

# APPLIED BEHAVIOR ANALYSIS

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## Looking into Applied Behavior Analysis

### **ABSTRACT**

While working with children with Autism, there are a great deal of challenges. Students with Autism have cognitive, social, and verbal delays that hinder their ability to functionally learn in a classroom. Often times, students will display aggressive behaviors which can create a stressful learning environment for his/ herself, as well other students in the classroom. The studies reflected focus on Applied Behavior Analysis in the classroom. Studies have been conducted over the years to find strategies to effective learning in classrooms with children on the spectrum. Each portion of this study focuses on each students IEP goals, and domains of learning.

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## **Introduction**

There are different techniques and strategies that are used to conduct lessons, as well as minimize aggressive behaviors. One technique that is implemented in the classroom is Applied behavior analysis (ABA). Autism Speaks has hired many people to help children with Autism learn the proper skills they need to achieve academic success. Throughout the years, more studies have been developed to help students with Autism in various areas.

## **Thesis Statement/ Research Questions**

The Applied Behavior Analysis system is known to help create a better environment for learning, as well as opens a window of opportunity for the child to progress better, without their behaviors hindering them from moving forward. Studies have shown that the methods in which help children socially, and academically in classrooms through the Applied Behavior Analysis technique, concluded successful results. (<https://www.autismspeaks.org/applied-behavior-analysis-aba-0>)

The question is, is Applied Behavior Analysis an effective form of treatment for children with Autism? and does Applied Behavior Analysis effectively help students with Autism meet their IEP goals?

## **Method**

In 2016, a study was conducted in a low-income area with a diverse population. Five male students were part of this research. One Caucasian male (Student N01), and students (C05, K02, K06, and Z08) were African Americans. Students Z08, and C05 were minimally verbal, and used a PECS system, which is a form of communication through photos. All five students had a delay in all developmental areas. Each student received two hours of 1:1 Applied behavior analysis therapy daily. The IEP goals were broken up into the following goal domains: Cognitive with 314 skills, Social with 77 skills, Academic with 63 skills, Adaptive with 42 skills, and Motor with 58 skills. The second and third measures were based on mathematics and reading skills. Each study was divided into measures: ABLLS-R, DIBELS-R, and DIBELS-M. ABLLS-R was developed by Partington which is a skill tracking system for students with Autism. (*Partington 2016*) DIBELS-R measures literacy skills from K-6 grade. (*DIBELS, 2016*) DIBELS-M measures math skills from K-3 which include counting, concepts, number identification. (*DIBELS, MATH 2016*) These three measures were conducted in the beginning, middle and end of the academic year.

## **Review of Literature**

Autism is considered the fastest growing disability in the *world*, but mainly in the United States. In the year 2000, 1 in every 150 children were diagnosed with autism, and by the year 2010, the number increased to 1 in every 68 children. (*U.S. Department of Education, National Center for Education Statistics, 2016*). As stated, Autism continues to grow at a rapid rate. There are many developmental delays to consider when working with a child with Autism. Some children may have developmental delays that can be less or more severe than others. Each child is different however, it is important to look at each child's individualized education program (IEP). An IEP is a plan that lists a breakdown of a student's academic level, behavior patterns, and lists the related services needed and provided by therapists. (<https://www.understood.org/en/school-learning/special-services/ieps/understanding-individualized-education-programs>)

## **Behavior**

The first delay to consider is Behavioral. Often times, children on the spectrum face challenges with their behavior due to lack of ability to communicate effectively. Their sensitivity to high auditory sounds and environments can play a role in how they react as well.

Behavioral issues in children with Autism hinder their ability to learn academically but also socially as well. Another issue in behavior may be due to their lack of ability in understanding receptive language.

Autistic children may hear certain words or phrases being said to them but will not understand what the person is saying. As a result, negative behaviors are displayed out of frustration and misunderstanding that they are not understood. Applied Behavior Analysis is often times implemented to reduce these behaviors.

### **Social Interaction**

Another delay children on the spectrum may face is social interaction. Children with Autism may not respond to simple cues such as facial expressions or gestures. Their difficulties hinder them from seeking enjoyment with others, or take part in fun activities. Factors such as a child being non-verbal can also hinder their ability to be social.

