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Creating Equitable Mainstream K-6 Education for Students with Autism Spectrum Disorder

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Creating Equitable Mainstream K-6 Education for Students with Autism Spectrum

Disorder

by

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A capstone project submitted in partial fulfillment of the requirements for the degree of
Master of Arts in Teaching.

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DEDICATION

For Josh, you are the best brother anyone could ask for.

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CHAPTER ONE

Introduction

School is an environment that supplies students with a multitude of learning experiences. Of course, academic learning is typically the primary focus of a school day. School also is a place where many other valuable kinds of learning take place as well. Students learn social and emotional skills, including but not limited to, self-awareness, self-management, social awareness, relationship skills, and responsible decision making (n.a., 2017). This is especially true for elementary school. A student's primary school years are foundational in molding the type of student and person a child will become. Mead (2016) attests, "Research shows that the average annual learning gains for children in grades K-2 are dramatically greater than those for subsequent years of school" (para. 1). There is clear value to giving children a quality elementary education. Unfortunately, not all students are given the same opportunities to receive this type of formational education.

One demographic of students that is at risk for receiving an unfulfilling education is children with Autism Spectrum Disorder (ASD). According to the Centers for Disease Control and Prevention (CDC)(2023), "Autism Spectrum Disorder (ASD) is a developmental disability that can cause significant social, communication, and behavioral challenges" (para. 1). The CDC also reports that it affects approximately 1 in 36 children (n.a., 2023). Many of these children have unique learning needs and also may require additional accommodations and supports to be successful in a general elementary classroom. Gómez-Marí et al. (2021) adds, "The fact that teachers have knowledge about ASD is beneficial in order to provide an adequate social and educational setting in which

students with ASD are included” (p. 2). This leads me to my research question: *How does a general elementary classroom teacher create an equitable and accessible learning environment for students with ASD?*

This chapter explores the background of myself and my own connections to this research along with my personal rationale for conducting this research. It also covers the professional rationale behind this project, which includes further discussing the prevalence of students with ASD in schools, barriers that educators face when teaching students with ASD, and benefits of neurodiversity in mainstream classrooms.

Background

My greatest joy and passion as a teacher is connecting with and watching all of my students learn and grow. I have had the pleasure of teaching many students with ASD. I am a white, female, neurotypical elementary school teacher and I have many years of experience working with children with ASD. Prior to teaching, I have worked as a Personal Care Assistant (PCA) for children with ASD. I also spent three years working as a Behavioral Interventionist at a children’s autism center. During my time working at this center, I received training to become a certified Registered Behavior Technician (RBT). Additionally, my youngest brother, who is currently seventeen, has ASD. Throughout the years, my brother has received many services and therapies that I have been able to observe and take part in. Through all of these experiences, I have learned a wealth of knowledge, tools, and strategies that have aided me in supporting and educating children with ASD.

Advocacy

Even with the multitude of skills and training that I learned, I recognize that I am neurotypical. I always have and always will have this lens as a researcher and educator. It is vital to my research that I collaborate with individuals diagnosed with ASD. Although I trust my own expertise, I acknowledge that I will never understand what it is like to experience school and the world as a neurodivergent person. This is why it has been crucial for me to incorporate perspectives from people with ASD throughout my research process.

My approach to this research is to serve as an advocate for children with ASD. I have a strong belief that students with ASD should be able to spend as much time in the mainstream classroom as possible to allow them to learn and grow best. My hope is that this research will inform general elementary school classroom teachers how to best support their students diagnosed with ASD. My final acknowledgement is that there is not one strategy, approach, research project, or training that will comprehensively give teachers the ability to meet the educational needs of every student with ASD. Rather, my aim is to determine how teachers can continue to access learning and resources to make their classrooms accessible for all students.

Personal Rationale

This research has deep personal meaning to me. As mentioned, my youngest brother has ASD and he was underserved in his public school education. He attended a public elementary school in a small rural town in Minnesota for grades Kindergarten through fifth grade. As my brother got older, the school provided fewer and fewer educational opportunities and services for him. In Kindergarten, he spent most of the

school day with his classmates with the assistance of a one-on-one paraprofessional. He had a very positive experience and was able to participate in most of the learning activities. He also was able to connect with his peers and form friendships. By the time he was in fifth grade, he spent most of his school day in the only Special Education classroom that served the entire fourth through twelfth grade student body. He had hardly any interactions with his homeroom classmates and he was not given the opportunity to participate in the mainstream classwork. He spent his time doing word searches, seemingly objectless worksheets, and doing cleaning tasks throughout the school.

School Experience

In an attempt to enhance my brother's education, our mom worked to arrange for his Behavioral Interventionist therapists - who he received services from outside of school - to come to the school to assist in providing him a meaningful education. The principal of the school denied these services on the basis that it would make the school appear as though they were not doing their job well. Our family then made the decision to pull my brother out of school altogether, and have him receive therapy services full-time with his Behavioral Interventionists at a children's autism clinic.

