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HOW THE INCREASE OF STUDENTS WITH AUTISM HAS IMPACTED THE GENERAL
EDUCATION CLASSROOM

A MASTER'S THESIS
SUBMITTED TO THE FACULTY
OF BETHEL UNIVERSITY

BY
JENNIFER JONLAND

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HOW THE INCREASE OF STUDENTS WITH AUTISM HAS IMPACTED THE GENERAL
EDUCATION CLASSROOM

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APPROVED

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Abstract

There has been a significant increase of students with autism in the general education classroom over the past few years. The education system is moving towards inclusion based of the Individuals with Disability Education Act (IDEA), which offers a free an appropriate education to all. It is important to look at the impact students with autism have had on their typically developing peers and teachers in the general education classroom. This research looks at both positive and negative impacts that autism students have had on the general education setting. A challenge for teachers is the lack of training they have received in order to effectively teach all students in their classroom. There have been a lot of benefits for both students with and without autism when participating in an inclusive classroom. Some of these benefits include increased social skills, awareness and diversity, increased friendships, and peer role models, which leads to increased engagement for all students.

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CHAPTER I: INTRODUCTION

There has been a dramatic increase in the number of students being diagnosed with autism spectrum disorder (ASD) in the past few years. Because of this, there has been a large increase of students with autism participating in the general education classroom. Stienbrenner and Watson (2015) state, "in 2012, United states schools served nearly 445,000 students with a primary education label of students with autism between the ages of 6 and 21, with over half of those students in the elementary and middle school range" (p.2392). Schools are moving towards an inclusion model, which is where all students are participating with their same-aged peers as much as possible. Based on the Individual with Disabilities Education (IDEA), students with disabilities should spend as much time as possible in the general education setting with typically developing peers. This is also known as the least restrictive environment. This paper focuses on how the increase of students with autism has impacted the general education setting.

It is important for educators to be aware of the increase of students with autism participating in the general education classroom. Teachers need to be willing to adapt and modify their classroom to meet the needs of all students. In order for teachers to adapt their classroom it is important for them to receive the proper training. Lack of training for general educators is one of the challenges they face when working in an inclusive classroom.

There are many benefits to having students with autism in the general education classroom. Some of these benefits are increased social skills, increased student

friendships, and increased engagement for all students. When students with autism participate in the general education classroom it provides awareness and diversity for typically developing peers.

Students with autism often struggle with social skills, building friendships, and being accepted by their peers. However, when students with autism participate in the general education they have an easier time making friends with their same-age peers. Inclusion also has a lot of benefits for neuro-typically developing peers. It increases student engagement and participation for all students in an inclusive environment. Typically developing peers become positive role models for students with autism.

Inclusion in the general education has many benefits for not only the students with autism, but also for typically developing peers. Are there challenges when working with students with autism in the general education? Yes, there are, but when teachers can receive the proper training and are willing to form a positive relationship will ALL students then everyone will benefit from an inclusive classroom.

Overall, there are more benefits than challenges when including students with autism in the general education classroom. The next chapter will address why social skills increase, engagement increases, and students with autism make more friends when participating in the general education classroom.

Since I currently work with high functioning autism students in middle school, I have chosen to address the topic of the increase of students with autism and how it impacts the general education classrooms. Students on my case load spend the majority of their day in the general education classroom, and it has been a struggle for them to

be successful in the classroom. Their oppositional deviance behaviors are common among children with autism, but teachers do not know how to address these behaviors in the classroom. This paper will focus on the increase of students with autism and how has it impacted the general education setting? Has it made a positive or negative impact on the general education setting? What are some characteristics of students with autism? What are some challenges educators face with the inclusion of autism students in the general education? What are some interventions and strategies teachers could use in an inclusive classroom? What are some benefits for all students with the increased amount of students with autism in the general education setting?

History of The Individuals with Disabilities Education Act

The Individuals with Disability Education Act (IDEA) offers all students a free and appropriate education including all students with disabilities. Therefore, schools are moving towards inclusive classrooms, which are designed to meet the needs of all students and encompass their individual needs, abilities, and educational needs (Falkmer, Oehlers, Grandlund, & Falkmer, 2015). Students should be placed with typically developing peers in the general education setting as much as possible. Broderick, Mehta-Perekh, and Reid (2005) suggest that every student has the right to be educated in an inclusive classroom and not segregated from their peers. This is also known as students being placed in the least restrictive environment.

Inclusion

Inclusion is where all students are taught in the general education classroom. Therefore, students with disabilities are participating in the general education setting

with neuro-typically developing peers. In an inclusive environment it is important for general education teachers, special education teachers, and parents to collaborate with one another. Collaboration is defined as when practitioners and parents team together to better plan and meet the needs of their students (Vakil, Welton, O'Connor, & Kline, 2008).

Inclusion in the classroom can be very beneficial for both students who are typically developing and those with autism. Gena (2006) states,

“inclusive educational practices not only realize the right of children with disabilities for a least restrictive placement, but also that the education and social benefits of inclusion on children with and without disabilities are great, as a growing research base outlines” (p. 542).

