies for their students with autism spectrum disorders. Further, strategies may need to be modified to fit the developmental level and educational placement of the student. As each student is an individual, it is essential that teachers adapt teaching strategies to meet the student's individual interests, strengths, and needs. The intervention methods chosen should also allow the student to demonstrate progress toward his/her IFSP outcomes or IEP goals.

### ***General Teaching Strategies***

Programs that result in educational progress for students with autism spectrum disorders utilize motivational strategies and are typically introduced in a highly structured method in a one-to-one or small group format, with minimal distraction, attention to specific details of the skill, and a focus on consistency, repetition, and predictability.

For the student with an autism spectrum disorder, verbal directions and unfamiliar materials often cause confusion that results in frustration and failure. As a result, many students with autism spectrum disorders become resistant to learning new skills. Therefore, it is necessary to identify and use teaching strategies that help motivate the student to learn. Many students with autism spectrum disorders have a limited repertoire of interests. Utilize these natural interests to capture the student's attention, to teach them in a meaningful way, and as a reward for completed work. For example, if your student has an interest in computers, find an interesting way to use computers to teach new skills, or use the computer as a reward for task completion of a non-preferred activity. Additional motivational strategies may include providing choices, changing

the way in which instructions are given, modifying the appearance or presentation of a task, changing the length of a task, or adjusting the pacing of your instructional presentation.

When the student does not have a skill in his repertoire or does not demonstrate a skill often enough to provide evidence of mastery, a variety of teaching methods, such as discrete trials, pivotal response training, shaping, and prompting, may be employed to encourage the student to learn the new skill. A discrete trial is a structured teaching strategy, used to teach tasks or lessons that have been broken down into their simplest teachable components. It consists of four components: the instruction, the child's response, a consequence, and a brief pause. Pivotal response training utilizes the discrete trial paradigm in lessons that are child directed. It also encourages teachers to create lesson plans and to work within the student's preferred activities. Shaping, which is the reinforcement of successive approximations of the target behavior, is helpful when the student does not initially have the desired skill in her repertoire. Whereas, prompting provides students with extra help to achieve the desired response. Prompting strategies may include verbal prompts, modeling, physical or gesture prompts, and the use of positional cues. Prompts can be used at the same time as instruction, during the student's response to help minimize errors, or after the student's incorrect response to demonstrate the correct answer. Although prompting strategies can be helpful in teaching new skills, it is essential to fade prompts over time in order to avoid prompt dependency.

Once new skills are acquired, it is important to gradually fade the high levels of contextual support and systematically generalize the newly acquired behavior to more complex, natural environments and routines. Refer to Topical Resources, Teaching Strategies on pages 44 – 45, for more information.

### ***Communication Strategies***

The communication abilities of students with autism spectrum disorders vary greatly, from students who are pre- or nonverbal to students with amazing expressive vocabularies, and from students who have very limited receptive abilities to those who can understand complex conversations and instructions.

For preverbal and nonverbal students with autism spectrum disorders, a communication program may focus on teaching the student to communicate through gestures, speech and/or an augmentative or alternative communication system. Alternative and augmentative communication systems such as sign language, visual symbol systems, communication boards, and voice output devices can provide an effective format for allowing students to communicate their wants and needs in any setting. Initiate augmentative and alternative communication options as soon as possible to ensure a method of reciprocal interaction and a system for teaching functional communication skills such as making requests, asking for help, protesting, and making choices. Early systems should be very functional and concrete. A typical progression for a visual-symbol communication system might be to move from a concrete to more abstract system. For example, starting with objects or actual photographs, moving next to colored photos and line drawings, and finally on to printed words.

Whether teaching a student to communicate through gestures, speech, or an augmentative or alternative communication system, new skills should generally be introduced in quiet, non-distracting environments, with generalization occurring in more natural contexts where natural cues and reinforcements are available to make the skills meaningful and spontaneous. Utilize

student interests to help motivate the child to initiate and use the communication system. For example, if a student has a favorite toy or book, the teacher may keep the material just out of reach but within visual sight of the student; thus, encouraging the student to request the wanted item. Positively reinforce all communicative attempts and initiations.

In contrast to the pre- or non-verbal student, many students with autism spectrum disorders are able to utilize complex language. However, these students, along with their non-verbal peers, often demonstrate a significant impairment in pragmatic language. For example, students with autism spectrum disorder often struggle with such skills as having a social conversation; perceiving, understanding and using gestures, facial expressions, and body language; initiating, maintaining and closing conversations; as well as understanding and using social conventions and rituals. Pragmatic communication skills are an important component of the student's educational program effectively taught through direct instruction as well as through social skill instruction (See the section on *Social Development Strategies* below for specific instructional strategies.) In addition to difficulty with pragmatic language, students with autism spectrum disorders also have difficulty understanding and comprehending complex language.

When working with any student with an autism spectrum disorder, a verbal or non-verbal student, it is important not to assume understanding. Teachers must closely monitor the student for receptive comprehension. Talk slowly and carefully. Some students will require simplified one or two-step directions, while others will require extra time to process spoken language. Clearly state your instructions and directions, indicating what you expect the student to do, rather than telling the student what not to do. Additionally, use proximity, gestures, and visual supports to help enhance and clarify your spoken message (See the section on *Structuring the Environment*, page 18, for tips and strategies on visual supports.)

While the content of language and communication instruction is similar for all children, the problems and strategies may differ. Work with your speech language pathologist to develop a comprehensive communication program. Additional resources may be found on page 43.

### ***Social Development Strategies***

Most students with autism spectrum disorders want to have friends, fit in, and be an active member of the social world. However, they have difficulty reading, understanding, and responding to social cues. Social skills, such as having a social conversation; perceiving, understanding and using gestures, facial expressions, and body language; initiating, maintaining and closing conversations; as well as understanding and using social conventions and rituals, baffle students with autism spectrum disorder. Because of this deficit in social understanding, students with autism spectrum disorders often develop, and then act upon, false beliefs or misperceptions about the social world, leading them to inadvertently say or do things that irritate and offend other people. Fortunately, a variety of approaches have been demonstrated to successfully teach students with autism spectrum disorders to understand and succeed in their social world.

Helping students with autism spectrum disorders to develop social understanding requires both systematic instruction as well as opportunities to practice the skills within naturally occurring routines. Rules, social stories, role-playing and scripts, cue cards and checklists, coaching, modeling, and friendship groups are all effective strategies for systematically teaching social skills.

Many classroom teachers find it helpful to teach and post the classroom social rules to help students understand the expectations of the classroom or other social situation. In writing rules, be sure to provide concrete, positively stated rules that are easy for the student to see and understand. Be sure to include a statement regarding why the rule is important. For example, “we use an inside voice so that students can finish their work.” Including why a rule is important provides the social link that children with autism spectrum disorders often fail to make on their own. Review the rules on a regular basis and reward the child with positive contingencies for following the appropriate social rules. In addition to posting and reinforcing social rules, it is important to provide instruction around social situations that confuse the student.