Unfortunately, this was the reality for many of the children who attended the clinic. There were anecdotes of children from various schools who, prior to receiving services at the clinic full-time, spent their days at school making popcorn and shredding paper. These students were severely deprived of an education, a right that all children deserve and one that is guaranteed by the government, and virtually pushed out of school. This should not have been my brother's, nor anyone's, educational experience. This

reasoning supports the need to research ways to improve education in mainstream classrooms for students with ASD.

I recognize that students with ASD have various learning needs that are sometimes best provided in a different setting than the general classroom, such as a Special Education classroom. However, having some needs that are met in a different classroom does not necessarily mean that all of their needs should be met in this separate setting. The school day should be filled with beneficial learning in every space that a student is in. Students with ASD should only spend the necessary amount of time outside of their homeroom classroom unless the student themselves is specifically requesting otherwise. In order for learning to occur in the proper environments, it is key to understand how a general elementary classroom teacher can create an equitable and accessible learning environment for students with ASD?

Professional Rationale

Population Makeup & Statistical Data

Part of the significance of this research is due to the rising number of children diagnosed with ASD. In 2020 the CDC (2023) conducted a study that showed a drastic increase of ASD, finding that, “About 1 in 36 children [have] been identified with autism spectrum disorder (ASD)” (para. 1). Twenty years prior in 2000, the CDC (2023) reported that approximately 1 in 150 children had ASD. This clearly makes up an increasingly large part of a school population. This increase is likely due to more efforts to diagnose ASD along with having a more all-encompassing definition of ASD (CDC, 2023).

Given this data, it is realistic to assume that virtually every student, teacher, and educator will have close interactions with a student with ASD at some point during their educational career. School, especially public school, has the purpose of providing a valuable education to students. Because of the drastic increase in the number of students diagnosed with ASD, it is of paramount importance that schools ensure they can meet the needs of such a large demographic group.

Individuality of ASD

There is not only a growing population of ASD students, but the wide spectrum of ways that ASD appears in children can make it difficult for educators to know how to meet the needs of their students. There is a popular phrase from Shore (as cited in Flannery & Wisner-Carlson, 2020) that, ““If you’ve met one person with autism, you’ve met one person with autism”” (para. 1). This quote is meant to highlight the uniqueness of all individuals with ASD. It can be challenging for teachers to know how to best serve each and every student with ASD in their classroom since each student has their own individual behaviors, needs, and qualities. This contributes to the difficulty of providing a quality education to each and every student. Even if a teacher has a student with ASD one school year, and is able to adequately support them in class, it does not necessarily mean that they will be able to do the same for their future students with ASD. This shows the importance of identifying the ways in which general elementary classroom teachers make learning and their classroom equitable and accessible for students with ASD.

Barriers for Teachers

A teacher’s job is to provide a holistic and quality education for all of their students. Ideally, all teachers would be able to give this to all of their students.

Unfortunately, this is not the reality and it is rarely due to a lack of care for students. Rather, Jaffal (2022) identifies an inadequate amount of resources and insufficient training as two of the main reasons why teachers are often unable to successfully educate students with ASD. This finding further supports the need to determine what specific resources and training would adequately prepare teachers to educate students with ASD. Without appropriate resources and training, teachers are more likely to struggle to educate their students with ASD and this can lead to more time being spent in Special Education classrooms than needed. Of course, Special Education services for ASD students can be of high value and use. However, there should be a balance and there are many advantages to students with ASD spending as much time as possible in the general education classroom that will be delved into further in this chapter. If teachers and educators have the proper training and resources for their students, they will better be able to serve their students, school, and community.

Benefits of Diversity in the Classroom

Providing a quality education for all students is reason enough for this research to be done. There is also high value in having a diverse classroom. It is important for children to be exposed to and experience all kinds of diversity including neurodiversity. Having students with ASD in mainstream classrooms is beneficial for all students. Honeybourne (2018) attests to this when, in reference to neurodiversity in the classroom, states, “it encourages more helpful and accepting attitudes towards neurodivergent individuals and society in general” (para. 14). All too often, ASD students are not accepted for their differences and who they are. According to Autism Speaks, “Evidence shows over 60% of children and young adults with autism experience bullying” (n.d.,

para. 1). Giving neurotypical students the opportunity to interact with ASD students and form connections with each other helps normalize differing identities.

Benefits of Inclusion for students with ASD

There are numerous benefits for ASD students as well for having neurodiverse general education classrooms. Firstly, ASD students should have access to the same opportunities and academic learning as their neurotypical peers. ASD students also deserve to feel like a valued part of the classroom community. Armstrong (2018) adds, “Students with [ASD] who are included in regular classrooms develop more positive views of themselves, form friendships with neurotypical kids, and are better able to keep up with the curriculum and learn important academic skills” (para. 4).

