Is ABA the only way?

Marilyn Watson, Senior Advisor - ASD Projects, Ministry of Education forwarded this article for your information

Author: Barry M. Prizant, Ph.D., CCC-SLP
Center for the Study of Human Development,
Brown University, Providence, RI

The purpose of this document is to set the record straight about often stated claims regarding ABA vs. other treatment and educational approaches for children with ASD. A small group of the many fine professionals in Applied Behaviour Analysis have espoused an "ABA only" approach for children with ASD, and make treatment and educational recommendations conveying this message to families and agencies serving children. Many experienced professionals and parents have become increasingly concerned about such statements made by practitioners and proponents of ABA that are either inaccurate or half-truths, since they convey spurious information to families that is not supported by the most current research and practice. When this occurs it can result in confusion for families and mistrust of professionals, who do not support ABA as the "only" effective approach, thereby undermining the critically important parent–professional partnerships that underlie successful collaboration.

Statements that are designed to communicate to parents that "ABA is the Only Way" attempt to convince parents that they have no need to look further, no need to educate themselves about the range of approaches available, and no need to consider other approaches or visit programs that may be guided by practices other than ABA. We hear repeatedly from parents of older children that in the early years, they were led to believe that ABA was the only credible approach that was available. They add that they wish they were exposed to the broader range of practices for children with ASD, as they could have made more informed choices for their children.

As a start, a few brief comments about ABA are in order, since ABA is often discussed as one approach or treatment, which is not accurate.

1. Definitions of ABA vary greatly, as do practices that fall under the heading of ABA.
A common definition for ABA is: "Applied behaviour analysis (ABA) is a systematic process of studying and modifying observable behaviour through a manipulation of the environment. Its principles are derived from extensive basic research, often with non-humans, but has become popular in recent years in therapy with autism and other developmental disorders".

Dr. Laura Schreibman, a highly respected Contemporary ABA researcher and practitioner recently stated that "Technically, Applied Behavioural Analysis is not a treatment for autism, it is a research methodology" (Screibman, 2007).

2. The range of practice under the heading of ABA has evolved over the past 30 years and now varies from Traditional Practices to Contemporary Practices (Myers & Johnson, 2007; Prizant & Wetherby, 1998; 2005):

Traditional ABA practice is characterized by highly structured, adult-directed teaching

referred to as Discrete Trial Instruction or Training (DTI or DTT) that focuses on teaching correct responses in regimented teaching.

DTT was first derived from the operant conditioning experiments of B.F.Skinner in the 1950's, and first popularized for children with autism by Ivar Lovaas in the 1960's – 1970's, then known as Behaviour Modification. Most often, such practices involve curricula or written programs that must be followed faithfully when "training" a child. Major objectives include maintaining "Instructional Control" and "Compliance" while teaching, and eliciting correct responses that are targeted in teaching programs. Procedures to eliminate undesirable behaviours are often prescribed, often without determining the functions or purposes of such behaviour. Contributions of Traditional ABA include the benefits of breaking tasks down into defined steps (task analysis), the importance of using a hierarchy of prompts and prompt-fading, and systematically measuring and tracking progress. *However, Traditional ABA practices are typically not informed by research on child and human development; use primarily adult-child (1:1) teaching formats to the exclusion of social instruction in various settings; do not take into account a child's developmental profile; and teach skills that do not necessarily focus on the core social communicative and relationship challenges faced by children with ASD.*

Contemporary ABA practice is characterized by more flexible, naturalistic teaching (incidental teaching) in natural routines and activities that focus on social initiation and spontaneity in daily routines and activities. Based on the significant limitations of Traditional ABA practice, many ABA practitioners have moved away from highly structured, prescriptive practice to practices that have a much greater focus on social communication across a variety of social settings, and the need to determine functions of behaviour to replace less desirable behaviour. In many ways, contemporary ABA practice, such as Incidental Teaching, Pivotal Response Training, and Positive Behavioural Support is more similar to developmentally-based approaches (e.g., SCERTS, Floor-time, RDI) than it is to Traditional ABA Practice. The development of Contemporary ABA practice has been heavily influenced by research on language and play development in typical children, with an emphasis on individualized and positive approaches to understand and address problem behaviour.