Social stories, originally developed by Carol Gray, use visual instructional materials in the form of a short story to describe social situations that are confusing for the student. The goal of any social story is to share information at the student’s developmental level regarding what is occurring in a given situation and why. Once written, the social story is read to or by the student to teach the new social skill, and then later to cue the student to practice the new skill. The team should develop a schedule to introduce, review, and fade the story.

In addition to social stories, scripting and role-playing are also effective strategies for teaching new social skills. Before introducing a student to a new social situation, it is often helpful to provide the child/student with a script of what to say and then role-play the situation. For example, a teacher may write a script teaching a student how to ask other children to play with him. The teacher and student might then role-play the scenario practicing how to respond to a variety of different outcomes.

Once a student has begun to demonstrate success with social skills in a structured setting, it is essential to practice the skills within naturally occurring routines. Social skills and friendship groups provide a context for students to both learn and practice social skills in a supportive and structured environment. Additionally, many teachers find it helpful to assign a peer mentor or friend to help the student with an autism spectrum disorder practice and use social skills in the natural environment. Whether through groups, peer mentors or other systems, it is important to create opportunities for the student to successfully practice newfound social skills with peers and with other adults both in and out of the classroom.

Depending on training and background, a variety of professionals may have knowledge in teaching social development. Talk with your speech language pathologist, school counselor or psychologist, and special education teacher to develop a comprehensive social development program. See pages 43 and 44 for resources.

In addition to the previously mentioned teaching strategies, a number of individual treatment methodologies have been and continue to be developed for students with autism spectrum disorders. For a description of some of the most cited treatment methodologies, refer to the *Interventions* section of this manual. Before choosing a teaching method or specific intervention strategy, Heflin and Simpson (1998) suggest that the IFSP or IEP team consider the following questions:

- Is the treatment published in peer-reviewed journals?
- Does the information regarding effectiveness come from a variety of sources?

- Are the studies validating effectiveness of high quality?
- Is empirical validation available, or does the majority of the support come from personal testimonials?
- Do the proponents claim that the option will help almost everyone with autism?
- How does this treatment rate in terms of restrictiveness and intensity?
- Are there less restrictive/intensive alternatives that may be just as effective?
- Are there options that are better researched than this one?
- Does the treatment ignore the functional communication and socialization needs of the child?

*Reference – Adapted from:*

J. Heflin and R. Simpson, “Interventions for Children and Youth with Autism: Prudent Choices in a World of Exaggerated Claims and Empty Promises. Part II: Legal/Policy Analysis and Recommendation for Selecting Interventions and Treatments,” *Focus on Autism and Other Developmental Disabilities*, Vol. 13, No. 4, 1998, pp. 212-220. Copyright 1998 by PRO-ED, Inc. Reprinted with permission.

### **Assessment of the Intervention**

Prior to using any intervention, it is important to record a baseline of functioning in the particular area targeted for improvement. That is, it is important to assess or determine how the child is currently functioning in the area(s) of need. Once the goals and objectives are set, data are recorded to monitor progress in the program designed to improve the target area as well as to troubleshoot the program. The data is analyzed to determine if a lesson or educational intervention is effective and what changes in the lesson or educational intervention need to be made. The IFSP or IEP team must determine how often data will be recorded and the criterion for determining when a particular intervention is unsuccessful and must be abandoned. Ongoing assessment of the child’s skill via the data collection system determines the next set of goals and objectives.

*Source for data sheets:*

*Show me the DATA!* Developed at the Experimental Education Unit, University of Washington, 206-543-4011.

### **Structuring the Environment**

Although all students thrive on routine and predictability, students with autism spectrum disorders are especially sensitive to changes in the environment or routine. Structuring the environment for students with autism spectrum disorder increases calm, attention, and responsiveness to learning. Although the level of structure needed for each student will vary based on their age, diagnosis and ability level, research has revealed that effective educational programs for students with autism spectrum disorders have structured environments which include:

- Physical Structure
- Routines
- Visual Supports

## ***Physical Structure***

Physical structure refers to the way each area in the classroom or school is set up and organized. To the student with an autism spectrum disorder who perceives the world differently or has unique sensory impairments, the school or classroom can be a confusing and overwhelming environment. Thus, the environment should be set up and organized with clear physical and visual boundaries. Boundaries such as carpets, bookcases, dividers, or study carrels are frames that visually identify an area, helping the student to understand where different activities take place and materials are stored. Consider providing a specific location for quiet activities and individual work activities. Once the various locations and boundaries are identified, signs, symbols, schedules, and choice boards can provide visual information on the rules and expectations of each area. Additionally, when planning the physical structure of the classroom, it is important to consider and minimize visual and auditory distractions, such as bright lights and noises, e.g., bells, children's loud voices, chairs scraping on the floor, and the humming of overhead projectors, lights, or computers.

## ***Routines***

Students with autism spectrum disorders are more socially responsive and attentive to learning and the environment when information is presented in a highly predictable and routine manner. Conversely, students with autism spectrum disorders can become easily overwhelmed at even minimal changes in their daily schedule or routine. To build independent work skills and to create a comfortable environment in which the student is ready to learn, develop and teach within routines. For example, a routine for independent seatwork may be as simple as first we work, and then we take a break. While a routine for large group instruction might be first the teacher lectures, then the students do group practice problems, followed by independent seatwork, and then a break. Routines are also effective in teaching functional, leisure, and vocational skills. Of course, routines can become problematic if the student begins to demonstrate an obsession for sameness that results in negative behaviors when change occurs. To mitigate this stress, plan and prepare the student for potential changes in the routine by utilizing transition strategies, role playing, and visual supports systems.

## ***Visual Supports***

Students with autism spectrum disorders have strong visual skills. Visual organization of instruction and materials allow the student to utilize these visual learning strengths. Examples of helpful visual supports may include the use of activity schedules and calendars, posted rules, choice boards, and other organizational methods as appropriate for individual students.

Activity schedules are a set of pictures or words that cue a student to participate in an activity. Depending on the student's age and ability level, an activity schedule may be a three ring binder with only one activity on each page, it may be a partial or full day picture schedule, or it may be as complex as a day timer or palm pilot. Mini-schedules are a set of pictures or words that cue children to the individual steps involved in a complex task. For example, a student learning to wash her hands, may have a mini-schedule breaking down the task of hand washing into four steps, including turning on the water, washing hands, turning off the water, and drying hands. Whereas, another student may use a written mini-schedule for social studies class, breaking down the subject period into its component parts of silent reading, note taking during lecture, and small group work. In addition to schedules, choice boards are another effective visual support.

Choice boards and menus are a set of pictures or words that visually communicate to the student with an autism spectrum disorder what materials, rewards or tasks are available to choose from. Choice boards can be effectively utilized to present a menu of leisure activities, work or tasks, restaurant or food selection, work areas, places to visit, songs to sing, or any other activity that may be a part of the student's life or education. Using a choice board is a method to help alleviate frustration caused by being unable to communicate a request and also to help motivate a student by allowing them to have power over choosing which task or activity to participate in.