Additionally, educators can sometimes mistakenly underestimate their students’ academic abilities - especially those who have social and/or communication differences (Retenbach et al., 2017). This is another reason why it is advantageous for ASD students to be able to learn in the general education classroom with their peers. It is much better to assume that valuable learning is occurring rather than conclude the opposite. The more time that ASD students spend out of the general education classroom, the less likely they are to receive the aforementioned social and academic benefits that school provides.

Conclusion

This chapter has outlined the personal significance that this research has to me. I have a wealth of experience working with children with ASD which included many trainings as well. My main source of knowledge has come from my youngest brother who has ASD. Throughout the past 17 years, I have been able to attend many different therapies, and have seen and practiced various strategies and tools to help him learn new

skills or regulate his behaviors. My objective is to use my background combined with this research to help foster accessible classrooms so more children with ASD can receive the quality of education they deserve.

Furthermore, there are multiple professional justifications for this research as well. The main benefit being that teachers need to have a better and more comprehensive understanding of all of their students in order to make inclusion possible. There is a rising number of students with ASD in schools meaning that most teachers will educate students with ASD in their career. However, most teachers do not have adequate resources or training to properly educate their students with ASD despite the increasing prevalence. Finally, there are clear benefits to having a neurodiverse-inclusive classroom for all students. This value can only be achieved if students with ASD are included in the general education classroom. In order to ensure this happens, the research question is posed: *How does a general elementary classroom teacher create an equitable and accessible learning environment for students with ASD?*

Chapter two will explore previous research on this topic that will support the significance of this research question. The findings of this research will be synthesized and give further justification for the development of this capstone project. Chapter three will detail the methods with which this capstone project was created. To conclude, chapter four will examine the results of the capstone project and its effectiveness.

CHAPTER TWO

Literature Review

The rationale for this research has largely had personal connections and has been knowledge-based. There is a wealth of information and research available that also supports the need to seek an answer for the research question: *How does a general elementary classroom teacher create an equitable and accessible learning environment for students with Autism Spectrum Disorder?* This chapter will review and analyze the research and studies that have been conducted on various facets related to the overarching topic of ASD education.

First, this chapter will survey the history behind ASD education. It starts with a discussion of what research has shown the general school experience to be for students with ASD. It will then transition into what the expected life outcomes are for people with ASD given the data on what school has historically provided for them. This theme then details the global and national legislation that is in place to support fair and equitable education for all students. Finally, the first theme closes by examining various methods and evidence-based practices that research has found to be effective and successful in supporting people with ASD in various settings. This section is meant to be a comprehensive overview of what school is like for people diagnosed with ASD, and how this experience affects them in the trajectory of their life. It also is meant to highlight the laws and research-based strategies that are already in place that are meant to help give an equitable education for all students.

This chapter then explores the barriers that teachers encounter when educating students with ASD. There are long standing policies that mandate inclusive education.

However, the solution to equitable education is not as simple as stating it. There are many areas in which educators need more support in order to make inclusive education an attainable goal. This chapter unpacks the research behind why so many teachers struggle to make an inclusive mainstream classroom a reality. The challenges that will be covered in this theme almost all relate to educators experiencing insufficiency. This includes a need for more training, more knowledge, more resources, and more practical teaching strategies. This theme portrays the viewpoint of an educator and what research has shown that teachers need in order to achieve inclusivity in their classrooms.

Finally, this chapter delves into the research on the perspectives of people with ASD and their family members. The final theme starts by assessing the opinions of parents of children with ASD and what their experience with dealing with their child's school and educators has been like. The participants of the reviewed studies disclose what changes they believe need to be made in order for schools to be more inclusive. This theme then acknowledges the voices of people with ASD and gives a first-person perspective of the mainstream school experience. This section covers the aspects of school that are beneficial to attaining inclusivity and the parts that need to be improved. This theme features the voices and perspectives of people with ASD and their parents in order to give a first-hand account of what is needed in order to accomplish equitable mainstream learning environments.

Comprehensive Background of ASD-Related Educational Experiences and Legislation

Historically, learning environments have excluded students with disabilities, including students diagnosed with ASD. This theme explores the common historical

school experiences for students with disabilities, specifically with ASD. This includes describing the typical educational life for students with ASD and the reasons behind why school has been a largely negative experience. This first subsection ends by exploring the outcomes for adults with ASD and what impact a less than substantial education has on the trajectory of their life. This is meant to give an encompassing view of what the average person who is diagnosed with ASD's early childhood through adulthood circumstances were like.

This section also examines the global and national legislation and policies that have passed in recent years in an attempt to make education more equitable and integrated for students with disabilities. This has brought more attention to the fact that school is not accessible to all students, especially those with disabilities. Finally, this topic of research highlights the strategies, evidence-based practices, and guidance that are available to educators. It goes over the advantages and disadvantages of these methods, and where there is a need for improvement.

General and Historical School Experience

Education for students with ASD has evolved and developed since ASD started being more commonly diagnosed in the mid-1900s (Henninger & Taylor, 2013). Historically, students with ASD have not had any sort of equitable school experience. A major theme for students with ASD is exclusion from public spaces - especially schools. In fact, McCluskey et al. (2016) found that historically, over half of students with disabilities are excluded from school, oftentimes permanently. Students with ASD are sometimes not even given the opportunity to be a member of the classroom. This impedes upon a child's fundamental right to receive an education.