CHAPTER II: LITERATURE REVIEW

Literature Search Procedures

Academic search premiere was used to find all of the articles used throughout this thesis. Articles were narrowed down by searching empirical studies from peer reviewed journals and were published between 1995 and 2016. Each article focused on the increase of children being diagnosed with autism over the past few years and the impact it has had in the general education classroom. A key word that is seen throughout the article is inclusion. Articles explain what inclusion in the general education classroom looks like. The key words that were searched included “how has the increase in autism impacted the general education classroom.” This chapter looks at the benefits and challenges teachers and students face in an inclusive classroom. This chapter includes the following: lack of training for the general education teachers, characteristics of autism strategies and interventions for teachers, benefits of peer support/friendships, and increase of student engagement in an inclusive classroom to review the literature on how inclusion has impacted the general education classroom.

Lack of Training

According the Individuals with Disabilities Education Act (IDEA), students with disabilities should be with the same-aged peers in the general education classroom as much as possible. Therefore, schools are moving toward an inclusion model by having students with high functioning autism included in the general education classroom for more than 80% of the time. Sansosti and Sansosti (2012) suggest that included students with High Functioning Autism Spectrum Disorder (HFASD) not only exhibit higher levels

of engagement and social interaction, but also they have larger networks of friends or are selected by their peers to be included in activities the same amount as students without disabilities.

The purpose of Sansosti and Sansosti's (2012) study was to see how different attitudes and experiences are associated with and impact the general education classroom when including students with high functioning autism. Overall, the majority of the participants in this study agreed that including students with high functioning autism into the general education classroom was beneficial and necessary for the student with autism. Also, inclusion in the general education classroom can also be beneficial for students without autism because of the additional curriculum, environment, and behavioral supports. However, some participants felt that fulltime inclusion might not be beneficial for all students with high functioning autism. They feel that making decisions about including students with HFASD into the general education classroom should be made on a case-by-case basis (Sansosti & Sansosti, 2012).

There has been a recent increase in children diagnosed with autism spectrum disorder (ASD). In 2005, there were approximately 120,000 students with autism receiving special education services (Finke, McNaughton, & Drager, 2009). That number is continuing to increase each year, which means more students with autism are being served in the general education classroom than ever before. The purpose of Finke et al.'s (2009) study is to identify and understand a variety of strategies that teachers used in their inclusive classroom.

The participants in this study involved a focus group of five general education teachers. Data was collected from the teachers over a 15-week period. Results show that there were both benefits and challenges for teachers and students. Three of the participants felt there was an increased opportunity for social interactions from typically developing peers. Typically developing peers were positive role models in the classroom for students with autism. Also, it was reported from four participants that having a student with ASD in the classroom provided awareness and diversity among typically developing peers. Some challenges that occurred were teachers felt like they need more time throughout the school day to complete lesson plans and modifications. Finke et al. (2012) found that teachers also felt there was a large need for extra support in the inclusive classroom. With limited resources for staff it made it difficult for some teachers to positively implement teaching that geared towards all students. However, the benefits of peers support and friendships out weigh the challenges.

Chamberlain, Kasari, and Rotherman-Fuller (2006) found that children with autism have a difficult time forming peer relationships and friendships with typically developing peers. Autism is a disability that impacts a student's social interactions with peers. There has been a noticeable increase of students with autism, therefore, there has been an increase of students with autism in the general education classroom. The inclusion model has both positive and negative impacts on all students. Research shows that inclusive classrooms have led to increased rejection of students with autism (Chamberlain et al., 2006). However, research also shows that an inclusive classroom

benefits both students with and without autism (Chamberlain et al., 2006). The purpose of their study was to weigh the benefits and challenges of an inclusive classroom.

Chamberlain et al.'s study included a total of 196 boys and 17 of them were diagnosed with autism (2006). All 17 students with autism were enrolled in the general education setting for majority of their day. Results show that including students in the general education classroom has both positive and negative impacts on students with autism. The majority of the target students managed to avoid isolation in the classroom and manage to be involved and enjoy peer interaction. Teachers and typically developing peers learn to modify the environment when interacting with a student with autism, which can cause stress throughout their school day. In this case, the positive outcomes outweigh the negative when including students with autism in the general education classroom. When children with autism are included into the general education classroom they are more likely to create positive peer friendships (Chamberlain et al., 2006).

Many schools are moving toward an inclusion model, which means students with various disabilities are participating in the general education classrooms with their same aged peers. Students with high functioning autism are among those students participating in the inclusion classrooms. Friedlander (2008) states that, "autism is a disorder that can impact many aspects of a child's learning experience" (p.141). The majority of children with autism have a difficult time picking up on nonverbal social cues, which can make it difficult to form friendships with peers.