Other visual organizational methods may include organizing and labeling materials in the classroom or in the student's locker or book bag. Providing cue cards for rules, and checklists for tasks, homework or learning materials can be helpful as well. For additional information on structuring the environment, refer to page 44.

### **Applying Functional Behavior Assessment to Problem Behavior**

One goal of the educational program is to prevent the development of problem behaviors. As previously discussed, communication, social, academic and motivational strategies, along with environmental modifications, such as physical and visual organization are effective strategies to utilize in teaching students with autism spectrum disorders and thus serve to prevent many potential problem behaviors. If negative behaviors develop or continue, a functional behavior assessment is used to identify the purpose of the child's social-communicative behavior and the effect it has on others, based on interpretations of the child's intent and meaning. Once the functional behavior assessment is completed, an intervention is created. Effective interventions may include environmental modifications, curricular interventions, or instruction designed to match the student's identified needs. The intervention includes finding and teaching appropriate replacement behaviors to serve the same communicative function as the negative behavior originally exhibited. Positive behaviors are then reinforced to reduce the negative behaviors.

### **Transition**

As discussed earlier, students with autism spectrum disorders often have difficulty with changes in the routine or the environment; this is especially true during unstructured periods, such as a planned or unplanned transitions. Consequently, students with autism spectrum disorders often need additional support and instruction in the skills that will allow the student to be as independent as possible during transitions, such as those occurring from:

- Activity to activity
- Home to school
- School to home
- One grade/school to the next grade/school
- School to post-school environments

When planning for a transition, it is important to prepare the student for upcoming changes. When transitioning from activity to activity, provide verbal and visual warnings before ending an activity and use visual supports, such as schedules, to inform the student as to which activity will occur next. Transition objects, which provide a visual cue as to where the student is going, are often helpful for students transitioning from one activity to another. For example, a student may carry a spoon as a reminder they are going to lunch. When transitioning a student into a new grade, school, community, job or post-school environment, it is important to prepare the student for the upcoming change. Assess the new environment to determine what skills the student will

need in order to be independent and successful and pre-teach those skills to the student. Talk with the student about the new environment, and if possible allow the student to visit the new environment. If a site-visit is not possible, consider videotaping, taking pictures, writing a social story, and compiling a list of expectations for the new environment. Additionally, meet with the staff members of the next setting to discuss the student's strengths and particular learning needs. Prepare the staff in the new setting by providing them with information on autism spectrum disorders, arrange to have them visit or learn about the student's current placement, and if possible arrange a meeting between the student and the new staff. In these ways, when typical and major life transitions are systematically addressed and planned for, students with autism spectrum disorders are more likely to experience success, have confidence, and be more independent, creating a positive experience for everyone involved.

### **Opportunities with Peers**

Students with autism spectrum disorders have significant difficulty in social and communicative interactions with others. Consequently, it is important for students with autism spectrum disorders to have regular and planned interactions with peers. Through peer contact, students with autism spectrum disorders may observe more appropriate models for social behavior, have access to responsive social partners, and engage in more normalized social experiences than would occur in the company of peers with autism spectrum disorders alone. However, it is important to recognize that merely placing a student with an autism spectrum disorder in the same place as typically developing peers does not ensure acquisition of social and communication skills. According to Wagner (1999), the most effective methods for helping students with autism spectrum disorders gain essential social and communicative skills include:

- Play or recreational activities that have been appropriately structured
- Peers receive training
- Teachers actively prompt and reinforce interactions between the student with an autism spectrum disorder and peers

#### *References:*

J. Burack, R. Root, and E. Zigler, "Inclusive Education for Students with Autism: Reviewing Ideological, Empirical, and Community Considerations," in D. Cohen and F. Volkmar (eds.), *Handbook of Autism and Pervasive Developmental Disorders*, 2<sup>nd</sup> ed., John Wiley & Sons, Inc., New York, NY, 1997, pp. 796-807.

Office of Superintendent of Public Instruction, *The MESH Manual for Inclusive Schools* (out of print), Olympia, WA, 1997.

P. Strain, G. McGee, and F. Kohler, "Inclusion of Children with Autism in Early Environments," in M. Guralnick (ed.), *Early Childhood Inclusion: Focus on Change*, Brookes Publishing Co., Baltimore, MD, 2001, pp. 337-363.

S. Wagner, *Inclusive Programming for Elementary Students with Autism*, Future Horizons, Inc., Arlington, TX, 1999.

### **Comprehensive Team Approach**

As discussed throughout this manual, autism spectrum disorders are characterized by deficits in communication, behavior, and social skills. Consequently, an effective program for students with autism spectrum disorders requires the expertise and input of family members and staff from multiple disciplines trained to understand the implications of autism spectrum disorders. A

comprehensive team approach includes parents and addresses personnel preparation issues, decision-making, and follow-up provisions. It includes related services personnel such as speech-language pathologists, psychologists, and/or occupational therapists to address social and language skills. Furthermore, a comprehensive team includes special and general education teachers and/or paraeducators to ensure progress in meeting the individualized educational goals, objectives, and outcomes of each student. Working together, a comprehensive team ensures consistency of teaching and intervention techniques across individuals, lessons, and settings, increasing the potential for students with autism spectrum disorders to acquire, maintain, and generalize new skills and abilities.

*References:*

California Department of Education, Special Education Division, *Best Practices for Designing and Delivering Effective Programs for Individuals with Autistic Spectrum Disorders*, Appendix B, Resources in Special Education (RiSE), Sacramento, CA, 1997.

G. Dawson and J. Osterling, "Early Intervention in Autism," in M. J. Guralnick (ed.), *The Effectiveness in Early Intervention*, Paul H. Brooks Publishing Co., Baltimore, MD, 1997, pp. 307-326.

Crystal Gray, *Educational Interventions Training Package*, for the Office of Superintendent of Public Instruction Washington State Autism Outreach Project, NW Educational Service District 189, Anacortes, WA, 2001.

Indiana University, Indiana Resource Center for Autism, *Autism Training Sourcebook*, University Affiliated Program of Indiana, Bloomington, IN.

National Research Council, Committee on Educational Interventions for Children with Autism, *Educating Children with Autism*, Catherine Lord and James P. McGee (eds.), Division of Behavioral and Social Sciences and Education, National Academy Press, Washington D.C., 2001.

# Interventions

The evaluation or analysis of the existing research in the literature relating to assessment and the development of optimal educational programs based on that analysis is confusing and difficult at best. The New York State Department of Health, Early Intervention Program prepared a guideline that is based on a sophisticated and rigorous analysis of the research and how it relates to assessment and intervention for children with autism. This document, *Clinical Practice Guideline, Report of the Recommendations, for Autism/Pervasive Developmental Disorders, Assessment and Intervention for Young Children (Age 0-3 Years)* is a valuable resource that will enhance understanding and facilitate informed decision-making with respect to assessment and intervention for young children with autism. The federal Office of Special Education Programs (OSEP) Research to Practice Division recently funded the National Academy of Sciences to study educational interventions for children with autism. Their findings are documented in a report, *Educating Children with Autism*.