In a study conducted by Brede et al. (2017), the researchers explored the reasons why students diagnosed with ASD are excluded from schools at such high rates. The participants for this study included people diagnosed with ASD and their parents. Brede et al. (2017) further show that students with ASD are excluded from school and that, “nearly one in five [parents] reported that their child had received at least one fixed-term school exclusion, and one in 20 had been permanently excluded” (p. 2). Furthermore, one third of the surveyed parents stated that their child had been excluded from school, although it had not been officially reported in school records (Brede et al., 2017). Researchers found that there were many reasons for this exclusion including, children displaying challenging behaviors, educators not being able to meet the students’ needs, and students not being able to adjust to the mainstream school setting (Brede et al., 2017). This is an alarmingly high rate of students that are missing out on educational opportunities and essentially being forced out of the classroom. Students with ASD typically have more individual needs, both academically and socially, that can make it challenging for teachers to successfully educate them which is what ultimately leads to exclusion (Brede et al., 2017).

Educational Access for Students with ASD

Educational exclusion for students with ASD is not isolated to just a classroom level. Schools as a whole are not equipped to adequately educate and look after students with ASD. Roberts and Webster (2022) found that, “...school principals lack sufficient knowledge to make decisions, manage resources and create school cultures and programs that support students with autism” (p. 702). The integral structure of schools is geared towards educating neurotypical students in a time where there is a rapidly increasing

number of neurodivergent students - people who are diagnosed with ASD or other thought patterns that are considered atypical (Oxford Languages, n.d.) (de Beco, 2016). Given this data and information, it comes as no surprise that students with ASD have had a historically negative school experience.

Even if students with ASD are not outright excluded from a school as a whole, schools have traditionally been segregated with neurodivergent students being placed in Special Education (SPED) classrooms rather than included in the general education classroom (de Beco, 2016). While there has been an effort in recent years to include neurodivergent students in mainstream schools, oftentimes, this means that neurodivergent students are educated in SPED classrooms while still technically being placed in a mainstream school (de Beco, 2016). In the past, students with ASD were often enrolled in different schools altogether that only served students with disabilities (de Beco, 2016). This is not to say that specialized institutions do not have value. Rather, the point is that students diagnosed with ASD are being educated in specialized schools because teachers are unable to adequately meet their needs (de Beco, 2016).

Outcomes for Adults with ASD

This typically negative experience is not isolated to just the school years for people with ASD but continues into adulthood. It has lasting effects on these students' lives. In the 20th century, small-scale case studies were done on people with ASD and what their quality of life was like as adults. It was found that 67% of the participants studied were institutionalized in settings such as state hospitals (Henninger & Taylor, 2012). More recent studies found that 74% of the participants (adults with ASD) were

determined to have a poor or very poor quality of life (Henninger & Taylor, 2012). These figures are very disheartening however, they do not necessarily go into details.

Additional studies done on the trajectory for people with ASD have found more specific ways in which they have poor life outcomes. Roberts and Webster (2022) found a correlation between children with ASD not receiving adequate support during their school years and poor employment rates. It was also found that many adults with ASD either live with their parents or in assisted living such as group homes (Henninger & Taylor, 2012).

Inadequate Support for Families. Additionally, families of people with ASD also experience negative outcomes due to a lack of beneficial interventions and education. When children with ASD do not have their needs met at school and are being pushed to learn new skills and grow, parents are oftentimes the ones who have to step in and provide additional care on top of their typical parenting duties. This heavy load leads to almost half of parents quitting their job in order to provide the necessary care and attention to their child (Dillenburger et al., 2015). These poor outcomes in life can be traced back to the early years and not receiving the skills and services needed to prosper and succeed. This data and information further demonstrates the need to enhance the school experience for children with ASD.

Current Legislation and Research

Over the course of the past few decades, there has been a multitude of legislation and policies that have been enacted that have assisted in furthering educational rights for students with disabilities. This section will start with a broad overview of global policy, which mainly ensures the fundamental right of education for all. It also reviews

legislation that is more specific to the US education system. This portion also examines the research that has been done to help give guidance on achieving inclusivity in schools.

Global Legislation

It is globally recognised that every person, no matter their level of needs, deserves an education. The Convention on the Rights of Persons with Disabilities (CRPD) states that, “excluding and segregating people from mainstream education due to disability and failing to provide accessible learning environments ‘constitute discrimination’” and that inclusive education is a human right (Goodall & MacKenzie, 2019, p. 499). In addition to the CRPD, there are multiple worldwide policies that support the right to education.

These conventions include: the Universal Declaration of Human Rights, the International Covenant on Economic, Social, and Cultural Rights, the Convention on the Rights of the Child, and the UNESCO Convention against Discrimination (de Beco, 2016). Overall, these international legislations protect the right of people with disabilities to receive an education and specifically, an inclusive education. Despite multiple global policies securing the right to an inclusive education, students with ASD are still not receiving this right on a large scale.

