

Examining the Structure of your ABA Program

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One of the most difficult, if not painful processes for parents of children with autism is the daunting task of selecting the “right” intensive intervention program for their child. With the current increased awareness of autism, there are now more treatment options than ever before from which parents can choose. Intensive early intervention programs provide daily one-on-one treatment to young children goals focusing mainly on communication, social, play, and self-help skills. Such intervention programs that have been empirically validated by research rely heavily on behavioral methods developed to teach skills effectively. The term applied behavior analysis (ABA) refers to a field that has been constantly developing and expanding for many decades. Practitioners of ABA use a range of methodologies to create behavior change, evaluate progress, and systematically modify intervention programs.

The field of ABA can appear very complicated and confusing to consumers, often because its practitioners may adhere to several different camps within the field. Professionals using ABA methods may develop programs that appear very different but are addressing the same goals. One factor contributing to consumer confusion is the inconsistent descriptions that behaviorists use when presenting their programs. Terms such as "discrete trial training," "pivotal response training," "verbal behavior," "natural language paradigm," “incidental teaching” and a long list of others make each family's research a difficult process. Further complicating the process is that within each behavioral camp serious debate exists as to which methods are most important within each approach. For example, discrete trial training, by far the most popular approach, is conducted differently by different agencies and researchers across the country. Dr. Ivar Lovaas, who developed this methodology for teaching children with autism, has repeatedly expressed his distress with this inconsistency. These professionals have valid rationales for the dramatic differences in their behavioral approaches to intensive early intervention; however, the lack of agreement in the field only serves to further impede the process for families.

Recently there has been a growing debate as to what makes a good ABA program. Until more research is performed that compares the different ABA approaches, it is much too early to discuss what may be the best approach.

Table 1: Variables that impact the structure of an ABA program

- The number of settings in which intervention is conducted
- The amount of play that is encouraged
- The number and types of choices provided to the child
- The use of visual cues
- The reliance on food rewards, praise, tokens
- The ongoing use of physical prompting
- The availability of peer/sibling play partners

However, this article will address basic variables a consumer may consider when evaluating a program for an individual child, with specific focus on what we believe is the primary factor in designing early intervention programs—structure. While there are many different considerations that should be taken into account when tailoring a program to an individual child's needs, the level of structure is, by far, the first, and perhaps most important, treatment variable to consider. This, more than any other treatment consideration, sets apart the critical intervention differences in the field of applied behavior analysis.

What makes an ABA program?

The field of ABA uses different techniques and teaching strategies to increase desired behavior, decrease maladaptive behaviors and teach new, functional behaviors. These techniques can be used with individuals of all ages and functioning levels. The basic underlying principle of ABA is that all behaviors, whether appropriate or not, are functional for the individual. Specifically, the individual is utilizing the behavior to communicate a need or to obtain a specific response from the other individuals in the setting (for example, a child who tantrums to avoid a task). The teaching strategies that were developed based on these principles use techniques such as rewarding appropriate behavior and ignoring inappropriate behavior to teach new skills and shape existing behaviors into useful and communicative skills. Data is used to record the progress and the development of these skills, and also serves as a critical factor by allowing the interventionist to make informed programmatic modifications.

Much confusion exists today about how to define an autism intervention as an intensive applied behavior analysis (ABA) program. The professionals who provide such services are not necessarily in agreement about what intensive programs should look like, though most believe that these programs should adhere to ABA principles and methods throughout the sessions. These methods, however, can be used in hundreds of different ways. For example, ABA can mean teaching language while the child is playing on a swing, or it can be prompting specific speech sounds using a highly structured teaching method while seated at a table. Traditionally, ABA programs have involved collecting data on many specific behaviors, prompting the child to demonstrate those behaviors numerous times within a session, and shaping more advanced forms of those behaviors over time. Recently there have been a growing number of professionals who are incorporating ABA principles into what has been considered more developmentally appropriate intervention contexts. Terms such as “play-based” ABA and “naturalistic” interventions are being used to promote such programs. (See Table #2) Professionals within the field acknowledge both the traditional discrete trial methods and the newer naturalistic methods as being valid ABA approaches, with huge numbers of empirically-based studies to back them up. The question that consumers are faced with, however, is “How critical a component is structure when planning intensive ABA programs?”

Table 2: Basic Differences between intensive ABA programs

Highly Structured Programs

Play-Based Programs

Very specific (micro) goals targeted.
Goals may be broken down into small steps.

Goals inserted into play routines.
Targeted skills move play along.
May be more structured at beginning of program, moving to looser structure as the child develops more skills.

Teaching session directed by teacher/ therapist

Teacher follows the child's lead while still maintaining control over the teaching session

Mass trials aimed at teaching specific responses to prompts

Multiple goals targeted simultaneously in a play-based format.
Child learns that play requires communication and social skills.

