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Using a Language and Literacy Intervention to
Increase Autistic Students Social Interactions with Peers

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Abstract

This paper explores the research looking at an intervention done with four preschool students with autism like tendencies. Two of the students are on the autism spectrum and two students show autism like tendencies and deficiencies. All four students struggled in social situations and play with their peers. The intervention provided for all four students was a checklist of skills needed to be successful in a social situation; group games, cooperative play and cleaning up. The article review discusses many supports provided and areas of need for young and adolescent students on the autism spectrum. The results of the intervention showed that three out of the four students did show improved social skills according to the preschool social skills checklist; one student maintained his current social skills.

Keywords: autism, social skills, intervention

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Social interactions between young children happen multiple times a day. This skill to socialize with peers comes at an early age for many children. Some children on the autism spectrum struggle with play skills, language skills and interacting with their peers. There are many ways to teach the students the skills needed to interact with peers and play with toys appropriately. Interventions can be used to show students how to play with toys, how to interact with peers and how to share when in a play setting.

Through action research, the following study shows the results of interventions in the areas of language and literacy given to students on the autism spectrum to increase their play and social skills with peers. The methods used in the study to collect data were observations and documentation of Individualized Education Plan (IEP) goals in the areas of language and literacy. The students will be observed in a social setting with peers and with adults present. The settings will range from teacher directed to student driven play areas. If data shows an increase in social exchanges interventions like the following could be used with many autistic children to increase their daily social interactions with peers around them.

Literature Review

Students with autism and the typically developing classroom is a newer idea and there is a lot of research currently on the topic. However, there is not a lot of information available for autistic students' socialization in the general education classroom. Inclusive classrooms are becoming more and more popular in schools and teachers are finding more ways to engage students of all abilities including autism. *Inclusion Means Everyone! The Role of the Early Childhood Educator When Including Young Children with Autism in the Classroom*, is one

article that gives educators information on how to have a successful inclusive classroom (Vakil, Shernavaz, Welton, O'Connor, Kline, 2008).

Students on the autism spectrum learn differently than many students and the resources in the classroom often need to be modified for their learning. Some ways that are addressed in the following paragraphs are social stories; stories written to help students understand what they should be doing in different social situations. Joint play and attention; these skills are often difficult for students that struggle socially and time is taken out of the day for students to have a chance to practice playing with other peers and giving the correct response and attention when a peer is talking.

The following piece of literature looks at the social story intervention of two students on the autism spectrum. They worked on engaging in role play, answering questions and appropriate play in a social situation. They also talked about inappropriate behavior; the amount of inappropriate behaviors did decrease after the intervention. One article, *A Social Stories Intervention Package for Students With Autism In Inclusive Classroom Settings* stated that, "Social stories have been experimentally investigated in home settings, self-contained special education/resource classrooms, and campus outdoor areas but not in general education inclusion settings. Including students with autism in general education classrooms can create meaningful social opportunities with peers without disabilities and is considered a preferred alternative to self-contained educational settings" (Chan & O'Reilly, 2008, p. 1). The information that Chan, Jeffery and Mark (2008) provide in the article is crucial in the developmentally appropriate teaching for students on the autism spectrum. Many students benefit from a social story and it is a quick and easy way for educators to show the appropriate behavior to the student. The student

can also have access to the social story to look back on when they are feeling uncomfortable in a situation. Including students on the autism spectrum in the general education setting can give the students peer examples on social behaviors. These typically developing peers can provide real life examples on how the students should act in a social setting. Introducing students and giving them the supports needed to succeed in the general education classroom can teach them how to adjust in other social situations as well.

According to Vakil, Shernavaz, Evonn Welton, Barbara O'Connor, and Lynn S. Kline (2008) there are many ways to include all students in the classroom, including students that struggle socially or are on the autism spectrum. There is a higher number of children with autism in the classroom and providing an inclusive classroom is very important. The learning for these students has been on the rise and many teachers are accepting the challenge of working and creating an inclusive classroom. This article gives great insight to a successful and diverse classroom. Vakil, Shernavaz, Evonn Welton, Barbara O'Connor, and Lynn S. Kline's (2008) article provide real information for educators on specific ways to support learners on the spectrum. This information is important because many students on the spectrum are working towards social acceptance and being able to attend class in a general education classroom will help them learn and may help them learn quicker with their peers.