## References:

New York State Department of Health, Early Intervention Program, *Clinical Practice Guideline, Report of the Recommendations, Autism/Pervasive Developmental Disorder, Assessment and Intervention for Young Children (Age 0-3 Years)*, Publication No. 4217, Albany, New York, 1999.

National Research Council, Committee on Educational Interventions for Children with Autism, *Educating Children with Autism*, Catherine Lord and James P. McGee (eds.), Division of Behavioral and Social Sciences and Education, National Academy Press, Washington, D. C., 2001.

**The following interventions are presented as information on the most often cited interventions. Inclusion of this information in this manual should not be construed as an endorsement of the intervention.**

**DISCRETE TRAIL (DT)/ INTENSIVE BEHAVIOR INTERVENTION (IBI)/ APPLIED BEHAVIOR ANALYSIS (ABA)** Beginning in 1963, Dr. Ivar Lovaas, of the University of California at Los Angeles (UCLA), and his colleagues applied behavioral techniques to children with autism. The Lovaas treatment methodology has evolved over the years. Although, initially practiced only in clinic settings, the methods refined by Lovaas are currently practiced in clinics, homes, and school settings.

The objectives of this treatment are twofold: teach the child to want to learn and help the child to understand that learning is possible. The methodology calls for one-on-one treatment through a sequenced behavioral perspective of operant conditioning. The classic stimulus, response, consequence model entails breaking down a skill goal into small, sequenced steps. Each part of a skill must be mastered before the next part is presented. Prompts and reinforcements (both positive and negative) are used to achieve desired behavior. The underlying philosophy is that behavior changes slowly and in small increments.

Research has demonstrated this intervention to be most successful when provided in an intensive (20-40 hours per week) one-on-one format by trained staff, which may include family members, professionals, paraprofessionals, volunteers, or college and high school students. Appropriate

training in the theory and methodology of applied behavior analysis is especially critical to the success of the student's program.

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**FLOOR TIME--DIR (Developmental Individual-Differences, Relationship Based) Model** is a developmental approach developed by Dr. Stanley Greenspan. A child psychologist, Dr. Greenspan, has been involved in clinical practice with children with special needs and their families for several decades in the Washington, D.C., area. His method calls for focusing on each child's current level of functioning and individual nervous system rather than grouping children under similar disability labels like autism and providing one treatment option for that disability.

The term "Floor Time" refers to the typical area used to foster a child's development - the floor. The philosophy of treatment emphasizes creating emotional attachments between adult and child. The approach is to facilitate mastery of developmental skills in three primary areas of deficit: sensory modulation, motor planning and sequencing, and perceptual processing.

The comprehensive treatment program involves interactive intervention time spent with a child in both the home and school settings where the parents or professionals channel activities to emphasize three types of experiences: Floor Time where the child leads one to an activity of choice which gradually becomes interactive, Semi-Structured Play where one interacts with the child to create highly motivating situations in which to engage in problem solving, and Motor, Sensory Spatial Play where the child is involved in physical activities such as running, jumping, spinning, etc.

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**PECS (Picture Exchange Communication System)** was developed by Dr. Andrew Bondy and Lori Frost at the Delaware Autistic Program. Dr. Bondy and Ms. Frost have since established a private consulting company, Pyramid Educational Consultants, to market and train professionals in its use.

The goal of the PECS is to have the child spontaneously initiate a communicative interaction. The underlying philosophy is that a reason for communication must precede actual speech production. The method begins with identifying potential reinforcers (items the child likes and wants). Training begins with physically assisted exchanges of pictures for actual items and continues through a total of six phases. These are meant to lead to desired results in the final stages where a child will use simple sentence structure to make a spontaneous request (phase 4); respond to the question "what do you want?" (phase 5) and responding to other simple questions, such as "what do you see?" with an appropriate comment, such as "I see a bird" (phase 6).

The originators of PECS stress that professionals should go through training in the PECS program to appropriately use the communication strategy and that aspects of behavioral analysis and behavioral teaching techniques be used in conjunction with PECS.

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**SENSORY INTEGRATION (SI)** was originally developed by Dr. Jean Ayres, an occupational therapist, who worked in California with children and adults with neurological disabilities. Since

Dr. Ayres' death in the early 1990s, the approach has continued to be defined and refined by various individuals.

SI is the ability of an individual to organize sensations received by the body to move, learn, and behave normally. We learn through sensory systems, which include visual/sight, auditory/sound, olfactory/smell, gustatory/taste, tactile/touch and vestibular/inner ear movement, and gravity.

Assessment and intervention techniques were developed to assist parents and professionals in the remediation and accommodation of sensory system deficits. The area of SI is primarily a treatment used by occupational therapists but can be applied effectively with other disciplines such as speech-language therapy and in classroom learning situations. However, non-informed parents and professionals should not provide stimulation to sensory systems without consultation or advice from an informed professional.

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**SOCIAL STORIES**, also known as Social Scripts, were developed by Carol Gray in 1991. Mrs. Gray was a teacher who worked as a consultant for the public schools in Jenison, Michigan. Her approach was developed from the "Theory of Mind" concept. Theory of Mind states that within the autistic spectrum of disorders there is a deficit in the ability of this population to understand the intentions of other people. Therefore, the individuals have trouble developing appropriate social behavior.

The methodology of Social Stories is founded on the belief that understanding social rules is an essential part of learning an appropriate social behavioral response. The objective is to teach understanding rather than compliance. The stories are usually written by parents or professionals involved with the child who are able to write stories to teach specific social situations of concern to an individual child.

Social Stories uses a simplified story formula to develop a story specific to an individual's social needs. The formula for writing the stories calls for clearly defining the social situation which is a problem for the student, identifying social cues which give perspective to the situation, and providing a directive for an appropriate response. The resulting story is to be read to or by the person with autism enough in advance to allow for multiple readings before the situation is to occur.

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**TEACCH (Treatment and Education of Autistic and related Communication handicapped Children)** was started in the 1970s by Dr. Eric Schopler at the University of North Carolina at Chapel Hill, School of Medicine.

The program recognizes the need for educational supports from early childhood through adulthood. It requires teacher training and follow-up training as well as collaboration with parents and co-therapists.

The philosophy of TEACCH is to focus on the individual with autism and to design a program around the person's interests, skills, and needs. It espouses a broad-based intervention approach, which includes extensive individual evaluation to determine the starting point for educational

programming. The individual educational goals and strategies to address these goals continue to evolve over a person's lifetime based on individual assessment and measured progress.