US Education Legislation

There is a wealth of legislation in the US that serves to aid in ensuring children with ASD receive a fair and valuable education. The aforementioned CRPD has a clause that specifies that all students have the right to accommodations in education to ensure that their needs are met (de Beco, 2016). While the CRPD is an international policy, the US furthers this legislation with the Individualized Education Plan (IEP). Moores-Abdul (2010) includes a comprehensive explanation of an IEP:

According to the U.S. Department of Education, Office of Special Education and Rehabilitative Services, each IEP is required to contain, among other things, the following: (a) annual measurable goals related to either the students' academic, behavioral, physical or social needs; (b) a list of special education and related services that may include supplementary aids/services for the student, curriculum modifications, or supports for staff; (c) an explanation of participation with non-disabled children in general education classes; and (d) a statement regarding student participation or non-participation in state mandated assessments, and what modifications are required. (p. 155)

An IEP is a key guideline that allows for necessary accommodations to be made for all students who need them (Moores-Abdool, 2010). It is legally binding meaning that by law, schools and educators are required to fulfill a students' IEP (Moores-Abdool, 2010). This should ensure that every student receives every resource and support needed to obtain a valuable education.

Combating Autism Act. Another piece of legislation in the US that aids in promoting care and support for people with ASD is the Combating Autism Act of 2006. This act, "requires the Secretary of Health and Human Services to establish regional centers of excellence through the CDC, and to provide evidence-based interventions for individuals and their families through both state and federal programs" (Dillenburger et al., 2014, p. 138). The programs created through this US policy also helps to promote a continuing educational curriculum (Dillenburger et al., 2014). Although even with this

standard to have up-to-date curriculum, there is still a need to further educational research to bridge theory and practice in autism education (Guldberg, 2017).

Individuals with Disabilities Education Act and No Child Left Behind

Provisions. One of the most crucial acts that has significantly improved education for children with ASD is the Individuals with Disabilities Education Act (IDEA) passed in 1975 (Moores-Abdool, 2010). There are many components to IDEA that aid in providing an equitable and accessible education for all children. IDEA states that it is mandated that children with disabilities receive a free, appropriate education (Escheidt, 2006). The No Child Left Behind Act (NCLB) required that students with disabilities are given access to state mandated general curriculum and tests (Moores-Abdool, 2010). Due to the conditions posited in NCLB and IDEA, “general education teachers are required to adapt their instructional strategies in the general education classroom to accommodate students with disabilities” (Moores-Abdool, 2010, p. 154).

In 2015, the Every Student Succeeds Act (ESSA) revised and replaced NCLB. ESSA maintained the expectation that students with disabilities are presented with a school’s general curriculum and state tests - with a 1% exception cap (Samuels, 2015). In addition, ESSA now requires that schools report on their bullying data in order to track and support schools’ climates (Agoratus, 2016).

IDEA also mandates that students with disabilities are educated in the least-restrictive environment which promotes inclusivity (Busby et al., 2012). Another provision of IDEA is that parents are an equal stakeholder in the design and creation of a child’s IEP (Tucker & Schwartz, 2013). Ideally, there is a balanced partnership between families and the educational staff on a student’s team at school. Just as it is with many of

the terms of IDEA and other related policies, it is not always the case that this equal balance of partnership between school and home can be achieved (Tucker & Schwartz, 2013).

Early Research Findings

Legislation and policies have worked to progress the value of education for students with ASD. There are also early findings that have assisted in supporting students with ASD in schools. Early intervention is key when helping children with ASD learn and grow (Bruder, 2010). According to Bruder (2010), inclusive environments are the best overall learning environments for children with ASD. This groundwork and fundamental knowledge gives us a direction to move towards - inclusivity and early intervention in schools.

Methods and Strategies Used by Schools and Teachers

Simply put, school has not historically met the needs of students with ASD. Due to this history, there have been a number of legislative acts and policies that have been put in place both nationally and globally to push for more equitable education for all students. Although these enactments have good intentions, they did not give practical or applicable solutions to the issues of inaccessibility. Rather, they mandated an inclusive environment without also mandating proper support for teachers to make an equitable classroom possible (Busby et al., 2012). Even so, there are still methods and strategies that have been developed for educators to use in helping students with disabilities. Some of these strategies - especially dated ones - are not viewed as effective any longer while some have been more successful. There are a number of evidence-based strategies,

methods, and interventions that teachers can and have used that are worth exploring to note what is already available to help progress accessible and inclusive education.