Friedlander (2008) discusses different tools and strategies for general education teachers to include students with autism in their classrooms. Some of the tools and strategies are easing transitions, creating social stories, offering a variety of sensory tools, and developing a behavioral plan for all students. When implementing these tools and strategies in the classroom both neuro-typically developing peers and students with autism will all benefit. The concern that many teachers have when working in an inclusion classroom is their lack of training. However, when students with autism are given the opportunity to participate in the general education classroom is beneficial for all students. Friedlander (2008) states, "providing all students with a rich, inclusive classroom environment that includes individual goals with foster mutual respect and understanding for all" (p.143).

An inclusive classroom, is one where students with disabilities are taught in the mainstream classroom along with their typically developing peers and a general education teacher. Among this population are students with high functioning autism. Advocates for autism feel that a full inclusion model has positive impacts on teachers, students with autism, and typically developing peers. Some research shows that integrating students with autism in the general education classroom can help students without autism accept and understand how to work with these students. With the increase in students with autism being supported in the general education classrooms it is important to look at the teachers' perspective (Cassismos, Polychronopoulou, Tripsianis, & Syriopoulou-Delli, 2005).

There were a total of 228 teachers who participated in a cohort study to help understand their views and attitudes when including children with autism into their classrooms. Teachers who had previous training in autism had significantly different views and attitudes to an inclusive classroom compared to their co-workers with limited training. A majority of the teachers feel the greatest challenge when working with students with autism in the general education classroom is the lack of support services (Cassismos et al., 2015). When a teacher is given proper training in autism they are less likely to struggle.

In order for an inclusive model to be effective, teachers need to be properly trained in the area of autism. Teaching students with autism in the general education classroom can be very challenging because of their behaviors. It is important for teachers to have an open mind and accept diversity in their classroom. When educators teach in ways that express diversity then they will be able to teach all students in the mainstream class without needing as much special support. Jordan (2008) suggests that teachers need to be willing to have more laborious interaction with their students and make a conscious effort to understand what will be beneficial for them. Many educators teaching an inclusive classroom are unaware of strategies that help form positive relationships with students with autism. It is important that teachers form a relationship with each student in their classroom. Forming a relationship with a student with autism can be challenging because of their social struggles. When a teacher is not properly trained to interact with these students then it makes it difficult to provide a positive

impact in an inclusive classroom. Also, it is important that teachers focus on students' talents instead of focusing on their disabilities.

Characteristics of Autism

Autism is defined as a neurodevelopment disorder that impacts a child's social awareness, communication skills, and language skills. A recent report showed that 1 in every 110 children are being diagnosed with autism (Boyd & Shaw, 2010). There is controversy over why autism has increased dramatically over the past decade. One of the reasons people think there has been an increase in autism is because of increased public awareness and having the tools to diagnose students at a young age. Some of the early indicators of autism are not being interested in social play, hand flapping, and extreme behaviors. Boyd and Shaw (2010) suggest that early diagnosis results in better outcomes when these children begin school.

A participant in Boyd and Shaw's (2010) study was diagnosed with autism when he was two years old. When he was first diagnosed he had many tantrums and behaviors at home. However, when he transitioned to school he was provided with support in the general education classroom. The child's parents noticed that with the appropriate support from being diagnosed at a young age led to a decrease in behaviors and increase in his ability to verbally express his frustrations. Having the tools to diagnose children at a young age with autism has a direct impact on the child's educational experience. Students with autism exhibits different types of behaviors in the classroom.

Some characteristics of autism include, impairments in communication and interactions with others, repetitive and stereotyped behaviors, and delays in social interaction, language, and social communication (Debris & Carlo, 2013). These behaviors are often seen in the classroom, making it difficult for a child with autism to relate to typically developing peers in a social environment. The amount of students with autism has increased dramatically over the past decade. Research shows that the amount of students with autism increased from 1 in every 150 in 2000 to 1 in every 88 in 2008 (Debris & Carlo, 2013). Therefore, the amount of students with autism participating in the general education has also increased. Debris and Carlo (2013) suggest, in order for inclusive classrooms to have a positive impact on all students teaching strategies and modification are necessary for success. Some modifications that teachers can implement in their classrooms include posting classroom rules, label classroom centers, having a quiet area, one-on-one centers, and including sensory materials in the classroom. These are just a few of many modifications that teachers can use to help teach students with autism in their classroom. When a teacher can plan adequately and be considerate of all students in the classroom it will increase all students' ability to learn.

Strategies and interventions. Teaching in an inclusive classroom can have its benefits and challenges for teachers and students. When a teacher can focus on students' strengths and talents it can help students become more engaged in the classroom. Research shows that differentiated instruction is essential in providing opportunities for all students in an inclusive classroom. Differentiating instruction is a

comprehensive approach to teaching that enables successful inclusion of all students into the mainstream classroom (Broderick, Mehta-Parekh, & Reid, 2005). When teachers can provide differentiated instruction in the classroom it will help meet the educational, social, and emotional needs of students with autism. It creates a positive learning environment for all students in the general education classroom.