In summary, it is important that families understand that ABA practices vary considerably from one ABA approach to another. Across ABA practices, there are critical differences in philosophy, research support, the types of intervention, and the methods used to document progress. Over the past 10-20 years, the clear trend within ABA has been movement from Traditional to more Contemporary Practices. This is due to the following facts: 1) research has not supported the effectiveness of Traditional ABA Practices in teaching social communication and other critical, functional skills (see below); and, 2) there have been significant changes in societal values and beliefs, resulting in educational laws that no longer allow for the use of punishment and aversive procedures in educational practice, which were first introduced and studied in traditional ABA practice. For this reason, it is critically important to determine what type of ABA practice is being referred to, especially when decisions are being made regarding the use of ABA in educational programming.

3. Researchers have criticized ABA approaches that use DTT as the predominant instructional method, citing its limited effectiveness. Their concerns include: 1) the use of strategies that do not foster social communication or support the formation of relationships, both of which are the core deficits in autism; 2) a teaching format that is primarily adult-controlled and that discourages initiation and spontaneity in communication and learning by

placing a child in a respondent role, resulting in passivity and prompt dependence; and 3) the teaching of skills that remain limited to the teaching situation: that is, they do not meaningfully generalize to independent use in daily interactions and activities.

In fact, due to these concerns, the most highly regarded and highly published researchers in ABA and ASD over the past three decades have been openly critical of Traditional ABA practices, have abandoned such practices, and have demonstrated in published research that the most effective approaches infuse developmental, child centered and family centered principles in educational programming for children with ASD. As noted, these contemporary ABA researchers and practitioners have moved to more developmentally–based and natural activity-based practices influenced by the literature on child development and learning in natural routines and environments. These contemporary ABA researchers and practitioners include Drs. Robert and Lynn Koegel, Laura Schreibman, Phil Strain, Gail McGee, some of who were mentored by and conducted research with Dr. Lovaas (RK, LS, GM) in the late 1960's to the early 1980's, when Traditional ABA practices were initially developed. Strain has noted that only through the integration of different perspectives including ecological, developmental, systems theory, as well as behavioural, can "new and more robust interventions" be developed for children and families.

The Most Frequent Claims Used to Support Traditional ABA Practices
The following are examples of claims about ABA that are still made frequently, despite the fact that research does not support these claims:

Claim # 1. Research has concluded that ABA is the only effective, or most effective approach for children with ASD, and therefore is the "gold standard" of treatment.

FALSE: The most comprehensive review of educational research to date, conducted by the National Research Council (a committee appointed by the National Academy of Sciences, NRC, 2001), concluded that given the current state of research in ASD, there is no evidence that any one approach is better than any other approach for children 0-8 years of age. They noted, "Studies have reported **substantial changes** in large numbers of children receiving a **variety** of intervention approaches, **ranging from behavioural to developmental**". It is important to note that this opinion was the consensus of 12 national experts in ASD, coming from a variety of disciplines and approaches (including ABA). This committee was convened to review 20 years of educational research in autism and in a 324-page document made a number of conclusions and recommendations (go to www.NAP.edu). Some ABA proponents cite the 1999 New York State Clinical Practice Guidelines for Early Intervention (0-3 years) for Children with Autism, which only addressed services for 0-3 years, in supporting this statement that ABA is the only effective approach. However, the National Research Council included this document in their review, which was conducted a few years later, and refuted their conclusions. The American Academy of Paediatrics (Myers & Johnson, 2007) noted that, "There is a growing body of evidence that supports the efficacy of certain interventions (behavioural and developmental) in ameliorating symptoms and enhancing functioning, but much remains to be learned".

Claim # 2. Once a child is diagnosed with ASD, he or she must receive ____ hours (25, 30 or 40 hours) of ABA services, often recommended in a DTT format, in order to make progress.