Applied Behavioral Analysis Therapy

Studies that support early intervention for students with ASD have found that applied behavioral analysis (ABA) therapy is a very beneficial intervention (Dillenburger et al., 2014). ABA therapy has been used since the 1960s, and targets both positive and negative behaviors displayed by individuals (Autism Speaks, n.d.). While ABA therapy is not without its flaws, the main one being that it has been viewed as a way to “prevent” or “fix” autism, it is a very effective practice that meets and addresses children's individual needs (Dillenburger, 2014). It aims to help people with ASD learn the skills and behaviors they need to be successful in mainstream settings while reducing the behaviors that impede upon integration (Autism Speaks, n.d.). This early research shows that we already have valuable information in regards to assisting children with ASD in growing and developing that can be evolved and refined.

Early Start Denver Model

Another example of an evidence-based practice that has been found to be successful is the Early Start Denver Model (ESDM). This strategy is best used in early-childhood education and it is a naturalistic, play-based approach to learning individual and cooperative social skills (Aylward & Neilsen-Hewitt, 2021). It uses theories derived from ABA therapy, although it is best used in low student-to-teacher ratio settings (Aylward & Neilsen-Hewitt, 2021). This makes it difficult to apply in a mainstream setting since typically, there is only one teacher leaving a high student-to-teacher ratio.

Daily Life Therapy

The Daily Life Therapy approach focuses on educating students within a whole-group setting. Oftentimes, interventions for students with ASD are viewed as a very individualized application. With this strategy, the goal is to utilize exercise and movement to help students be able to function in a group and community setting (Tutt et al., 2006). This makes it more practical to utilize in a mainstream classroom setting. However, there is criticism of this approach due to the fact that it tends to aim for conformity rather than celebrating individual differences (Tutt et al., 2006).

Lovaas

This strategy is another that is most often used in an early-childhood setting. This is an intensive cognitive and behavioral therapy that is practiced for 30-40 hours a week making it unsuitable to use in a mainstream classroom (Tutt et al., 2006). This form of treatment targets specific behaviors that a child with ASD is displaying and the focus is on manipulating and changing these behaviors using a reward system (Tutt et al., 2006). Similarly to the Daily Life Therapy, this approach can have negative impacts due to the implication that ASD is something that needs to be changed rather than nurtured.

Option Method

In this approach, therapists celebrate a child's individuality and are not seeking to change their behaviors (Tutt et al., 2006). Rather, their goal is to help break down daily life skills into manageable tasks and to show children care and acceptance for who they are (Tutt et al., 2006). This therapy contrasts with the Daily Life Therapy and the Lovaas method as therapists are not trying to change a child's behavior but are looking to support them with their behaviors. This is validating to children receiving this therapy because it

does not imply that behaviors and pieces of who they are need to be changed. This therapy and strategy is also challenging to use in a general education classroom due to the intense amount of individualized time and attention it requires to be successful.

TEACHH

This method is a very personalized approach and relies heavily on visuals to support learning (Tutt et al., 2006). It is a lifelong behavioral therapy that seeks to address and meet individual goals for each student and to foster communication and daily independent living skills (Tutt et al., 2006). This is considered to be a favorable approach as it teaches practical skills that increase a child's autonomy without the air of conformity as seen in previous methods. However, the individualized nature of it makes it difficult to apply in a mainstream classroom without extra support.

Antecedent Procedures

Antecedent procedures are strategies that teachers can implement into their daily interactions with students that help to create an inclusive environment that students with ASD can be successful in. There are a number of strategies that can be categorized under the umbrella of antecedent procedures, meaning they are methods to be used before a behavior occurs. An example of this is to give a student with ASD a schedule for the day so they know what to expect before it happens (Crosland & Dunlap, 2012). A related intervention is to use priming to prepare students for an event - such as a fire drill - by telling them exactly what will happen and what they will do during this event (Crosland & Dunlap, 2012).

Self-Management Strategies. This approach takes the focus away from a teacher delivering a strategy and places the focus on the student instead. In this method, students

take autonomy over their own learning and monitor their own goals and behaviors and administer their own reinforcement (Crosland & Dunlap, 2012). This strategy is useful for teachers as it requires little, if any, extra effort on their part to be inclusive towards their students (Crosland & Dunlap, 2012). However, it does necessitate that the student with ASD has the skills and ability to manage their learning and progress fairly independently which is not always practical.

Positive Behavior Support (PBS). One final strategy is an individualized method titled positive behavior support. This approach seeks to identify behaviors in students with ASD that prevent them from being in an inclusive classroom environment. Therapists then intervene and give students a positive behavioral alternative to the challenging behavior that they are displaying (Crosland & Dunlap, 2012). This strategy is very effective and honors a student's behaviors while still giving them the skills to succeed in a general education classroom (Crosland & Dunlap, 2012). It can be challenging to utilize in an inclusive classroom due to needing the support of a therapist.

There are clearly many evidence-based practices, strategies, and methods available for teachers to use in their classrooms. The underlying issue is that not all of these interventions are able to be easily applied in a mainstream setting. There is also typically a heavy focus on evidence based and theory based strategies. While of course it is important for a method to be studied and rooted in research, there is also great value in hands-on practice and knowledge (Guldberg, 2017). Guldberg (2017) calls for an, "accumulation of understandings rather than an accumulation of facts" (p. 156) when developing resources and strategies for teachers to use in their mainstream classrooms.