Broderick et al. (2005) suggest that every student has the right to be educated in an inclusive classroom and not segregated from their peers. *Brown vs. Board Education* help us realize that being separate is not equal. However, there are still some people who believe that students with disabilities can't participate in a general education classroom. The Individuals with Disabilities Education Act does not allow children to be segregated from their peers. Overall, Broderick et al. (2005) discuss the importance of differentiated instruction and when it is properly implemented then it creates a successful environment for all students to learn.

Students with high functioning autism have a variety of challenging behaviors. Some of these behaviors include off-task behavior, blurting, impulsivity, and difficulty regulating. Therefore, many students with high functioning autism are at risk for academic struggle, peer rejection, anxiety, and depression. Research shows that parent involvement is very important for positive student outcomes, such as, increased student achievement and few behavioral problems at both home and school (Wilkinson, 2005). Since high functioning autism is a disorder that is cross categorical it is very important that there is a positive parent teacher relationship. Wilkinson (2005) suggests implementing a Conjoint Behavioral Consultation (CBC) model when working with a

student with autism in the classroom. The Conjoint Behavioral Consultation model is defined as a structured, indirect service where parents, teachers, and all support personnel work together and collaborate with one another to meet academic, social, and behavioral needs (Wilkinson, 2005).

The participants in this study were a 9-year old boy with high functioning autism who participates in a mainstream classroom with 27 typically developing peers and one general education teacher. Results from this study show that CBC was an effective and practical method when working with a student with high functioning autism. The students' behaviors in the classroom and home decreased and student achievement increased. There are many strategies and interventions that teachers can incorporate into their inclusive classroom.

This study shows how implementing an intervention can help high functioning autism students that have behavior problems at school. The intervention is called *Prevent-Teach-Reinforce* (PTR), which helps identify the functional behavior assessment because it involves more training.

A study by Strain, Wilson and Dunlap (2011) was based on three participants who were all under the age of 10 who were diagnosed with autism using the DSM-IV criteria. The first participant, the lead teacher and the PTR facilitator were the ones who incorporated the PTR model. The second participant, the team was involved in implementing the PTR model. The third participant, included the student, lead teacher, and PTR facilitator (Strain et al., 2011). The results show for each participant that after they implemented the PTR strategy in the classrooms their behaviors dropped

significantly from their baseline data. When they did a follow up at week 12 the data continued to show a decrease in behaviors. By incorporating this intervention, the three participants' behaviors decreased dramatically over 12 sessions. However, this intervention might not work for every student because some students might not respond the same as the participants in this study. Also, in order for this to be effective the general education teacher and the team needs to follow the *Prevent-Teach-Reinforce* every day in order for this intervention to impact the students' behavior in a positive way. This can be a great intervention that might work for a student with high functioning autism in the general education classroom to address and decrease behaviors.

Student with autism have difficulty understanding and identifying the emotions and behaviors of others. Therefore, it can be difficult for teachers in the general education classroom to teach students with autism. Magyar and Pandolfi (2012) suggest that teachers may not be adequately prepared to develop, implement, and/or evaluate programs/strategies for students with autism that result in positive outcomes. Magyar and Pandolfi focused on the multi-tiered problem-solving (MTPS), which is a strategy for teachers to use in their classroom. The MTPS is a pro-typical prevention-oriented model that is recognized as a useful tool to address a variety of student learning and behavior problems (Magyar & Pandolf, 2012).

Magyar and Pandolf (2012) show different interventions that classroom teachers can use to address both social-emotional and behavioral needs for students with ASD. The interventions were implemented through a multi-tier model, which include three

tiers. The interventions address high need areas of both social and functional communication, deficits in the classroom survival skills, and impairments in both emotional and self-regulation strategies (Magyar & Pandolfi, 2012).

If teachers implement this model into their classroom, it is likely to help improve student outcomes. It is important for teachers to implement this model and interventions in their classroom to help all students be successful. Magyar and Pandolfi (2012) state, “schools will be required to develop appropriate and effective educational programs for students with ASD within the least restrictive setting, and the ASD Support Model may represent a feasible framework for schools to consider for meeting the needs of their students” (p. 985).

Peer support and friendships. Inclusion in the classroom means that everyone is being taught and accepted in the mainstream classroom. Students with disabilities should be with their same age peers as much as possible, which is known as a least restrictive environment. Inclusion allows students with disabilities to learn and play in a supportive environment with their typically developing peers. In order for inclusion to be beneficial, teachers, supportive staff, and parents need to collaborate together. Collaboration is defined as a team of practitioners and parents team together to better plan and meet the needs of their students (Vakil, Welton, O’Connor, & Kline, 2008).

A four-year old boy with high functioning autism participated in a general education classroom. He demonstrated a variety of behaviors that included, limited eye contact, repetition, and isolation. A team of people worked together to help him successfully transition into a general education classroom. Since Cody was in an

inclusive classroom during early childhood there had been a decrease in his behaviors. Also, when all educators and parents worked together to meet the needs of students, it helped decrease disruptive behaviors. Research showed that when children are placed in an inclusive classroom during early childhood years there is a decrease in teasing and bullying from peers (Vakil et. al., 2008).