Structure is good and structure is bad

There is no question that ABA programs require having specific behavioral goals that are prompted and reinforced throughout each session. But this teaching process can take place under very different conditions and still be successful. The tightest level of structure, such as that offered in a traditional discrete trial training program, may involve having the child sit across from the therapist, as the child is directed by the therapist to respond to a series of prompts. The child is then rewarded for a correct response using a reinforcer (e.g., a food item, a toy, a token, praise). Many discrete trial training programs follow this level of structure during much of the child's session time. The greatest benefit of tight structure is the amount of teaching that can occur during the limited session time. Many teaching trials are completed, and progress is typically remarkable. Parents and professionals are often delighted to see gains in imitation, speech, and other behavioral goals in a short amount of time.

As with most dramatic accomplishments there is a cost for over-tightening the structure of an autism intervention program. Children with autism are prone to prompt dependency and stimulus overselectivity. Prompt dependency is seen, for example, when a child learns to use language to communicate, but relies on being asked a question, or prompted to speak, before doing so. As a result, he may develop only limited spontaneous verbal communication. This does not serve him well in situations outside of the therapy setting. Stimulus overselectivity is seen when children learn to respond to only very specific aspects of the communicative environment, such as hand gestures or volume changes. Without a range of social interactions to learn from daily, it is very difficult to know if the child is learning to be overselective to aspects of the

intervention that are unchanging. Data on correct responding can be misleading in such cases, as the child is actually only learning to display certain skills under certain conditions. Specifically, those tremendous gains that are achieved may not generalize to situations outside of the treatment sessions. This is, unfortunately, a very common phenomenon, and is not easily fixed. Often times the child will be able to respond to many questions, independently demonstrate play behaviors, and follow complex directions during the daily intervention sessions. However, while playing with peers or going into the community with the family the child may seldom show the ability to use those skills. This is the reason that there should be a balance of structure in any intensive program for children with autism.

Are there risks in decreasing structure?

It is important to have loosely structured intervention time each day. This requires allowing the child to play, make toy requests, and explore a range of environments that can produce intervention opportunities. Spontaneous language and social skills are the critical goals that are addressed under this looser structure. By using more naturally occurring interactions it becomes easier to target multiple goals simultaneously. Play-based interventions often allow for the child to make many choices (following the child's lead) throughout each session to motivate the child to participate in a range of teaching interactions. The child is able to choose between different activities and toys, which are then used in a play-like natural environment to teach specific communicative, play and social skills. Access to these preferred activities is reinforcing for the child thereby maintaining interest in the teaching session.

Such strategies tend to be easier for parents and siblings to perform, and thus lend themselves to more generalized use. The theory behind loosely structured programming is that many hours of intervention can be delivered throughout the day because most positive interactions can be teaching opportunities and parents can incorporate the teaching strategies into all of the child's daily routines. Also, when teaching opportunities are more dispersed it is more likely that the new skills will be generalized, and it is less likely that the child will become prompt dependent in using those skills.

The term "natural" has been used to describe this type of intervention, causing some confusion in the field. While the therapist should be targeting as many naturally occurring opportunities and family routines as possible, he or she is not simply waiting for opportunities to arise. Conversely, this program involves structure in terms of the goals that are being targeted systematically and the teaching strategies that are being used. In addition, an enormous amount of work is involved in motivating the child to approach and respond to interactions. The term "incidental teaching" has also been misunderstood at times. It is not a matter of waiting for an incident to occur and providing praise. Incidental teaching involves planning and orchestrating teaching opportunities across different situations to ensure generalization and independence.

There are risks in loosening structure. The literature in this area has been used by professionals to argue against discrete trial training and traditional ABA programs. This is unfortunate. The need for loosely structured teaching opportunities for children with autism is not a rationale to have fewer goals or to abandon structure all together. There is still a place for tight structure in most programs for children with autism. Finding the appropriate balance is the

challenge. The individual child may need time under tight structure to develop higher level goals that can be inserted into the session time that is loosely structured. As gains in independence and generalization are charted during this time it is likely that skill needs will be identified that may best be addressed under tighter structure. These separate teaching sessions (tight vs. loose) should serve to inform the goals of each.

Another risk to decreasing structure is that parents, siblings, peers and other potential teachers may not know how to extend teaching to critical learning opportunities. Highly structured ABA sessions tend to be easier to replicate, while more play-based sessions are deceptively difficult to perform. These programs rely on methods to motivate the child to use communication and socialization skills across situations and environments. With any ABA program it is assumed that the child is getting many hours of intervention outside of planned session times. It is very important to train those individuals who will need to be responsible for teaching throughout daily routines. To help program for effective generalization, make sure that a professional has observed those critical people in the child's life and verified that they understand the program, and are implementing it correctly. This will help to ensure that all those extra teaching hours will occur.

When to “loosen things up”

It is important to think of “loose” as the ultimate goal. The ability to use new social, speech, and play goals across a range of environments and with numerous people is critical. The end result of learning functional skills should obviously be their functioning under any circumstance. Thus, the skill of asking questions, for example, should go from established teaching routines (tighter structure) to incidental teaching opportunities (looser structure) to ultimately generalization environments such as new peers, shop clerks, and other communication partners that are not aware of the communication goal.