School and Teacher Successes

The focus thus far has mainly been on how schools are currently inaccessible to students with ASD and the reasons behind this reality. Lindsay et al. (2014) examine tips and strategies used by teachers who have been able to successfully create an inclusive environment. These include adapting curriculum to serve all students, building a solid relationship with students with ASD and their parents, working as a team within the school, asking for necessary resources, and fostering the necessity of acceptance and inclusion amongst all students and staff (Lindsay et al., 2014). This data shows that there is available knowledge on strategies that teachers can use to foster inclusivity with students diagnosed with ASD (Lindsay et al., 2014).

Another study by Roberts and Webster (2022) examined more characteristics of schools and classrooms that were able to be inclusive to students with ASD. It looked at the effectiveness of a whole school approach when educationally supporting students diagnosed with ASD, and the strategies used to achieve this goal (Roberts & Webster, 2022). They found that schools with staff who were knowledgeable about ASD, student-specific strategies and interventions, family communication and collaboration, adaptive curriculum, availability of resources, and a functional approach to challenging behaviors were key features to creating an inclusive environment (Roberts & Webster, 2022).

Summary

It has been clearly identified that in the past, schools were not fairly servicing students with disabilities. Due to this, many different laws and regulations were put in place to assure that this would not continue. There were also various strategies and

methods developed for educators to use when creating an integrated classroom.

Moreover, there have been successful accounts and advice for how to achieve inclusivity in a general education classroom. However, despite all of this research and support, there are many challenges that teachers face when trying to fulfill these policies and create an accessible classroom. These barriers that teachers face when attempting to foster an inclusive environment will be explored in the next section.

Barriers that prevent teachers from creating an accessible classroom

It is clear that currently, mainstream schools are not inclusive and are not meeting the needs of people with ASD despite all of the legislation and evidence-based practices put in place to aim for equitable education for all children. There are many reasons for this reality that are in ways, interconnected. One common denominator that has been found to be one of, if not the main determinant for a child's school experience is the classroom teacher (Falkmer et al., 2015). In short, a teacher can essentially make or break a student's education. This is an immense amount of pressure placed on teachers, and there are many barriers that teachers face when trying to create an inclusive classroom. This section will explore the following challenges that many teachers encounter that prevent inclusion: insufficient training, insufficient knowledge on ASD, insufficient resources, and everyday classroom difficulties.

Lack of Training

Receiving training plays a major role in how prepared a teacher feels to successfully run their classroom. Unfortunately, many mainstream classroom teachers do not feel as though they are properly trained to teach students with ASD (Brown & McIntosh, 2012). In many cases, general education teachers believe they need the support

of a specialized educator (e.g. SPED teacher) in order to deliver the mainstream curriculum to their students with ASD (Moores-Abdool, 2010). This feeling of unpreparedness is for good reason, as it has been found that, “fewer than 15% of teachers received training in teaching strategies for students with ASD from teacher preparation programs at colleges or universities” (Hsiao & Sorenson Peterson, 2019, p. 195). In fact, it has been found that when teachers do not receive ASD specific courses or training during their college programs, it negatively affects their ability to later administer evidence-based practices with their students (Al Jaffal, 2022). Despite there being a multitude of evidence-based practices and strategies available, this knowledge is not being made accessible to many teachers.

Issues with Implementing Evidence-Based Practices

The issue of teachers not feeling trained proficiently to teach students with ASD is not necessarily due to a lack of training materials. In successful cases, evidence-based practices that teachers learn in training have demonstrated an increase in positive outcomes for students with ASD (Hsiao & Sorenson Peterson, 2019). There is a gap that needs to be bridged between the knowledge that is available and training educators on how to implement it in their classrooms in a practical and accessible way.

Impractical Strategies and Training. A study done by Morrier et al. (2011) supports this need for more pragmatic training. The researchers of this study found that even when teachers were trained in best teaching practices for students with ASD, “Slightly fewer than 5% of teachers reported using best practices for students with ASD in their classrooms” (p. 124). Another complication with implementing evidence-based practices is that even though it is rooted in research, these strategies may not even be the

best option for educating every student with ASD (Flannery & Wisner-Carlson, 2020). This only adds to the frustration for educators trying to learn how to improve their teaching methods. Although receiving quality training is obviously an important part of expanding teachers' knowledge pertaining to teaching students with ASD, it does not guarantee success in every situation.

While there are currently evidence-based practices available, teachers are currently not given enough training to learn about these strategies before or during their career to help prepare them to teach students with ASD. They also are not always the most practical to implement. Experts have found that for strategies to be truly accessible, they should be both evidence-based and field-tested (Goodman & Williams, 2007). It is impractical to expect that a strategy that is tested in a controlled setting can be easily applied in a regular classroom setting that is anything but controlled and predictable. On top of this challenge, most school districts do not have a defined strategy and plan for teachers to follow to be inclusive towards their students with ASD (Moores-Abdool, 2010). Educators are expected to have inclusive classrooms with little to no guidance from their districts along with getting trained to rely on strategies that may or may not be realistic to even use.