Children with autism often experience loneliness and less satisfaction with friendships compared to their same aged peers. They experience more rejection from their peers and have a smaller social group. Bradley (2016) suggests that students with autism are three times more likely to be bullied than their typically developing peers. Therefore, they are more likely to have lower self-esteem (Bradley, 2016). Peer support and approval are important factors in order to have a positive outcome in an inclusive classroom. Evidence shows that when typical developing peers understand more about autism it has a positive impact on social inclusion.

The purpose of this study was to find out if peer mentoring helps raise the self-esteem of students with autism. The participants in this study were 12 students with autism and 36 students who participated in a peer mentoring program. After participating in the peer mentoring program, students with autism reported that there was a significant decrease in the amount they experienced bullying. Prior to the peer mentoring program 10 out of 12 students with autism reported that they were bullied. After the program only one student reported that they experienced bullying (Bradley, 2016). Results also showed that the students' self-esteem increased after the program was implemented. Students reported that they felt less alone and were able to make

friends easier at school. Peer mentoring has a positive impact for students with autism in the mainstream classroom.

Friendship is a very important part of a child's social development. When children with high functioning autism are included in the general education classroom it can be difficult to form friendships with their typical developing peers. This study was a multidimensional study on friendships between students with high functioning autism and their peers. Research shows that there are three dimensions of friendship, which are companionship, intimacy-trust, and closeness-affection (Bauminger, Solomon, Aviezer, Heung, Gazit, Brown, & Rogers, 2008).

There was a total of 164 students who participated in a study, and 44 of those students had high functioning autism. The purpose of this study was to examine friendship characteristics between students with high function autism and typically developing peers. Results show that the typical developing peers demonstrated a larger frequency in play, whereas students with high functioning autism demonstrated a larger frequency in parallel play. Students with high functioning autism showed fewer friendship related behaviors like goal directedness and social conversation with peers (Bauminger et al., 2008). It is possible for typical developing peers and students with autism to form friendships in the general education classroom, but it might take some facilitating from teachers. It can be challenging for students with autism to make friends because of some behaviors associated with autism.

Students with high functioning autism often exhibit off-task behaviors, verbal outbursts, and inattention. Research shows that there are a variety of benefits of

including a student with autism into the general education classroom. These benefits are increased opportunity for social interactions, developing friendships, increased communication, increased social skills, and adaptive behavior skills (McCurdy & Cole, 2013). However, even with the benefits of including students in the general education classroom with typically developing peers there are also barriers. Some of these barriers are getting the support from administration and staff and off task behaviors from a student with autism.

The purpose of a study by McCurdy and Cole (2013) was to evaluate the positive effects of peer support/interventions from typically developing peers with students with autism. Participants in this study were three boys with high functioning autism in elementary school. Results show peer support interventions in the inclusive classroom decrease off task behaviors. Overall, the study showed that implementing peers support in the general education classroom has a positive impact on students with autism and their behaviors in the classroom.

Therefore, building friendships between typically developing students and students with a disability is very important in an inclusive classroom. When maintaining a friendship with another person it is important to reciprocate three different characteristics, which are mutual liking, mutual enjoyment, and shared connection (Webster & Carter, 2012). Webster and Carter (2012) examined 16 students with a developmental disability and 47 typically developing peers' ability to engage in behaviors associated with mutual liking, mutual enjoying and shared interaction in a general education classroom (Webster & Carter, 2012).

In order to meet the definition of friendship students need to meet all three characteristics of friendship. Students were observed on their ability to reciprocate with their peers. The targeted participants in this study were predominately male with 13 boys and three girls. Students in this study were diagnosed with either a developmental disability, intellectual disability, communication and motor skills disability, and autism spectrum disorder. Results from this study shows that the median ranking for mutual liking was slightly lower than the other two components (Webster & Carter, 2012). Overall, the interview results show that typically developing peers and students with developmental disabilities possess some components in friendship. However, a majority of students with development disabilities struggled to meet all three components of friendship.

Inclusion can be very beneficial for students with autism, but it can also be a challenge for them to build friendships and a social network among their neuro-typical peers. Kasari, Locke, Gulsrud, and Rotheram-Fuller (2011) state, “mainstreamed classrooms may offer an ideal context to use typical peers as social models, encouraging the maintenance and generalization of skills often not achieved by interventions that use an adult interventionist” (p. 533). A risk of having high functioning autism students with typically developing peers there is a higher chance of being rejected from their peers.

Kasari et al. (2011) set out to find if students with autism could build strong friendships with typical classmates when they were fully included in the classroom compared to students with autism who were not fully included in the general education

classroom. Results show that students with autism who are with typically developing peers do create friendships. Kasari et al. (2011) found that typically developing peers are more likely to have close friends and be more “popular” with their classmates, but students with autism still formed friendships with their peers. When typically developing peers model social behavioral interactions it increases the involvement and acceptance of students with autism in the classroom (Kasari et al., 2011).