FALSE: Following the comprehensive review of research, the National Research Council

recommended that children with ASD need active engagement in intervention for least 25 hours a week. **However, they did not specify any particular approach** and as noted, there is research evidence of substantial positive changes using a variety of intervention approaches, from behavioural to developmental. Furthermore, the NRC noted that the instructional priorities, or the most important areas to focus on, must include:

a) functional, spontaneous communication,
b) social instruction in various settings (not primarily 1:1 training)
c) teaching of play skills focusing on appropriate use of toys and play with peers,
d) instruction leading to generalization and maintenance of cognitive goals in natural contexts,
e) positive approaches to address problem behaviours,
f) functional academic skills when appropriate

ABA approaches vary greatly regarding the extent to which they focus on these practices, with Contemporary ABA approaches more consistent with these priorities.

Claim # 3. A child with ASD will benefit the most from ABA services that use a DTT or Discrete Trial Teaching/training format, because:

a) Certain readiness skills must be acquired before a child can benefit from social learning experiences (Readiness "myth")
b) Children with ASD (especially young children) can only learn in 1:1 teaching, and cannot learn from other children (Tutorial (1:1) instruction "myth")
c) Typical environments are too over stimulating for a child to learn (Overstimulation "myth")
d) Behaviour can not be controlled in more typical settings (Behavioural control "myth")

FALSE: Three highly published and respected Applied Behaviour Analysts in ASD, Drs. Phil Strain, Gail McGee and Frank Kohler, devoted an entire chapter to these claims, and reviewed research to see if there was any support for each claim. They concluded, "These myths rest on shaky, if not absent empirical grounds." (from Strain, McGee & Kohler, 2001). In other words, there is virtually no research that supports these myths. Strain, McGee and Kohler do cite the critical need for well supported and well-designed activities for children with ASD in inclusive and developmentally appropriate social environments.

Claim # 4. If a child does not receive intensive ABA by five years of age, the "Window of Opportunity" for learning will close, or it will be missed.

FALSE: There is no evidence that there is a ceiling on learning, or that there is a window of opportunity that closes. This statement is an inaccurate rendering of a statement that is true:

One of the factors associated with better outcomes is early entry into intervention.

However, this is only one of a number of factors that are associated with better outcomes. Others include inclusion of a family component, active family involvement in programming, developmentally appropriate activities, 25 hours of engagement in individualized programming per week, and repeated, planned teaching opportunities. The term "individualized" is often misinterpreted as 1:1 services. However, it refers to a program is that developed for each individual child based on his/her strengths, needs, and family

priorities.

Learning and developmental progress for children and people with ASD is life-long, as it is for all human beings. Clearly, it is important to get started in intervention as early as possible, but that does not mean that a child's progress will be limited, if not absent, unless the child receives a minimal amount of ABA (or any other) services prior to five years of age. We have known many children who continue to demonstrate significant developmental progress in later childhood, adolescence and even adulthood. Unfortunately, the "Window of Opportunity" claim often leads to overwhelming guilt for many parents whose children did not begin services early, or who did not choose traditional ABA as the approach for their child.

Claim # 5. ABA is the only educational approach that results in "recovery" from autism, which occurs in about half of the cases.

FALSE: When this claim is made, the studies that are most frequently cited are those of Dr. Lovaas and colleagues (Lovaas, 1987; McEachin, Smith and Lovaas, 1993), in which 19 children receiving intensive ABA services were followed, and 9 were considered to have “recovered” at follow-up. However, there are a number of problems with this claim.

1. First and foremost, these studies have been severely criticized for the claims made about the results of the study, given the very small number of subjects, and the type and intensity of treatment provided. They also have been criticized for many flaws in research methodology (e.g., the measures that were used to support “recovery”, subject selection, type of control group). Additionally, the studies were conducted when aversive procedures were still being used. Many attempts to replicate or reproduce these findings with larger groups of children in a number of federally-funded research centres nationally have failed, and in fact, a number of these centres were closed down prior to the completion of the research period due to poor results. *To date, close to 20 years following publication of the first Lovaas study, there has been no successful replication of the original results with many failed attempts.*