Play skills are a very important skill for young students to have; students on the autism spectrum often struggle in this area and may become a social outcast if the skills are not taught to them. According to Wong and Kasari, "Young (2012) children with autism have significant social-communication delays in symbolic play and joint attention. Specific deficits in these areas distinguish children with autism from typically developing children as well as from children with intellectual disabilities" (Wong, Kasari, 2012, p. 1). The research for this study looked at

preschool students in their own classrooms for two hours on three days. The results from the study do show that the students were not at the same social stage as their peers; they did not engage or play the same amount as the other students in the classroom. This is important information for educators to understand, students on the autism spectrum may be functioning very low socially compared to their peers. This will affect how the students interact during centers, small groups, large groups and circle time. The students may seem disruptive at times and may seem like they do not want to be a part of the group but that is not true, they may not have the skills to enter the group or to attend. These skills are important for the students to learn at a young age so they can join the general education classroom with their peers and it is important for early childhood educators to teach these skills to students on the autism spectrum.

For students that are older in age the social gap can get deeper because of the lack of skills. According to Laugeson, Ellingsen, Sanderson, Tucci, and Bates (2014), there is a great need for social skills for the adolescent age student on the spectrum. There is not a lot of information on adolescent students on the spectrum and the social skills needed, this article gives more information on friendships and school. Seventy-three adolescent middle school students on the autism spectrum, their parents, and their teachers were all part of a study that looked at the change in social functioning skills. The students participated in “the implementation of a school-based, teacher-facilitated social skills intervention known as Program for the Education and Enrichment of Relational Skills (PEERS)” (Laugeson et al., 2014). The results of the research show that the students improved significantly with their social skills. Their autism tendencies also decreased after the implementation. The reports from the adolescents show that they had more positive interactions with peers in social situations and the parents reported a decrease in anxiety with their child. This study is important because it shows that there is a gap during the

adolescent stage and that students on the spectrum are not able to adjust like their peers. The information taken in this study can help educators increase the social opportunities and supports for students on the spectrum. The study also shows that parents, educators and the students can all work together to create an environment that will help students on the spectrum grow socially and be able to make social decisions and act appropriately in different setting with their peers.

There are a number of new resources for teachers and administration to have access to when they are working with students on the spectrum. *Services to Include Young Children with Autism in the General Classroom*, is about available services for educators. This article provides useful services that are provided for students with autism. This article gives background on the diagnosis and what the tendencies look like for a student on the spectrum. Sperry, Whaley, Shaw, and. Brame provide a useful resource for educators and administration that may have a new student entering the classroom or the school community. It is important for educators to have a background of insight in the autism spectrum to fully understand the way their students will respond in the classroom. Students on the spectrum learn differently than others and they also interact different from their peers. It is important for an educator to understand that so the student can have success in the classroom. There are many different needs that will have to be met with a spectrum student in the classroom and this article provides a background and specific materials or ideas to aid in the everyday success of the student.

The increase in information available to educators and parents is on the rise for students on the autism spectrum. There is more information available today than there ever was before. There is information to increase social skills for students in the classroom and these modifications are showing more success. With the information becoming easily accessible to educators, the students and families are seeing more success in functioning in a typical society

setting. Students on the autism spectrum may learn differently and socialize differently than their peers but with some modifications and all areas of their support team working together, they can be very successful in the classroom as well as in the community.

Methods

Participants

In this action research study, there were eight preschool students. In the preschool class there are students ranging from age three to age five. There is one girl student and seven boy students. The students in this class are all entitled for a special education reason. Some students in the class have a diagnosis of autism. The socioeconomics of the classroom ranges from low income to above average socioeconomic status. Four of the students attending the summer school program are from the current teacher's classroom and the other four will be new to the teacher but not the classroom setting. Three of the students are diagnosed with autism and five do not have a diagnosis but some are currently in the process of testing. All eight students are at summer school with an adaptive behavior goal. At the beginning of summer school, all students' current social skills were observed to document social interactions with peers.