Student engagement. When friendships are formed between typically developing peers and students with autism it increases student engagement in the general education classroom. We know there has been a significant increase of students with Autism in the general education classroom. Stienbrenner and Watson (2015) state, “in 2012, United states schools served nearly 445,000 students with a primary education label of autism between the ages of 6 and 21, with over half of those students in the elementary and middle school range” (p. 2392). With the increase of students with Autism in the classroom it is important that teachers focus on student engagement.

Student engagement is an important piece in student learning for both students with and without Autism. Stienbrener and Watson (2015) suggest that engagement is a critical factor in learning academics for students with and without autism.

Stienbrener and Watson (2015) looked at the relationship between classroom ecological factors and student coordinated joint engagement, as well as the relationship between student characteristics and joint engagement (Stienbrenner & Watson, 2015). Their definition for joint engagement was “the ability to interact with materials and

people simultaneously, and requires coordination of attention between others and the environment” (p. 2393).

The results from this study show the importance of joint engagement between student with and without autism when participating in a small group. Students with autism are more likely to be engaged in a small group environment compared to a large group environment. Stienbrenner and Watson (2015) suggest that in large group instruction, students spend an average of approximately 54% of their time not engaged, compared to only 20% of their time not engaged during one-to-one instruction. We can see that when teachers provide more one-to-one instruction it increases student engagement.

The Individuals with Disabilities Education Act (IDEA) offers all students a free and appropriate education to all students with disabilities. Therefore, schools are moving towards inclusive classrooms, which are designed to help meet the needs of all students and encompassing their individual needs, abilities, and educational needs (Falkmer et al., 2015). Researchers have participated in a variety of observations in inclusive schools to compare participation and involvement levels between students with autism (ASD) and students without autism. It is important to understand that students with autism have a difficult time socially interacting with peers compared to students without autism.

After extensive research on how students with and without ASD interacted with their peers and teachers in the classroom, it was found that students with ASD have fewer interactions with classmates overall. However, there was no difference regarding

the level of involvement in their interactions with others. Falkmer et al. (2015) state, “compared with classmates, students with ASD participated more frequently in tasks defined as sequential, none and other, and less frequently in tasks defined as social” (p.371).

Overall, students with autism are less likely to participate than their typically developing peers, but they are not less involved. Students with autism are more involved compared to their peers in parallel activities. Therefore, in the inclusive classrooms it would be beneficial to incorporate more parallel activities to increase student involvement.

The controversy on whether students with disabilities should be included in the general education classroom has been debated since the 1980s. Specifically, it has become more prevalent with students with autism because of the recent increase of children with Autism (Gena, 2006). Including students with autism can be very beneficial for both their education and social growth. Gena (2006) states, “inclusive educational practices not only realize the right of children with disabilities for a least restrictive placement, but also that the educational and social benefits of inclusion on children with and without disabilities are great, as a growing research base outlines” (p.542).

A total of four students with autism who participated in this study who received systematic behavior analytic interventions from an early age were more likely to establish appropriate social interactions with their peers. Therefore, the students that received this intervention were more likely to engage with their same-aged peers in an inclusion classroom. The students learned how to initiate and respond to peer initiations

using proper social interactions. Gena (2006) states, “for cultures in which the inclusion of children with autism is a relatively new and uncommon practice, making the inclusion process as unobtrusive as possible is important, because it is likely to help teachers and other school personnel to have a more accepting attitude toward inclusion” (p.553).

Autism spectrum disorder is a neurological disorder that impacts a child’s communication skills, social development, and ritualistic behaviors and resistance to change (Lindsay, Proulx, Thomson, & Scott, 2013). Research shows when an inclusive classroom is successfully implemented it can increase student engagement in social interactions, higher level thinking, and advance education goals in all student (Lindsay et al., 2013).

The participants in this study by Lindsay et al. (2013) were a total of 13 teachers (ten females, three males) who taught a variety of classes. The purpose of this study was to help gain a better understanding of both challenges and experiences teachers have in an inclusive classroom. After multiple interviews, results show that there were three main challenges teachers had when a child with autism was in the general education classroom. These challenges were understanding and managing behavior, socio-structured barriers, and creating an inclusive environment. Teachers felt that they were not provided with adequate materials or proper training from administration to teach students with autism in the mainstream classroom. Another challenge that was expressed by the majority of teachers was lack of parent involvement (Lindsay et. al., 2013).

Dahle (2003) suggest that ten years ago 1 in every 10,000 people were diagnosed with autism. Five years ago, 1 in every 500 people were diagnosed and today it is estimated that 3 in every 500 people are diagnosed with Autism (Dahle, 2003); the rate of young children diagnosed with autism is rapidly increasing. Individuals with Disabilities Education Act (IDEA), states that all children should be placed in a least restrictive environment (LRE) or an environment that is comfortable for all students (Dahle, 2003). Therefore, more students with autism are represented in the general education classroom.

Early intervention and structured education programs play a very important role in students functioning later in life. Dahle (2003) found, "that intense behavioral treatment with preschoolers with autism was successful in achieving higher IQ scores, more expressive speech, and a reduction in behavior problems" (p. 66).