Goals should be addressed in loosely structured teaching sessions once the child is approximating the skill, if not earlier. For many children, loose structure will make up the most of their ABA sessions. As long as data is demonstrating improvement across areas this is a good choice. When gains are not being achieved, the need to target those goals through more structure should be considered. It is important to remember that skills may take longer to learn under looser structure, but the risk of those skills not becoming functional is greatly reduced.

<p>Table 3: Indicators that it may be beneficial to dedicate more session time to looser-structured teaching activities</p> <ul style="list-style-type: none">• Functional communication is beginning to develop more rapidly• Child has a growing interest in a range of toys and other items• Increased independence in verbally expressing preferences• Pretend play is emerging• Prompt dependency is becoming a significant problem

When to “tighten things up”

Two primary indicators that the teaching session should become more structured are behavior and learning curve. If the child’s behavior has not come under control of the therapist and learning environment, it may be that learning in a more structured situation should come first. One major benefit of tight structure is the ability to more quickly teach sitting, attending, compliance, and imitation. Also, if the child is not learning under the looser structure, then it is important to consider the primary benefit of tight structure—faster learning. This balance is the trickiest part of program planning. Giving up looser structured session time may mean giving up some of the child’s ability to generalize the target skills. Giving up tighter structured session time may mean giving up some of the child’s opportunity to learn the skills faster. Ultimately, the goal is to insure learning and progress. A combination of tight and looser structure, or starting with tight structure initially, and then moving to a looser structure as the child adapts to intervention, are two possible treatment approaches. The key is to have the flexibility to modify the program according to the child’s needs as s/he develops and learns.

Table 4: Indicators that it may be beneficial to dedicate more session time to tighter-structured teaching activities

- Basic imitation is a goal
- Compliance is a goal
- Child rarely displays interest in others' behavior
- Child struggles with choosing preferred items
- The setting is associated with downtime or leisure activities

The most important factor in selecting an intensive program is for you as the parent or primary caregiver to feel comfortable with your child’s program and to believe that your child is in a teaching environment that is best suited to his and your family’s needs. The most important things to consider are:

1. Are the goals challenging and appropriate? Your child’s goals should meet his current level of functioning, as well as his communication and social needs.
2. Are the goals and the teaching structure appropriate for him? It is essential that your child be given many opportunities to practice new skills under different social situations. This can easily be incorporated into the teaching session.
3. Is he learning skills that are functional and meaningful within his daily routines? Your child should be learning skills that are useful and that can be used across the day. For example, if the goal is to teach your child to comply with requests, you can teach him to put coins in a box *or* to put all his toys in a toy bin. The latter is more functional and useful to him. It has an outcome he can understand.
4. Is he learning to use his new skills in different settings and with different people? This is a critical aspect of a child’s program. It is not sufficient for your child to learn skills that he is only able to use in his home. New skills should be taught in a manner that allows your child to recall them when he is in the park, with other children, in stores, at school and in other community settings. The program should be meaningful to you and your child wherever you may be.

5. Do you feel comfortable with the level of structure in his program? If you feel that the structure of the program is too rigid or too lax, consider requesting modifications or switching to another type of intervention.
6. Does the program allow for play and social time, and the involvement of siblings and peers? The development of social skills is critical at an early age. Your child's program should address social skills in multiple settings, and it should involve practicing with peers and siblings in your home, in the community, and in your child's school.
7. Is your child's interventionist right for the job? This individual should be motivated, energetic and creative, and should be a good fit for your family. The more you can participate in sessions and learn the techniques from your interventionist, the greater the benefit to your child.
8. Are you seeing changes in his behavior and ability to communicate? Do you see him learning new skills and making progress? If no progress is observed within the first 6-8 weeks of a program, you may want to discuss this with the supervisor of your program. It would be important to know how decisions are being made about goals, methods, structure.

Some Final Thoughts

Professionals involved in the field of applied behavior analysis are far from developing a systematic procedure for designing highly individualized programs for children with autism. We simply do not have research that adequately compares intervention approaches. Also, as this article describes, clear definitions of program differences are lacking in the literature. At this time we are faced with generic descriptions that leave it to the consumer to evaluate the program's offerings. We suggest that as a starting point parents look broadly at the program's use of structure in its teaching approach. More than anything else, this speaks to the interventionist's perspective on learning, as well as to his/her expectation of how the child will respond. If the interventionist is flexible in teaching methods, and can move comfortably between different teaching styles, it speaks well as to his approach to teaching children. It indicates that he is likely to understand the need for both styles. To take it a step further, parents can inquire about the interventionist's decision-making process regarding how sessions are structured. This will help the family understand how serious issues such as prompt dependency and generalization will be addressed.

As the program evolves over time, this single variable—structure—will propel many discussions towards the more major issue of how independent responding is developing. As targeted behaviors become mastered and used more loosely across contexts, new skills can be targeted under more structured and supported teaching sessions. Open conversations about how to expand the program into more and more natural social opportunities should become a regular occurrence. After all, our goal in providing intensive intervention is not to teach our children to become robots, but to equip them with the functional knowledge and skills to survive day-to-day within an ever-changing world. A well-structured and balanced program can do that.

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