2. The issue of "recovery" from autism remains extremely controversial, and the likelihood of recovery has not been supported in long-term follow-up studies of children who received a variety of interventions. Furthermore, accurate diagnosis of very young children remains a relatively new and imprecise art as young children may change dramatically in the first 3 years of development. Some developmental challenges such as language disabilities, sensory processing disorders and anxiety disorders, and physiological challenges such as severe environmental and food allergies, and gastro-intestinal disorders can impact social communication and emotional regulation, and may be confused with a profile of autism at a very young age. (Such physiological problems are also observed in some children with an accurate diagnosis of ASD, creating further diagnostic confusion). Therefore, whether a child diagnosed around 2 years of age will continue to have that diagnosis 2-4 years later is a question that research has just begun to address. Unfortunately, available research indicates that the number of accurately diagnosed children who "move off the spectrum" remains very low (about 2-4%) (Lord et al., 2006). Clearly, some children with ASD do go on to do very well academically, in the development of social relationships and in having a positive “quality of life”, even if they continue to qualify for a diagnosis and continue to experience some of the challenges associated with ASD. At this point in time, however, research indicates that ASD remains a life-long developmental disability for the majority of children receiving this diagnosis.

Claim # 6. There are hundreds of studies that demonstrate that ABAworks, and few or no studies that other approaches "work".

HALF-TRUTH - There are a considerable number of studies conducted by ABA researchers and published in ABA and other journals that demonstrate the effectiveness of specific elements of practice, such as: teaching communicative skills and communicative replacements for problem behaviours, toilet training, social skills, use of visual supports, relaxation techniques and many other areas of focus in intervention. However, there are very few studies that have looked at the effectiveness of "comprehensive intervention programs", and this is true for ABA as well as other intervention approaches (NRC, 2001). Furthermore, many studies that are cited as supporting ABA practice include practices that were first developed outside of ABA, such as teaching spontaneous communication, social skills and play skills, use of augmentative communication systems, use of relaxation procedures and use of visual supports such as schedules and graphic organizers.

In their review of educational research, the National Research Council (2001), and more recently, the American Academy of Paediatrics (Myers & Johnson, 2007) noted that there are many models, other than Traditional ABA, that more comprehensively include the most essential components of effective programs that have demonstrated positive outcomes for children with ASD. Furthermore, approaches other than ABA have also utilized scientific research-based practices and meet criteria associated with effective educational practice.

SUMMARY AND CONCLUSION: Principles and practices in Applied Behaviour Analysis have long made contributions to intervention and educational programming for children with ASD. Most effective programs utilize some ABA principles and practices integrated with other practices (developmental, sensory, AAC, family support) in individualizing programs for children. However, within the ABA community, some practitioners and agencies continue to make claims that amount to the declaration that "ABA is the Only Way", or that it is not possible to have quality programs unless they are ABA programs, or supervised by ABA personnel (i.e., BCBA's - Board Certified Applied Behaviour Analysts). Most often, these statements are supported by claims 1-6 noted above, despite the lack of research support for these claims, and even evidence that refutes these claims. Unfortunately, this message continues to be conveyed by proponents of traditional ABA practice, when services are prescribed to families of children with ASD, and the agencies that serve these children.

We also must consider the cost of these claims, not just monetary, but the lost time in effective programming, to a child and his or her family. A narrow focus on Traditional ABA practice may result in children losing opportunities to participate in a program that supports genuine social and communicative learning and emotional growth, the primary needs of children with ASD – time that could have been spent learning about people and developing relationships, and acquiring meaningful, functional skills that allow children and older individuals, and their families, to participate in and enjoy everyday activities and routines in their home school and community.

The most comprehensive and respected research reviews have indicated that there is no substantial evidence to support the "myths" listed above. In fact, as noted, these claims have been severely criticized by the most highly published researchers within ABA whose own research and practice have evolved from Traditional ABA to Contemporary Practices (Drs. Robert and Lynn Koegel, Phil Strain, Gail McGee, and others). Of course, these claims have

long been challenged by other professionals who have made contributions to practice in ASD by developing approaches from orientations other than ABA, including Stanley Greenspan, Steven Gutstein, Gary Mesibov, Carol Gray, myself and my colleagues. Furthermore, adults with autism, including Stephen Shore, Jerry Newport, Temple Grandin, Donna Williams, Ros Blackburn and Michelle Dawson, who have written and/or speak about their experiences, have raised serious questions about approaches that draw primarily from ABA practice, to the exclusion of other practices.