The teaching strategies are implemented in highly structured, modified physical environments using individualized curriculum.

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**THEORY OF MIND** is an evolving psychological concept that describes the development of an individual's understanding of how other people think. Dr. Simon Baron-Cohen is one of the leading professionals associated with Theory of Mind as it relates to autism.

The Theory of Mind concept describes the ability to understand intentions, beliefs, desires, and emotions from another perspective. Dr. Cohen termed a significant deficit in this area as "mind blindness." Infants are born with what Dr. Cohen calls two core areas: Folk Psychology-understanding how **people** work and Folk Physics-understanding how **things** work. Each individual's cognitive style depends on how these two core areas develop. A significant deficit in folk psychology development can be found in individuals with autism.

Theory of Mind proposes "mind blindness" can be overcome by teaching the individual to "mind read." This teaching includes fostering the development and understanding of social behavior, communication, and imagination. The theory does not provide definitive methodology to accomplish this. The most popular methodology lending itself to this teaching is that of Carol Gray's Social Stories.

*Reference:*

Gail J. Richard, *The Source for Treatment Methodologies in Autism*, LinguiSystems, Inc., 3100 4<sup>th</sup> Avenue, East Moline, IL 61244-9700, Copyright 2000, < [www.linguisystems.com](http://www.linguisystems.com) >.

## Autism Interventions Comparison Chart

**Reference:**

Gail J. Richard, "Autism Treatment Methodologies Comparison Chart," *The Source for Treatment Methodologies in Autism*, LinguiSystems, Inc., East Moline, IL, Copyright © 2000, pp. 153 - 155.

Methodology	Persons/Agency Affiliated with	Synopsis	General Principles	Duration	Aspect of Autism Addressed
<b>Behavior Modification (ABA, DTT, IBI)</b>	Ivar Lovaas	Teaches appropriate behavioral responses using intense one-on-one teaching strategies.	Operant conditioning principles of antecedent, behavioral response, and consequence are applied in discrete, small steps to teach appropriate behavior responses.	Generally 20-40 hours per week of instruction	Behavior
<b>Floor Time – (DIR)</b>	Stanley Greenspan	Deficits in a child’s developmental pattern can be addressed by stimulating brain development to compensate for neurological differences. Environmental stimulation and interaction utilize principles of neuroplasticity and emotional attachment to foster cognitive development.	Determine the individual child’s neurological developmental stages and stimulate the environment to promote developmental growth. It is critical to follow the child’s lead and current neurological levels to design intervention.	Not specified; unlimited	Neurological/ developmental delays
<b>PECS</b>	Andrew Bondy Lori Frost- Pyramid Educational Consultants	An alternative augmentative communication system to precede speech and establish the concept of interaction.	Communication involves at least two people in a social exchange and a message. The basic idea involves the presenting of a message exchange (picture) to accomplish a desired action.	Not specified; unlimited	Apraxia/nonverbal communication

<b>Methodology</b>	<b>Persons/Agency Affiliated with</b>	<b>Synopsis</b>	<b>General Principles</b>	<b>Duration</b>	<b>Aspect of Autism Addressed</b>
<b>Sensory Integration</b>	Jean Ayres	The ability to organize sensation received from the environment and the body to function effectively and respond productively.	Sensory system differences interfere with behavior and learning. Responses can be controlled better and result in more productive behavioral responses by modulating sensory stimuli.	Unlimited; lifelong	Sensory neurological system
<b>Social Stories</b>	Carol Gray	Teaches the necessary social skills, both physical/body and verbal in specific situations to help an individual function more productively.	Subtle social aspects are presented in a direct, clear story format to explicitly teach appropriate responses in social situations.	Unlimited	Social skills and behavior
<b>TEACCH</b>	Eric Schopler Gary Mesibov University of North Carolina	Broad intervention philosophy that is interdisciplinary and advocates understanding in the culture of autism to design treatment programs. Program includes training, research, and service.	Visual and physical support and structures are key components to effective intervention principles in educational programming.	Lifelong	Educational/vocational programming
<b>Theory of Mind</b>	Simon Baron-Cohen	Ability to understand mental states of other individuals; to put oneself in another's perspective of intention, beliefs, desires, and emotions, resulting in "mind blindness."	Focuses on teaching the person to develop abilities in reading the emotional intentions of others.	Unlimited	Social emotional aspects

# Early Intervention Services and Special Education

## Birth to Three Years of Age

The Individuals with Disabilities Education Act (IDEA), Part C provides for early identification and intervention for birth to three year olds with disabilities. The lead agency for Part C in Washington is the Department of Social and Health Services (DSHS). The DSHS Infant Toddler Early Intervention Program (ITEIP) is responsible for administering the state system of early intervention services. The State Interagency Coordinating Council (SICC) advises and assists DSHS ITEIP in administration of the state early intervention program.

There is a local lead agency and county ICC in each county or Tribal area. Like the SICC, the county ICC serves as an advisory body to the local lead agency working in close collaboration with other agencies and stakeholders in the local community. Those include:

- Families who have children with disabilities
- Family Resources Coordinators (FRC)
- Service providers
- Public school personnel
- Members of the broader community

Early intervention emphasizes a family-centered approach. Families of infants and toddlers are always at the center of the service coordination. Families can enter the early intervention system through many access points. ITEIP provides support for the local early intervention services needed to assist families in maximizing the development of infants and toddlers within their natural routines, activities, and culture.

The early intervention process is initiated by a referral to the local lead agency. Anyone can make a referral, with the family's permission – a doctor, a parent, or a friend of the family – if there is a concern about an infant or toddler's development. The FRC is the person who works closely with the family to ensure that the services are designed to meet the needs of each eligible infant or toddler and the needs of the family.

To be eligible for early intervention services, infants and toddlers must be identified and assessed using tests and procedures that are appropriate for very young children. The findings from these evaluations determine if the infant or toddler is experiencing delays in one or more of the five developmental areas:

1. Cognitive – ability to learn and learning style
2. Physical – ability to move, see, and hear
3. Communication – ability to understand language and express needs
4. Social or emotional – ability to relate with others
5. Adaptive skills – ability to dress, eat, and take care of oneself

Once the evaluation and assessment procedures are complete, and the infant or toddler is determined to be eligible for services, the family works with a team to develop an IFSP (Individualized Family Service Plan). The IFSP becomes the written description of services and

supports for an infant or toddler with a disability and his/her family. Services may be provided by a number of different agencies. It should be noted it is optional for school districts to provide programs that serve children age birth to three. An important part of the program is to ensure smooth connections or transitions as they move from the early intervention program to preschool education or other community services. A transition planning conference is arranged by the county Part C lead agency at least ninety days (or at the discretion of all parties up to six months) before the child's third birthday. This transition meeting is for the purpose of planning a child's transition into Part B preschool program, if child is eligible for these services, or into other appropriate services, such as Head Start, community preschool, etc. If a child is eligible for Part B services, the IEP is developed by a team that includes the child's parents, educators and school administrators. The IEP guides the services for the eligible special education student.