Data Collection

For this action research, study data was collected at the beginning of summer school to collect a baseline. Data was then taken at the end of each week for a total of three weeks. Data is represented on a checklist with three subcategories; group games, cooperative play and cleaning up. The data was taken with observations of students at a center play time and the IEP goal data of the adaptive behavior. During the six-week summer school data and observations were taken on four students, two with an autism diagnosis and two with low social skills but not a current

diagnosis of autism. The students participated in a social skills intervention as well as a language intervention four days a week. The social skills intervention was with one peer and an adult. The language intervention was one on one with an adult. Students in the social skills intervention were placed with a peer with similar social skills. The social skills intervention and language intervention were each ten minutes a day for four days a week. The students were observed during center play time at the end of week three and week six. The students not on the intervention participated in centers, free play time, recess and other group activities with peers.

The social skills intervention plan was to improve the students' interactions with peers while in a preferred location, playing with preferred toys. The intervention consisted of the adult assisting the student in interacting with one peer such as; asking for a turn, sharing, and playing appropriately with the toy. The language intervention plan was to support students in their play skills and interactions with peers. The intervention was one on one with an adult and built on the current communication skills of the student such as; asking for "my turn," requesting a toy and requesting "all done." The students were allowed to use PECs pictures to request items from the adult and encouraged to make the sounds for the desired item. The adult would prompt the student for the picture or verbal name of the desired item. When the student gave the picture or said the word, they received the desired item.

The checklist used for the intervention consists of three areas, group games, cooperative play and cleaning up. The checklist skills are organized from first skill wanted in the top left to the more difficult skills on the bottom right. Each subcategory has up to four skills. The student's goal is to start at number one and work over to number four. Group games is the first skill, cooperative play is a further skill and cleaning up is the last skill on the checklist. The students worked on all of the social skills during their intervention time but data was taken on the

following three areas at the end of each week. An observation was made while the student was in a social interaction setting.

Group Games

All four students first goal was to play comfortably alongside another child, no interaction is expected. The next skill is for the child to imitate what others are doing in a play setting. The third skill is for the child to enjoy a simple back and fourth game either with an adult or another student, this could be anything from hide and seek to a simple board game according to the child's cognitive skills.

Cooperative Play

All four students first goal was to participate in a play activity with other children present; the student will all be using the same materials. The next skills is for the student to participate in simple turn taking with an adult or child, this is supported with adult modeling. The third skill is for the child to share or take turns with another child or adult with prompts. The final skill is for the child to share his or her toys or allow another child a turn in response to the child's request. This skill has no adult prompts.

Cleaning Up

The first skill is for the child to work with an adult to clean up during work time in a one on one setting. The next skill is for the child to clean up materials in a small group; this skill is supported by an adult in the area. The third skill is for the child to clean up materials in a small group activity when the direction is given to the whole group. The final skill is for the child to clean up during center time when the whole group direction is given; this skill is not supported by an adult.

Results

Table 1 Week One Results

Student	Baseline Data 6/12/17	% correct (12 points)	Score after week one 6/15/17	Point Gain	% Gain
A	5	.416	5	0	0
S	6	.50	6	0	0
N	1	.08	1	0	0
T	9	.75	9	0	0

Table 2 Week Two Results

Student	Baseline Data 6/12/17	% correct (12 points)	Score after week two 6/22/17	Point Gain	% Gain
A	5	.50	6	1	.08
S	6	.583	7	1	.08
N	1	.08	1	0	0
T	9	.833	10	1	.08

Table 3 Week Three Results

Student	Baseline Data 6/12/17	% correct (12 points)	Score after week three final intervention week 6/29/17	Point Gain	% Gain
A	5	.50	6	1	.083
S	6	.75	9	3	.25
N	1	.083	1	0	0
T	9	.917	11	3	.25

Baseline data was taken week one after the students were settled into the new classroom for summer school and had been in a few social situations each day. All four students displayed at least one skill on the checklist at the end of week one. Three out of the four students showed growth after the three weeks of interventions. Three students showed growth from the baseline week to week two and two students showed growth from week two to week three. Two of the four students have a diagnosis of autism and one out of the two showed growth. The other two students do not have a diagnosis but display autism tendencies, both students showed growth. The overall goal was for the students to be able to demonstrate 10/12 skills from the checklist. Typically developing peers of the same age can display 10/12 of the skills on the checklist. One student reached the goal and was able to demonstrate 11/12 skills.

