Autism Spectrum Disorders (ASD) is one of the fastest growing diagnoses of childhood. ASD disorders are neurologically caused and are identified by the American Psychiatric Association (2000) in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) as Pervasive Developmental Disorders (PDD). Salient elements of the DSM-IV ASD diagnostic include difficulties with eye contact, peer relationships, relating and interacting with others, delays and an absence of spoken language, atypical and stereotypical language, deficiencies in age-appropriate spontaneous play, limited and stereotyped interest patterns and behaviors (e.g., repetitive movements), nonfunctional rituals and routines, and preoccupation with atypical objects.

Specific forms of PDD include Autistic Disorder, Childhood Disintegrative Disorder, Rett’s Syndrome, Asperger Disorder, and Pervasive Developmental Disorder-Not Otherwise Specified. A brief description of each of these ASD subgroups follows.
**Autistic Disorder (aka Autism).** This diagnostic grouping is reserved for individuals who display significant social interaction impairments, communication impairments, and repetitive, stereotypic, and restricted interests and activities prior to 36 months of age. In the majority of cases, children diagnosed as having autism have cognitive impairment, severe speech, language and communication impairment, and significant problems in relating and interacting with others. Stereotypical and restricted patterns of behavior are also common.

**Childhood Disintegrative Disorder (CDD).** Children diagnosed with CDD have similar characteristics to children with autistic disorder. However, they differ in the age of disability onset. In contrast to individuals diagnosed with autistic disorder, children with CDD experience a period of normal growth and development prior to manifesting social interaction, communication, and behavioral impairments.

**Rett's Disorder.** This is a very rare condition (almost exclusively among females) wherein after a few months of age there is head growth deceleration, progressive loss of previously acquired motor skills, stereotypic (repetitive) hand wringing or hand washing, generalized motor impairments, and social and communication impairments. Loss of these skills is typically progressive and permanent.

**Asperger Disorder.** The primary and essential feature of Asperger syndrome is impaired social interaction. Eye contact difficulties, difficulty in recognizing and reading facial expressions and body language, inability to develop and maintain peer relationships, difficulty in relating and interacting with others, and stereotypical and restricted patterns of interest and behavior are common. The majority of students with Asperger Disorder have average intellectual abilities.

**Pervasive Developmental Disorder-Not Otherwise Specified (PDD-NOS).** This somewhat vaguely defined diagnostic entity refers to children who evidence “severe and pervasive impairment in the development of reciprocal social interaction associated with impairment in either verbal or nonverbal communication skills, or with the presence of
stereotyped behavior, interests, and activities…” (APA, 2000, p. 84). The diagnosis of PDD-NOS is used when the criteria for other forms of PDD/ASD or other disabilities are not met.

ASDs are developmental in nature and are highly variable. As Kluth (2003) observed, “If you know one person with autism, you know one person with autism” (p. 2). Even among difficult to understand disabilities ASD is the quintessential enigma. Children and youth identified as having autism and/or pervasive developmental disabilities present highly individualized characteristics and a significant range of functioning levels that significantly set them apart from students with other types of disabilities. Some students diagnosed with ASD have near- or above-normal cognitive and language systems, with evidence of their disability manifested in the form of subtle social peculiarities. Others have significant cognitive and intellectual impairments, limited or no expressive language, and severe behavioral and social abnormalities. That individuals with autism sometimes demonstrate isolated abilities and highly developed splinter skills only adds to the mystery of the syndrome.

Fierce debates over the causes of autism, intervention choices, and educational programming features have been consistent elements in the recent history of ASD. Many parents and professionals perceive ASD to be such a unique disability that they recommend that teachers use specialized and exclusively autism-oriented intervention methods, curricula, and programs with students with this disability. Indeed, books, magazines, newspapers and television programs routinely have reports and shows about ASD, including its growth, its impact on individuals, families and communities and the ever increasing education and intervention choices for students diagnosed with ASD.

Educators have had a particularly difficult time identifying and using the most effective methods from seemingly endless intervention and treatment choices. There is strident debate over which methods bode best for students with ASD and often a paucity of scientific evidence to guide choices in this important area. The ASD field is notorious for allowing consideration of unvalidated interventions and treatments, making this a particularly significant issue. The allure
of interventions and treatments that lack scientific support is easily understandable. To be sure, these methods frequently promise hope for positively responding to a life-long disability that not only lacks a clear etiology but also a clearly effective treatment plan. Accordingly, professionals and parents who are given opportunities to use methods and treatments that promise dramatic improvements, even if the approach being considered lacks scientific validation, may be willing to “take a chance” and consider using techniques and strategies that all too frequently have little to offer. Without question uncritical use of miracle cures and untested approaches has generally had a detrimental effect on students with ASD.