*References:*

Department of Social and Health Services, Infant Toddler Early Intervention Program Public Awareness Materials , Infant Toddler Early Intervention Program, Olympia, WA, September 2000, <<http://www.wa.gov/dshs/iteip/iteip.html>>.

Office of the Superintendent of Public Instruction, *Rules for Provision of Special Education to Special Education Students*, Chapter 392-172 WAC, Olympia, WA, revised April 2002, <<http://www.k12.wa.us/special/>>.

### **Three to Twenty-one Years of Age**

Washington state regulations, consistent with IDEA, provide for special education services for eligible students age three to 21. The school district evaluation group, along with the parents, determines whether a child/youth is eligible for special education services. If the child/youth is eligible for special education services, an IEP is developed delineating the services to be provided.

IDEA provides for families to be actively involved in making decisions about their children's education. Learning about your rights identified in the procedural safeguards will facilitate your understanding of the process and make it easier for you to participate in the decision-making process. Contact your local school district to obtain a copy of the procedural safeguards and special education procedures.

*References:*

Office of the Superintendent of Public Instruction, *Family/Educator Guide to Special Education Services in Washington State*, Olympia, WA, revised July 2002, <<http://www.arcwa.org/FEPP.htm>>.

Office of the Superintendent of Public Instruction, *Rules for Provision of Special Education to Special Education Students*, Chapter 392-172 WAC, Olympia, WA, revised April 2002.

Washington State School Directors' Association, *Resource and Procedures Manual for the Identification, Evaluation and Education of Students with Disabilities*©, 2<sup>nd</sup> ed., 221 College Street NE, Olympia, WA 98516, 360-493-9231, December 2000.

## Post-School Transition

Washington state regulations, consistent with IDEA, provide a framework for transition planning and services. Regulations require the student's IEP include a statement of transition needs to be identified at age 14 or younger, if appropriate, and a statement of needed transition services at age 16 or younger, if appropriate. Transition planning ensures that students with autism spectrum disorders are prepared for post-secondary education, and/or employment, and independent living. There are a number of services and supports available to assist in the transition process. Contact your local school district or the resources listed below for more information.

### *References:*

Division of Vocational Rehabilitation, State Office Lacey, Mailing Address: P.O. Box 45340, Olympia, WA 98504, Street Address: 612 Woodland Sq. Loop SE, Lacey, WA 98503-1044, 1-800-637-5627 Voice/TTY, Voice/TTY 360-438-8000, FAX: 360-438-8007, <<http://www1.dshs.wa.gov/dvr/index.htm>>.

Office of the Superintendent of Public Instruction, *Rules for Provision of Special Education to Special Education Students*, Chapter 392-172 WAC, Olympia, WA, revised April 2002.

Washington State Center for Change in Transition Services, Office of the Superintendent of Public Instruction state needs project, University of Washington, Experimental Education Unit, Room 130, Box 357925, Seattle, WA 98195, 206-543-4011, <<http://depts.washington.edu/ccts/>>.



# Washington State Autism Outreach Project

The Autism Outreach Project is a state-needs project funded through the Office of Superintendent of Public Instruction in collaboration with the Department of Social and Health Services and housed at Northwest ESD 189. The Autism Outreach Project provides information and technical assistance on autism spectrum disorders to families, schools and agencies in order to support the educational outcomes of students with autism spectrum disorders ages birth to 21.

## Services and Activities

### Lending Library

The Autism Outreach Project has a lending library with books, videos, and materials spanning the autism spectrum with an array of resources in both English and Spanish. Books may be checked out for three weeks and videos for two weeks.

### Information and Referral

Autism Outreach Project staff are available to answer questions or provide resource information on autism spectrum disorders, parent support groups and associations, autism consultants and diagnostic centers, medical providers, research, educational interventions, training opportunities, and other topics upon request.

### Web page

The Autism Outreach Project website provides information on autism spectrum disorders, a copy of the Lending Library resource guide, information on autism training in Washington, as well as a comprehensive list of links to national and state resources on autism spectrum disorders.

### Training

The Autism Outreach Project organizes and conducts regional and statewide training events. Each year, regional workshops are organized on topics such as early intervention, education, social skills, communication, and positive behavior supports. Autism Outreach Project staff present at school districts, community agencies, and parent support groups. The Autism Outreach Project also hosts speakers from around the country to provide one to three days of intensive training.

### Annual Data Collection

Demographic data is collected annually on the number of children with autism spectrum disorders in Washington schools and early intervention agencies.

### Other Projects and Services

To access services or to receive more information contact:

Autism Outreach Project

1601 R Avenue, Anacortes, WA 98221

Phone: 1-888-704-9633 Fax: 360-424-2146

Email: [autism@esd189.org](mailto:autism@esd189.org), Web: <http://autism.esd189.org>



## Selected Resources

Below is a selection of resources families, schools, and agencies may find helpful in meeting the educational needs of students with autism spectrum disorders. At the time of printing, all resource information was up-to-date. For current information, please contact the Autism Outreach Project.

**The following resources are presented as information only. Inclusion of this information in this manual should not be construed as an endorsement of the resources.**

### Washington Specific Resources

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#### Autism Spectrum Disorders

Autism Center

<http://depts.washington.edu/uwautism/>

Center on Human Development and Disability, Box 357920, University of Washington, Seattle, WA 98195

Phone: 206-221-6806, Fax: 206-543-5771, email: [leenk@u.washington.edu](mailto:leenk@u.washington.edu)

The University of Washington Autism Center at the Center on Human Development and Disability (CHDD) provides intervention services, professional training, diagnostic evaluation, and program consultation for children with autism and related pervasive developmental disorders.

Autism Outreach Project

<http://autism.esd189.org>

NW ESD 189, 1601 R Avenue, Anacortes, WA 98221

Toll free: 1-888-704-9633, Fax: 360-299-4071, email: [autism@esd189.org](mailto:autism@esd189.org)

The Autism Outreach Project, an OSPI state needs project, provides information and technical assistance on autism spectrum disorders to Washington families, schools and agencies in order to improve the educational outcomes of students with autism spectrum disorders ages birth to 21.

Autism Society of Washington (ASW)

[www.autismsocietyofwa.org](http://www.autismsocietyofwa.org)

Phone: 360-943-2205, Fax: 360-330-2240, Email: [autismsociety@hotmail.com](mailto:autismsociety@hotmail.com)

ASW is the local state chapter of the Autism Society of America (ASA). ASW sponsors statewide chapter meetings, support groups, a statewide conference on autism, and provides links to resources and information.

Families for Effective Autism Treatment (FEAT) of Washington

[www.featwa.org](http://www.featwa.org)

5700 Sixth Ave. S., Suite 208, Seattle, WA 98108

Phone: 206-499-FEAT (3328), Fax: 206-763-3373, email: [featwa@featwa.org](mailto:featwa@featwa.org)

FEAT is dedicated to assisting families in implementing behavioral programs. FEAT is a strong advocate for intensive early behavioral intervention rooted in the principles of applied behavior analysis. FEAT of Washington has a family resource guide for the greater Seattle area.