*(<https://www.autismspectrum.org.au/content/characteristics>)*

Some ways to improve with their social skills is to form social skills groups. This technique can be implemented in different environments such as home, communities, and in school. Parents can encourage their children to hold conversations on how they are doing, and also place them in settings with other peers to help build their social confidence.

Social skills groups provide an easier context of language, help build on self-esteem, and maintain structure for a chance to adapt to the skill.

*(<https://www.autismspeaks.org/social-skills-and-autism>)*

### **Adaptive Learning**

Daily life skills are crucial in functioning properly on a daily basis. Children with Autism face challenges adapting and applying these skills. According to Dr. Gerhardt, a child with Autism may find it difficult to cross a busy street because it involves motor skill, visual memory, and decision making. *(DAILY LIVING SKILLS: A KEY TO INDEPENDENCE FOR PEOPLE WITH AUTISM; Interactive Autism Network at Kennedy Krieger Institute; Published April 10, 2014)*

Daily living skills is a large portion of what adaptive behavior is, and includes communication, social and relationship skills, that can be difficult for children on the spectrum to face.



## ANALYSIS

After a course of 26 weeks of ABA therapy, the ABLLS-R measure concluded that Student N01 made progress learning 0-33 skills in the cognitive domain, 3 to 12 in the social domain, 0 to 12 skills in the academic domain, and 1 to 4 skills in the adaptive domain. By the end of the academic year, all goals listed on his IEP were met.

Student K02 achieved skills 1 to 26 in cognitive, 2 to 10 in social, and 1 to 4 in adaptive. By the end of the school year, Student K02 met his annual IEP goals.

Student C05, achieved 2 to 16 cognitive skills, 0 to 6 in social, 0 to 4 in academic and 0 to 3 skills in the motor domain. By the end of the academic year he met his annual IEP goals. Student Z08 achieved 13 new skills in cognitive, two in adaptive, 1 in academic, and 6 skills in social domain. At the end of the academic year he also met his IEP goals.

At the end of the study, all students made steady progress in all areas of domains. Student C05 achieved 33 skills, K06 achieved 39 skills, Z08 achieved 24 skills, and Student K02 achieved 52 skills. (Journal of Educational Issues ISSN 2377-2263 2016, Vol. 2, No. Overall, there were a total of 544 skills, which were grouped into five skills to reflect each students' progress.

The data reflected is extremely important in finding out whether or not Applied Behavior Analysis is an effective form of treatment with children on the spectrum, as well as helping students meet their IEP goals. Overall, the data concluded that all students in the study met their IEP goals, and is an effective form of treatment due to the fact that data shows significant improvements in all areas of measure. With significant help in all areas, it allows students with Autism cope and better deal with all areas of delays, and helps them achieve more academic success.

## **Personal Reflection**

It was from when I was a child that I knew that I would grow up to take on the role of a teacher, to guide and shape the future. I would spend almost every day after school on my staircase with the wall as my chalkboard. I spent time lining up my teddy bears in rows and supplying them with textbooks, and if I got lucky, I would have my niece sit in on my daily lessons as well. It was a big orange textbook bigger than my head and arms combined, with bold fine print which read “English Language Arts” on the front cover. It was my third-grade teacher, Ms. Tino, who inspired me. She always took the time to make sure I understood the material, and made every lesson a memorable one. At the age of eighteen I began my college journey in pursuit of becoming a teacher, and at the age of twenty I landed a job working with the Department of Education, as a paraprofessional. I stepped into my first assignment working for District 75, Special Education, and I was completely terrified. I had spent prior years working with children in classrooms, but never with children with Autism.

Over the course of four years I learned the in’s and outs of what it took to work with children with Autism. Each child has different specific needs and balancing all of them was key to running a successful classroom.

Throughout this process/analysis I have found that there is a lot of academic success through the use of Applied Behavior Analysis. In research and studies, I have realized that there is a higher rate of success in classrooms than what I have seen in my school personally. There have been a lot of areas of success but depending on the child, the cognitive level of achievement is lower than the studies I have read on. Overall, there is a higher success rate than what I imagined, and it gives me hope to see that with Applied Behavior Analysis, there is hope for children with autism to learn the skills that they need in the most effective way possible.