After week one for a baseline, Student N had one skill, he was able to clean up materials with adult support during work time. Student A was able to demonstrate five skills. She was able to play alongside other children, imitate other children, participate in a play activity, and clean up

at work time and in a small group with adult support. Student S was able to demonstrate six skills, play alongside other children, imitate other children, participate in a play activity and turn taking activity, and clean up at work time and in a small group with adult support. Student T had the most skills for a baseline. He was able to demonstrate nine out of the 12 skills. He was able to play comfortable alongside others, imitate others, enjoy simple back and forth games, participate in play activities, turn taking activities, sharing toys, cleaning up during work time, and clean up in a small group with and without adult support.

After week two of the interventions three of the students showed growth. One student stayed at the same level. Student A was now able to participate in a simple turn taking activity with adult support and modeling. Student S was now able to share or take turns with other children with prompts from an adult. Student T was now able to Share toys or allow a turn in response to another child's request. Student N was maintaining the skill of cleaning up materials at work time with adult support.

After week three, the final week of the intervention, three of the four students showed growth. Student A went from five skills demonstrated to six skills demonstrated. Student S went from six skills demonstrated to nine skills demonstrated. Student T went from nine skills demonstrated to eleven skills demonstrated and student N stayed the same with one skill demonstrated from the checklist. The two students that started with the highest score showed the most growth. Student T went from 9/12 to 11/12 and student S went from 6/12 to 6/12. The two students with the lowest score on the checklist showed the least amount of growth. Student A went from 5/12 to 6/12 and student N stayed the same with 1/12 skills demonstrated.

In conclusion, the results from the action research show growth for 75% of the students that participated in the interventions. Three out of the four students that received social skills and

language interventions improved their skills on a checklist that consisted of skills in the areas of group games, cooperative play and cleaning up. The results of this research shows that students on the autism spectrum or students that have autistic tendencies, can improve their social skills if a deficit is present and an intervention is in place. Social skills for young students has been proven to be very important through much research in the area. Students on the autism spectrum that struggle in the social skills area can benefit from extra help. Interventions and modifications can be put in place in the general education classroom to help these students succeed.

Preschool Social Skills Intervention Chart

Name: A, S, N, T Date: 2017

Base: A-5 points of 12 possible points
S-6
N-1
T-9

Goal: 10 points of 12 possible points

Skills	1	2	3	4
Group Games (Social/Emotional)	<p>___ Plays comfortable alongside another child/no interactions</p> <p>A A A S S S T T T</p>	<p>___ Imitates what other children are doing, interact occasionally</p> <p>A A A S S S T T T</p>	<p>___ Enjoys simple back and forth games such as hide & seek/ simple board games</p> <p>T T T S</p>	<p>___ works/plays cooperatively with one other child</p> <p>T</p>
Cooperative Play (Social/Emotional)	<p>___ Participates in play activity w/ other children using the same materials</p> <p>A A A S S S T T T</p>	<p>___ Participates in simple turn taking with adult involvement/adult modeling</p> <p>S S S T T T A A</p>	<p>___ With prompts, share or take turns with others</p> <p>T T T S S</p>	<p>___ Shares toys or allow turn in response to another child's request</p> <p>T T</p>
Cleaning up (Social/Emotional)	<p>___ Cleans up materials with adult support during work time</p> <p>A A A S S S N N N T T T</p>	<p>___ Cleans up materials in small group with adult support</p> <p>A A A S S S T T T</p>	<p>___ Cleans up materials in a small group when direction is given</p> <p>T T T S</p>	<p>___ Cleans up materials during centers when whole group direction is given</p>

Resources

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