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## Education & Early Intervention

Department of Health and Social Services (DSHS)/Infant Toddler Early Intervention Program (ITEIP)

[www.wa.gov/dshs/iteip/iteip.html](http://www.wa.gov/dshs/iteip/iteip.html)

P.O. Box 45201, Olympia, WA 98504

Phone: 360-902-8048, TTY: 360-902-7864, Fax: 360-902-8497, email: [loercSK@dshs.wa.gov](mailto:loercSK@dshs.wa.gov)

ITEIP directs the coordination of the statewide system of early intervention services for families with children age birth to three that have developmental delays. There are links to services, interagency coordinating councils, baby development chart, and resources.

Office of Superintendent of Public Instruction (OSPI)

[www.k12.wa.us](http://www.k12.wa.us)

[www.k12.wa.us/specialed/](http://www.k12.wa.us/specialed/) (special education)

Old Capitol Building, P.O. Box 47200, Olympia, WA 98504-7200

Phone: 360-725-6075, TTY: 360-586-0126, Fax: 360-586-0247

The Office of Superintendent of Public Instruction administers the state education system.

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## Family Support

The ARC of Washington State

[www.arcwa.com](http://www.arcwa.com)

2600 Martin Way East, Suite D, Olympia, WA 98506

Toll free: 888-754-8798, Phone: 360-357-5596

The ARC of Washington State promotes the education, health, self-sufficiency, self-advocacy, inclusion, and choices of individuals with developmental disabilities and their families. This website will link you with Parent-to-Parent of Washington State and the Family Educator Partnership Project, an OSPI state need project.

Department of Social and Health Services (DSHS)

[www.wa.gov/dshs/](http://www.wa.gov/dshs/)

DSHS Constituent Services, P.O. Box 45130, Olympia, WA 98504-5130

DSHS is a family of programs and services to help children, families, individuals with specialized needs, and individuals needing long term care. DSHS programs include Division of Developmental Disabilities (DDD), the Infant Toddler Early Intervention Program (ITEIP), and Division of Vocational Rehabilitation (DVR).

DSHS/Division of Developmental Disabilities (DDD)

P.O. Box 45310, Olympia, WA 98504-5310

Phone: 360-902-8444, TTY: 360-902-8455, Fax: 360-902-8482

The Division of Developmental Disabilities (DDD) assists individuals with developmental disabilities and their families to obtain services and supports based on individual preference, capabilities and needs, and which promote everyday activities, routines, and relationships

common to those who receive services. This link will provide information on eligibility criteria, services, contacts, rules, and newsletters.

The Father's Network

[www.fathersnetwork.org](http://www.fathersnetwork.org)

16120 NE 8<sup>th</sup> St., Bellevue, WA 98008-3937

Phone: 425-747-4004, ext. 218, email: [jmay@fathersnetwork.org](mailto:jmay@fathersnetwork.org)

The Father's Network celebrates and supports fathers and families raising children with special health care needs and developmental disabilities. Many links for families are located at this website.

Washington PAVE (Parents Are Vital in Education)

[www.washingtonpave.org](http://www.washingtonpave.org)

6316 S. 12<sup>th</sup> St., Tacoma, WA 98465

Toll free: 1-888-5-PARENT, Phone: 253-565-2266, Fax: 253-566-8052, email:

[wapave9@washingtonpave.com](mailto:wapave9@washingtonpave.com)

PAVE supports individuals with disabilities and their families through training, information, referral, and support.

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## Transition to Work

Center for Change in Transition Services

<http://depts.washington.edu/ccts>

University of Washington, Experimental Education Unit, Room 130, Box 357925, Seattle, WA 98195

Phone: (206) 543-4011, email: [pabrown@u.washington.edu](mailto:pabrown@u.washington.edu) [cindajoh@u.washington.edu](mailto:cindajoh@u.washington.edu)

The Center for Change in Transition Services provides special education personnel, directors, students and their families with resources, information, and news regarding secondary special education and transition services.

Division of Vocational Rehabilitation (DVR)

<http://www1.dshs.wa.gov/dvr/index.htm>

Lacey DVR (Regional Headquarters) P.O. Box 45340, Olympia, WA 98504

Toll free/TTY: 1-800-637-5627, Phone/TTY: 360-438-8000, Fax: 360-438-8007

DVR is a statewide employment resource for businesses and people with disabilities. The mission of DVR is to enable individuals with disabilities to obtain and keep employment. This site provides links to supported employment, transition from school-to-work, and independent living.

## National and State Internet Resources

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### Asperger's Syndrome

Online Asperger Syndrome and Support (OASIS)

[www.udel.edu/bkirby/asperger](http://www.udel.edu/bkirby/asperger)

OASIS provides information and support on Asperger's Syndrome.

Tony Attwood

<http://www.tonyattwood.com/>

This web site contains resources and information on Asperger's Syndrome.

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## Autism Spectrum Disorders State & National Guidelines and Publications

California

<http://www.feat.org/CABP/default.htm>

The California website provides information about autism spectrum disorders and summarizes suggested strategies for addressing common issues in program development, transition planning, provision of effective staff development, and program evaluation.

Iowa

<http://www.medicine.uiowa.edu/autismservices/bestpractices/index.htm>

The Regional Autism Services Program at the University of Iowa has created guidelines for best practices in assessment and educational programming for students with autism.

Minnesota

<http://cfl.state.mn.us/SPECED/Guidelines/autism.pdf>

Minnesota has recently revised its eligibility criteria for autism spectrum disorders to reflect current research. A guidelines document, *Promising Practices for the Identification of Individuals with Autism Spectrum Disorders*, has been created to assist the field in applying the state's new eligibility criteria for ASD.

Missouri

<http://tiger.coe.missouri.edu/%7Emocise/pubs/fsta-1.htm>

Missouri has posted three technical assistance bulletins: *Services to Young Children (Ages Birth to 3) with Autism Spectrum Disorder*, *Instructional Program Development for Young Children (Ages 3-8 years) with Autism Spectrum Disorders*, and *Intensive Services for Young Children (Ages 3-8 Years) with Autism Spectrum Disorders*.

National Academy of Sciences

<http://www.nap.edu/books/0309072697/html/>

The federal Office of Special Education Programs (OSEP), Research to Practice Division funded the National Academy of Sciences to study educational interventions for children with autism. The book, *Educating Children with Autism*, published by the National Academy press, is available at this website.

NASDE-Autism Spectrum Disorders: An Update on Policies and Interpretations

<http://www.nasde.org/2001%20sat.%20conference/2001.htm>

The National Association of State Directors of Special Education, Inc. website. Scroll down to the March 21, 2001, Satellite Conference section where the outline, handout, and slides are listed. This is a 61-page Power Point document.