Overall, at Purchase I have had trouble fitting classes that are geared toward my major of choice which is Education. As a result, it was recommended to me that I took Liberal Studies. Through this particular course, it has allowed me to expand on the field of study that interests me most, and learn and understand different areas in the field, on a more in-depth level.

## **Conclusion**

As a result of the data presented in this study, it has been proven that Applied Behavior Analysis does give a child with Autism the opportunity to progress better in all areas of measure in a classroom setting. Applied Behavior Analysis is a technique that is an effective form of treatment, and helps students better learn in a classroom. The more students in a classroom given this form of treatment, the better results will be produced as a whole in the classroom. Better improvement in all areas, can not only give students a chance to strengthen each skill but give them the confidence to communicate with each other, and practice adaptive skills independently.

## **Bibliography of Sources**

**DIBELS® Math. (2016). Overview. <https://dibels.org/dibelsmath.html>**

Provides a deeper understanding of math and why it is important. DIBELS math, provides a breakdown of what target areas the assessment focuses on, and gives instructional support for teachers in classrooms. This source helps with a deeper understanding on the study conducted in the research.

**Partington, J. W. (2016). The Assessment of Basic Language and Learning Skills - Revised (ABLRS-R).**

**<https://www.partingtonbehavioranalysts.com/page/ablls-r-25.html>**

Provides a breakdown on what the basic language and learning skills are, and a deeper understanding on the assessment. Resources such as books, charts, and online resources are available to parents and teachers, so they are able to effectively teach new skills. This source helps with an understanding on the assessment used in the research.

**U.S. Department of Education, National Center for Education Statistics. (2016). Digest of Education Statistics, 2012 (NCES 2014-015).**

**<https://nces.ed.gov/fastfacts/display.asp?id=64>**

This source gives a breakdown on the statistics on how many students with disabilities receive services, and statistics about the increase in Autism.

**(DAILY LIVING SKILLS: A KEY TO INDEPENDENCE FOR PEOPLE WITH AUTISM; Interactive Autism Network at Kennedy Krieger Institute; Published April 10, 2014)**

This source is helpful in explaining the different functional daily life skills a child with autism can benefit from. Dr. Amie W. Duncan, conducted studies on student's IQ's, and explains the importance of having daily life skills in order to function in society.

**<https://www.autismspeaks.org/social-skills-and-autism>**

This source gives an overview on the definition of social skills, who can teach it, and how social skills groups can impact a child with Autism.

**<https://www.autismspectrum.org.au/content/characteristics>**

This source is extremely helpful in understanding the characteristics of Autism. Each description lists each delay, and explains the difficulties behind them. There is also information on the different ways to reduce and improve on different areas of each characteristic.

**<https://www.understood.org/en/school-learning/special-services/ieps/understanding-individualized-education-programs>**

This source gives an overview on what an IEP is, and gives in depth examples and explanations on how they work and what they are used for. There is a process when putting an IEP together. This source provides information on how that is, and what happens in an IEP team meeting.

**Journal of Educational Issues ISSN 2377-2263 2016, Vol. 2, No. 2**

Author Nai-Cheng Kuo discusses the different factors that are seen in the classroom with Autistic children. He explains the different levels of learning, and discusses how Applied Behavior Analysis is implemented. Studies were conducted between five students, and listed are the results of each student and whether or not ABA was effective.

**DIBELS. (2016). Dynamic indicators of basic early literacy skills.  
<https://dibels.org/dibels.html>**

This source is relevant to the research study. It gives a breakdown on how the assessment is set up and how each measure of reading is calculated. This source gives an overview on how the assessment tracks each students progress.

**<https://www.autismspeaks.org/applied-behavior-analysis-aba-0>**

Applied Behavior Analysis gives a breakdown on what Applied Behavior Analysis is, how it works, and the positive reinforcements that follow. Autism Speaks gives an overview of the different ABA programs for Autism, and the main goals for each. There is also information on who provides the services and the evidence that ABA proves to be efficient.