As noted, a clear and continuing trend in education and treatment within ABA has been the movement from Traditional ABA to more Contemporary Practices. Contemporary ABA practices are now very close in philosophy and practice to non-ABA Practices that are more developmentally based, and individualized for children and families (e.g., DIR-Floortime, Hanen, RDI, SCERTS, TEACCH and others). In fact, in the most recent Autism Speaks treatment grant award cycle, the grants that were approved for major funding did not include research on an approach that was based primarily on an ABA orientation, to the exclusion of other practices, demonstrating the priority placed on expanding treatment perspectives.

There is so much more that we need to learn in supporting children and older individuals with ASD and their families. This evolving knowledge base will need to come from persons with ASD, researchers, educators, therapists and parents from a range of philosophical and practical orientations. There no longer is any place for unsubstantiated claims that are made with the goals of limiting the potential range of effective practice, or to "convince" parents or funding agencies that "ABA is the only way". This has resulted in costly litigation, divisiveness, mistrust and confusion for parents and practitioners. In some cases, it also has taken away freedom of choice from families, when only limited treatment options are available. It is a disservice to children with ASD and their families that claims supporting traditional ABA practices continue despite evidence and expert opinion regarding their limitations. For education and treatment practice to advance, and for programs to be truly individualized for children and families, claims that "only one approach works" must cease.

Barry M. Prizant, Ph.D.
Director
Childhood Communication Services
Adjunct Professor
Centre for the Study of Human Development
Brown University

My sincere thanks to the nearly two dozen educators, therapists, administrators and parents who provided invaluable feedback to earlier drafts, resulting in this final version. I so appreciate their encouragement and the clear consensus that a document such as this is needed to support families and practitioners. Special thanks to Carol Gray, Karen Levine, Diane Twachtman-Cullen, Eve Mullen and Tony Maida for their detailed and timely comments.

References

Koegel, R., and Koegel, L. (Eds.) (1995). Teaching children with autism. Baltimore, MD: Paul Brookes.

Lord, C., Risi, S., DiLavore, P., Shulman, C., Thurm, A., & Pickles, A. (2006). Autism from

two to nine. Archives of General Psychiatry, 63, 694-701.
Lovaas (1987) Behavioral treatment and normal educational and intellectual functioning in young autistic children. Journal of Consulting and Clinical Psychology, 55, 3-9.

McEachin, J.J., Smith, T., & Lovaas, O.I. (1993). Long-term outcome for children with autism who received early intensive behavioral treatment. American Journal on Mental Retardation, 97, 359-372.

Myers, S. Johnson, C. Management of children with autism spectrum disorders. (2007). Pediatrics, 120, 1162-1182.

National Research Council (2001). Educating children with autism. Committee on Educational Interventions for Children with Autism. Division of Behavioral and Social Sciences and Education. Washington, DC: National Academy Press. (www.nap.edu)

Prizant, B.M. & Wetherby, A.M. (1998). Understanding the continuum of discrete-trial traditional behavioral to social-pragmatic, developmental approaches in communication enhancement for young children with ASD. Seminars in Speech and Language, 19, 329-353.
Prizant, B.M.,& Rubin, E. (1999). Contemporary issues in interventions for Autism Spectrum Disorders: A commentary. Journal of the Association of Persons with Severe Handicaps, 24, 199-217.
Prizant, B.M., & Wetherby, A. M. (2005) Critical considerations in enhancing communication
abilities for persons with autism spectrum disorders. In F. Volkmar, A. Klin & Paul, R. (Eds.),
Handbook of autism and pervasive developmental disorders (3rd Edition).
Strain, P., McGee, G, and Kohler, F. (2001). Inclusion of children with autism in early intervention settings. In. M. Guralnick (ed.), Early childhood inclusion: Focus on change. Baltimore: Paul Brookes Publishing.