National Institute on Mental Health

<http://www.nimh.nih.gov/publicat/autism.cfm>

*The National Institute on Mental Health: Autism* is an on-line autism publication, including a definition of autism and information on national resources and supports.

Nebraska

<http://www.nde.state.ne.us/SPED/PDF/schsupport/asd.pdf>

Nebraska's web site features two documents on autism: *Special Education Verification and Effective Instructional Practices for Children with Autism Spectrum Disorders* and *Autism Verification Criteria*.

New York

<http://www.vesid.nysed.gov/specialed/autism/home.html>

New York has posted, *Autism Program Quality Indicators*, a self review and quality improvement guide for schools and programs serving students with autism spectrum disorders.

Oregon

<http://www.ode.state.or.us/sped/spedareas/autism/autismtap.pdf>

Oregon has prepared a technical assistance paper for autism spectrum disorder entitled *Autism Spectrum Disorder Evaluation, Eligibility, and IEP Development*.

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## Diagnosis and Assessment Information

American Academy of Pediatrics

<http://www.aap.org/policy/re060018.html>

*The Pediatrician's Role in the Diagnosis and Management of Autistic Spectrum Disorder in Children* is a policy statement to help the pediatrician recognize the early symptoms of autism and participate in its diagnosis and management. This statement and the accompanying technical report serves to familiarize the pediatrician with currently accepted criteria defining the spectrum of autism, strategies used in making a diagnosis, and conventional and alternative interventions.

First Signs

<http://firstsigns.org/>

Through statewide initiatives, the goals of First Signs are to provide all pediatricians and family practitioners with free information about screening for autism and other developmental disorders and to inform parents about the key social, emotional, and communication milestones. This website provides information and free downloads of screening tools for autism and other developmental disorders.

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## Educational Approaches

The Alert Program

<http://www.alertprogram.com/>

The Alert Program is used to help teach self-regulation awareness. The website provides information on the program's steps for teaching self-regulation awareness, workshop opportunities, and ordering information.

The Association for Behavior Analysis

<http://www.wmich.edu/aba/>

The Association for Behavior Analysis is dedicated to promoting the experimental, theoretical, and applied analysis of behavior. It encompasses contemporary scientific and social issues, theoretical advances, and the dissemination of professional and public information.

Division TEACCH

[www.teacch.com](http://www.teacch.com)

University of North Carolina-Chapel Hill structured teaching program. TEACCH stands for the Treatment and Education of Autistic and Related Communication Handicapped Children.

Do2Learn

[www.doToLearn.com](http://www.doToLearn.com)

The Do2Learn website provides free printable learning tools, including picture cards, organizational tools, and information.

Floortime-Stanley Greenspan

<http://stanleygreenspan.com/>

Stanley Greenspan is a practicing child psychiatrist, chairman of the Interdisciplinary Council on Developmental and Learning Disorders, and the founder and former president of the ZERO TO THREE: National Center for Infants, Toddlers, and Families. This website provides information on Stanley Greenspan's research, treatment, intervention model (floortime), publications, and presentations.

Picture Exchange Communication System-Pyramid Educational Consulting Services

<http://www.pecs.com/>

The Picture Exchange Communication System is an augmentative alternative training package that allows children and adults with autism and other communication deficits to initiate communication. This website provides information on the services, training and products offered by Pyramid Educational Consulting Services, including information on Picture Exchange Communication System.

The SCERTS Model-Barry Prizant

<http://www.barryprizant.com/>

Dr. Barry M. Prizant is a clinical scholar, researcher, and consultant to families of young children with Autistic Spectrum Disorders (ASD) and related communication disabilities. This web site provides information on services provided by Dr. Prizant and his colleagues, including information on the SCERTS model: A Comprehensive Approach for Enhancing Communication and Socioemotional Abilities for Young Children with Autism Spectrum Disorder.

Sensory Integration-The Ayers Clinic

<http://home.earthlink.net/~sensoryint/>

The concept of sensory integration comes from a body of work developed by A. Jean Ayres, PhD, OTR, which assessed how sensory processing and motor planning disorders interfere with daily life function and learning. This website provides information on the research of Dr. Ayres, the services provided by the Ayers Clinic, as well as resources and information on Sensory Integration Theory.

Social Stories-Carol Gray

<http://www.thegraycenter.org/>

Carol Gray is the original author of Social Stories. This website provides information on autism spectrum disorders and the Gray Center. It also provides information on Social Stories, Carol Gray's conferences, and resources.

Social Thinking-Michelle Winner Garcia

<http://www.socialthinking.com/>

Michelle Garcia Winner, M.A., C.C.C. is a speech and language pathologist who addresses the educational and life-planning needs of individuals with autism spectrum disorders. She specializes in social thinking and perspective-taking therapy and education for professionals, educators, children, and adults with high-end autism spectrum disorders, and their families. This website provides information on her services and training.

Visual Strategies-Linda Hodgdon

<http://www.usevisualstrategies.com/>

Linda Hodgdon is an autism specialist and speech language pathologist. This website provides information on utilizing visual strategies for children with autism spectrum disorders and includes free printable pictures. The site also provides information on Linda Hodgdon's materials, workshops, and services.

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## Organizations & Centers

Autism Research Institute (ARI)

[www.autism.com/ari/](http://www.autism.com/ari/)

ARI is devoted to conducting research, and to disseminating the results of research, including the causes of autism and methods of preventing, diagnosing, and treating autism and other severe behavioral disorders in children.

Autism Society of America (ASA)

[www.autism-society.org](http://www.autism-society.org)

ASA is a national support network for individuals with autism and their families. Links are available on autism, advocacy, public awareness, research, and educational opportunities.

Center for the Study of Autism

[www.autism.com](http://www.autism.com)

Links on autism and autism-related resources.

Cure Autism Now (CAN)

[www.canfoundation.org](http://www.canfoundation.org)

CAN is an organization of parents, clinicians, and scientists dedicated to finding biological treatments, prevention, and cure for autism and related disorders.

Indiana Resource Center on Autism

<http://www.iidc.indiana.edu/irca>

The Indiana Resource Center for Autism staff conduct outreach training and consultations, engage in research, and develop and disseminate information focused on building the capacity of local communities, organizations, agencies, and families to support children and adults across the autism spectrum in typical work, school, home, and community settings.

National Alliance for Autism Research (NAAR)

[www.naar.org](http://www.naar.org)

NAAR is an organization that tracks current medical research and legislative issues.

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## Spanish Language

Asociacion Nuevo Horizonte

<http://www.autismo.com/>

Directorio de recursos relacionados con el autismo, articulos, congresos, y tablon de mensajes.

Autismo

<http://www.geocities.com/Athens/Troy/8638/>

Enlaces a sitios relacionados a este sindrome.

Autismo.com

<http://www.autisme.com/>

Definicion, tratamientos, bibliografia, y organizaciones en Espana.

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