Roberston, Chamberlain and Kasari (2003) show that a trans-disciplinary service model is one of the best practices that a teacher can incorporate into their inclusive classroom. This is a collaborative model that involves a variety of team members working together in the classroom. Many schools are moving to the inclusion model in the general education classrooms. The goal of the inclusion model is to facilitate a positive interaction between children with autism and their typical peers (Robertson et al., 2003). There has been a shift in education because of the inclusion model and it can be difficult for general education teachers to build strong teacher-student relationships with students with autism. Robertson et al. (2003) state, "eighty-three percent of

general education teachers had never had a student with autism in their class and fifty percent had never taught a child with special needs” (p. 126).

It is important for schools to offer trainings to general education teachers on how to build positive teacher-student relationships with students with autism in the general education classroom. Students with autism can display social behaviors that can make it difficult for the general education teacher to build a positive relationship with the included student in the classroom.

Student-teacher relationships are directly related to student behaviors (Robertson et al., 2003). Therefore, if the included student has behaviors in the classroom then it is difficult for the general education teacher to build a positive relationship with the included student. When an included student has a positive relationship with the general education teacher it increases the student’s ability to foster positive social development in the future and become fully included in the general education classroom (Robertson et al., 2003).

Conroy et al. (2004) questioned if teacher proximity in the classroom would be a positive intervention for students with autism. Participants in this study included six children between the ages of 5 to 7 that were diagnosed with autism. All six children participated in the general education classroom at least 50% of the day (Conroy et al., 2004). Results show students’ behaviors decreased with teacher proximity. Research shows that the absence of adult proximity increased students’ negative behaviors. These behaviors included inappropriate vocalization, off task behavior, and classroom disruption. Overall, the study shows that adult proximity increased on task behavior of

the students with autism. Also, findings show that teacher proximity increased student engagement in the general education classroom.

CHAPTER III: DISCUSSION AND SUMMARY

Summary of Literature

There has been a dramatic increase in the amount of children being diagnosed with Autism Spectrum Disorder (ASD). The number of students with autism increased from one in every 150 in 2000 to one in every 88 students in 2008 (Debris & Carlo, 2013). Boyd and Shaw (2010) define autism as a neurodevelopmental disorder that impacts a child's social awareness, communication skills, and language skills. Students with autism often exhibit a variety of behaviors that include verbal disruption, off-task behaviors, impulsivity, repetitive and stereotyped behaviors, and delays in social interactions (Debris & Carlo, 2013). A majority of children with autism have a difficult time picking up on nonverbal social cues, which can make it challenging to form friendships with their typically developing peers (Friedlander, 2008). There have been both positive and negative impacts with the increase of autism in the general education setting. Some of the challenges are the lack of proper training for teachers in an inclusive classroom, social struggles of students, and engagement for all students. Some positive impacts are increased peer friendships, awareness and diversity for all students, and increased student engagement (Stienbrenner & Watson, 2015).

It is important for teachers to learn new strategies and interventions that will create a positive environment for both students with and without autism. Some of these strategies include creating social stories, easing transitions, and developing a behavior plan for all students. Some interventions that can be beneficial for teachers are *Conjoint Behavioral Consultation (CBC)*, *Prevent-Teach-Reinforce (PTR)*, and *Multi-Tiered Problem*

Solving (MTPS) (Magyar & Pandolfi, 2012; Wilkinson, 2005; Wilson & Dunlap, 2011).

These interventions are all geared towards creating a classroom that will help all students increase their academic, social, and emotional skills. It can be challenging to form positive relationships with students with autism because of their social struggles. However, Jordan (2008) suggests that teachers need to be willing to have more intentional interactions with their students and make a conscious effort to understand what will be beneficial for students with autism.

When participating in the general education classroom another benefit for students with autism is the increase in peer friendships and peer support. Inclusion allows students with disabilities to learn and play in a supportive environment. Peer support and approval are important elements to ensure a positive outcome in an inclusive classroom. Bradley (2016) shows that students' self-esteem increased after implementing a mentoring program in the general education classroom. Additionally, students reported that they are likely to experience less loneliness and were able to make friends easier in the school setting (Bradley, 2016). Friendship is a very important part of a child's social development and can be very challenging for students with high functioning autism. Therefore, building friendships between both typically developing students and students with autism is very important. When friendships are formed between typically developing peers and students with autism it increases student engagement for all in the general education classroom (Stienbrenner & Watson, 2015). Student engagement is integral for learning for all students with autism as well as their typically developing peers.