Of course, the No Child Left Behind (NCLB, 2002) Act mandates that educators use scientifically based research (SBR) methods. Such methods are narrowly defined under NCLB as educational interventions, strategies and curricula that have been proven effective in clinical trials using large-scale replication methods, random samples and control and experimental groups. This highly restrictive federal policy interpretation of a SBR practice fails to recognize that most identified effective methods for students with ASD are based on single-subject designs and other respected research methods. The ultimate result of the current narrow-gauged and constricted federal interpretation of what is scientifically defensible translates to a significant paucity of NCLB-based scientifically approved methods for children and youth with ASD.

In spite of a flawed federal conceptualization of the meaning of scientifically based research supported methods there is nevertheless widespread general recognition of the dramatic need for consistent and appropriate use of identified effective practices. There is also a growing body of evidence on what intervention and treatment methods have the best records. Of course it is also important to recognize that these strategies and tactics can be expected to confer significant benefit only when properly tailored to fit individual student needs and when applied consistently and systematically with fidelity by well trained and knowledgeable personnel.

There is virtually universal agreement that identifying and using effective practices with learners with ASD is extremely important. Thus the current issue is not one that revolves around
the relative importance of effective practice use but rather on identifying those methods and
techniques that have effective qualities and properties. Putting in place professional development
and training mechanisms that will ensure that there are personnel who are able to correctly use
methods that are judged to be effective is an one effective practice matter that demands
administrative leadership.

There appear to be two primary actions associated with identifying effective practices.
The first involves identifying basic features associated with effective programming and
evaluating existing methods that are purported to be appropriate for use with children and youth
with ASD. The second involves creating structures and protocol for evaluating future ASD
methods, strategies and methodologies. Because the field is so dynamic related to new methods
constantly being introduced for students with ASD, rating and evaluating existing methods is only
a partial answer to the ASD effective practice issue. Evaluation strategies that can be used by
teachers and related service staff are needed to judge the suitability of these practices with
individual students.

Progress on the ASD effective practice front is being made. For instance, the Committee
on Educational Interventions for Children with Autism, Division of Behavioral and Social
Sciences and Education, National Research Council (2001) identified several basic characteristics
that should be in place in educational programs designed for young children with ASD:

- early [age] entry into an intervention program; active engagement in
  intensive instructional programming for the equivalent of a full school
day, including services that may be offered in different sites, for a
minimum of five days a week with full-year programming; use of
planned teaching opportunities, organized around relatively brief periods
of time for the youngest children (e.g., 15–20 minute intervals); and
sufficient amounts of adult attention in one-to-one or very small group
instruction to meet individualized goals. (p. 6)

Simpson and his colleagues (2005) evaluated commonly used interventions and
treatments for children and youth with ASD. Reviewed within five categories (interpersonal
relationship, skill based, cognitive, physiological/biological/neurological and other) 33 ASD
methods were evaluated using the following considerations: (a) reported outcomes and effects; (b) qualifications of persons implementing the intervention or treatment; (c) how, where and when the intervention or treatment is best administered; (d) potential risks associated with the intervention or treatment; (e) costs associated with using the intervention or treatment; and (f) methods for evaluating the effectiveness of the method. Using these factors, the 33 reviewed methods were assessed as: (a) scientifically based, (b) promising practice, (c) practice having limited supporting information, or (d) not recommended. Scientifically based practices were defined as those that have “significant and convincing empirical efficacy and support” (p. 9). Promising practices were strategies that had “efficacy and utility with individuals with ASD” (p. 9), even though the method requires additional objective verification. Practices with limited supporting information were those that lacked objective and convincing supporting evidence, albeit they had unsure or potential utility and usefulness. The classification not recommended was used for interventions and treatments that were judged to lack effectiveness and that had the potential to be harmful. Applied behavior analysis, discrete trial training, pivotal response training and Learning Experiences: An Alternative Program for Preschoolers and Parents (LEAP) were evaluated as scientifically based practices. Facilitated communication was identified as a “not recommended” method.

Administrators are in a unique position to facilitate the effective practice identification and application process. We specifically recommend that building and district administrators use the following three questions (Simpson, 2005) to assist in determining the suitability and effectiveness of a particular practice, strategy or methodology:

1. What are the efficacy and anticipated outcomes that align with particular practice, and are the anticipated outcomes in harmony with the needs of the student?

2. What are the potential risks associated with the practice?

3. What are the most effective means of evaluating a particular method or approach?

Summary
ASD is a complex and difficult to understand disability. Choosing the most effective methods for students with ASD is no less complex and challenging. There does not appear to be a single best-suited and universally effective method or program for all learners with ASD. However, it is clear that there are effective methods that should form the foundation of programs for students with ASD and that there are methods and strategies that are generally associated with desired outcomes. The best programs for students with ASD appear to be those that integrate a variety of objectively verified practices and that are designed to address and support the needs of individual children and youth with ASD.
References and Resources