There are many benefits for all students, with and without autism, that come from participating in an inclusive classroom. Sansosti and Sansosti (2012) suggest that including students with High Functioning Autism Spectrum Disorder (HFASD) not only causes students with HFASD to exhibit higher levels of engagement and social interaction, but they also have a larger network of friends or are selected by their peers to be included in the activities the same amount as students without disabilities. Inclusion also provides awareness and diversity among typically developing peers (Finke et al., 2009). Friedlander (2008) states, "providing all students with a rich, inclusive classroom environment that includes individual goals will foster mutual respect and understanding for all" (p.143). Students with autism are more likely to be engaged in a small group environment compared to their same aged peers. Stienbrenner and Watson (2015) suggest that in large group instruction, students spend an average of approximately 54% of their time not engaged, compared to only 20% of their time not engaged during one-to-one instructions. It is important that teachers provide more small group instruction to help students with autism become more engaged in the general education setting. Lindsay et al. (2013) suggest that when an inclusive classroom is successfully implemented it can increase student engagement in social interactions, higher level thinking, and advance education goals for all students.

As you can see there are many benefits of having students with autism participate in the general education setting. There are going to always be challenges, but it is ultimately more beneficial for teachers and all students who are participating in an inclusive environment. Gena (2006) states, "for cultures in which the inclusion of

children with autism is a relatively new and uncommon practice, making the inclusion process as unobtrusive as possible is important, because it is likely to help teachers and other school personnel to have a more accepting attitude towards inclusion” (p. 553).

Limitations of the Research

The research for this thesis was found by using academic search premiere and by only using peer reviewed empirical journals. During my research process I focused on the increase of students with autism and the definition of inclusion. Throughout my research I excluded adults with autism. I focused on the various impacts it has had on teachers and students with the education classroom moving toward an inclusive environment. Throughout this research I also focused on both the benefits and challenges for both teachers and students with the increase of students with autism in an inclusive classroom.

Some limitations of this research were the lack of participants throughout these peer-reviewed articles. Many studies focused on a few students with high functioning autism and completed interviews and observation in an inclusive environment. Therefore, research was limited and viewed through someone’s observation or assessment of what inclusive classrooms look like. Also, the majority of the studies only focused on high functioning autism students who are participating in the general education classroom. There are many students with a variety of needs who are diagnosed with autism. Just looking at high functioning autism limited the amount of students who could participate in this study and does not give a complete view of the impact of including students with other types of needs associated with autism.

Implications for Future Research

When completing the literature review I feel there was a large gap in understanding why autism has increased over that past years. Moving forward it would be beneficial for researchers to dig deeper and find out why autism as increased dramatically over the past decade. Studies focused briefly on the increase of students with autism, but had limited research. It would be beneficial for teachers to be aware of the increase and how it has impacted the general education setting.

It is also important for teachers to understand that the educational system is moving toward an inclusive model. More research could be conducted on the benefits specifically on inclusion for all students, not just students with autism. Not narrowing the search to just students with autism in the general education could provide more data for teachers, students, and parents.

It would be important for researchers to look more closely at how inclusion has impacted the child with autism themselves. Studies look at an overall picture on benefits and challenges for teachers and general education students in an inclusive classroom. I would like to see more specific research on how inclusion has directly impacted the child with autism. The studies in this paper briefly touch on some overall benefits for students with autism and I feel that could be beneficial for parents, teachers, and students.

Implications for Professional Application

The education system is moving toward an inclusion model based on the federal mandate of least restrictive environment. Therefore, it is imperative that all educators

be aware of the increase in autism and how it impacts the general education setting, and furthermore research, learn, and utilize various strategies that will facilitate the inclusion of students with autism into their classroom. It is important for teachers to be willing to receive specific training on students with autism. There are many characteristics of autism that can cause disruption in the general education classroom if teachers are not adequately trained. When teachers are proficient in strategies and interventions for engaging and including students with autism, all students will benefit from being in an inclusive classroom. When teachers offer an inclusive environment, general education students benefit. When students are more familiar with autism and their traits then students are more likely to accept their peers with autism.

Studies show there has been a dramatic increase in the amount of children being diagnosed with autism (Boyd & Shaw, 2010; Dahle, 2003; Debris & Carlo, 2013; Finke et al., 2009; Stienbrenner & Watson, 2015). With this increase in the population it is important for teachers, parents, and students to become familiar with this disorder. I currently work as a high functioning autism teacher in a middle school and majority of my students are fully included into the general education for majority of the day. I have seen the struggle in general education classrooms when they are not implementing inclusive strategies and intervention in the classroom. It is difficult for both the teachers and the students, but I have also seen the benefits that everyone receives when strategies and interventions have been put in place. We can learn so much from students with autism in the general education classroom. We as educators need to

provide an environment that is inclusive for all students as it improves outcomes for all students.

Conclusion

There has been a steady increase of students with autism participating in the general education classroom. Therefore, it is important to understand how it has impacted the general education setting. With the educational environment moving towards an inclusive classroom where all students have access to learning in an environment with their typically developing peers. There are both benefits and challenges with the increase of students with autism being served in the general education classroom. One of the largest challenges is that teachers have not received the proper training in strategies and interventions for working with students with autism in the general education setting or the specifics of how autism affects students. Benefits from inclusive classrooms are the increase social interactions and peer friendships/supports between students with autism and their typically developing peers, which leads to an increase student engagement for all students, which improves outcomes for everyone. The benefits of an inclusive classroom far outweigh the challenges for both teachers and students.

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