Since receiving ASD training does not necessarily ensure results with all students, many teachers do not feel the need to seek out more professional development and also do not feel confident implementing the strategies they do learn in training (Brock et al., 2014). Additionally, even if a teacher does feel skilled enough to utilize the strategies they learn, the mainstream classroom environment and the everyday pressures and chaos that arises in the average school day does not allow for many evidence-based practices to

be applied (Cook & Ogden, 2022). This is an issue because training should not be viewed as an all or nothing approach. There is a need for more purposeful and practical professional development in this area.

Lack of Knowledge

It should come as no surprise that the apparent lack of training that most teachers have in best educating students with ASD positively correlates with an overall lack of knowledge on ASD. Lindsay et al. (2012) reported that, “teaching strategies and approaches for students with ASD in mainstream schools is a key gap in the knowledge base” (p. 103). Furthermore, adults with ASD and parents of children with ASD have both attested to the notion that schools are not meeting the needs of people with ASD and are academically failing them because staff do not have an understanding of how to educate, or even interact with, students with ASD (Keen et al., 2016).

Teacher Belief in Ability

Part of the issue is teacher’s belief in their own ability to educate all students. It has been found that teachers believe that teaching students with ASD is a highly specialized skill and requires extensive knowledge in the area and that most mainstream classroom teachers are unable to attain the level of understanding needed (Busby et al., 2012). Even veteran teachers do not feel fully competent to teach children with ASD. Studies have found that new and experienced teachers alike rely mainly on a “trial and error approach” for teaching students with ASD (Anglim et al., 2018). Experts recommend that there should be an increase in education and awareness pertaining to the prevalence and symptoms of ASD (Ha et al., 2021). While this is true, it is also the case that exposure and experience interacting with people with ASD increases educators’

confidence in their knowledge to teach students with ASD (Gómez et al., 2021).

Educators need to both, receive more education on ASD as a whole and more experience actually interacting with people with ASD. This is why it is imperative for educators and teacher preparation programs to commit to expanding teachers' knowledge on ASD.

Lack of Resources

One other aspect that makes it challenging for teachers to implement the strategies they learn from training is the lack of resources prevalent in many schools. According to Bond and Hebron (2016) when schools are rich in resources such as speech and occupational services, inclusive-focused leadership, and ASD specialists, mainstream schools are much more likely to be inclusive. Al Jaffal's (2022) study supports this notion that it is more difficult for teachers to meet their students' needs without the proper amount of resources, and amongst the participant pool found that, "All teachers indicated that the lack of resources makes inclusion almost impossible to implement" (pp. 6-7). There are many different types of resources that help teachers make inclusivity more feasible, and two major categories are curriculum and funding.

Curriculum

One purpose of a curriculum is to be a guide for teachers to follow in order to know what content and pacing to use when teaching their students. In a study done by Busby et al. (2012), participants - who were all educators - testified that teachers needed an updated curriculum that encompassed both neurodiverse and neurotypical needs. When teachers are using a curriculum that is designed for neurotypical learners, it is then the teacher's responsibility to adapt the content to their students' learning styles. This adds to the challenge of educating students diagnosed with ASD since it has already been

established that many teachers do not feel as though they have sufficient knowledge on ASD.

Funding

Another important resource for schools and teachers is funding for resources. Unfortunately, most schools do not have enough funding to provide the resources needed to support all of their students, leaving teachers with the difficult task of meeting their students' needs without the proper resources to do so (Hasson et al., 2022). Oftentimes, outside entities need to give schools financial assistance in order to provide the necessary resources to support students with ASD in mainstream settings (Hebron & Bond, 2017). Even when teachers have the best intent and up-to-date knowledge and training, educators are still faced with the barrier of working with too few resources to make inclusion possible.

Classroom Challenges

Along with a lack of training, knowledge, and resources, there are a variety of challenges that arise during the regular school day that make inclusivity difficult for general classroom teachers to achieve. There are a number of variables that can occur during a school day that can throw off even the best thought out plans and lessons. The main two factors that will be covered in this subsection are the daily time constraints that teachers face and student behaviors.

Time Constraints

The average elementary school classroom consists of approximately 19 students all with different needs and learning styles (U.S. Department of Education, National Center for Education Statistics, National Teacher and Principal Survey (NTPS),

2020-2021). On top of this, teachers are also trying to meet the needs and demands of their administrators and districts. This leaves teachers with very little time left to devote to creating an individualized and accessible school experience for students with ASD (Cook & Ogden, 2022). All too often, children with ASD require more support than a teacher is feasibly able to provide, leaving them with a less than favorable school environment and conditions to learn in.

Busby et al. (2021) has shown that some teachers feel that the needs and extra support that students with ASD require disrupt the flow of the mainstream school day. While this may seem critical or even a discriminatory view, educators are being asked to accommodate students who have highly individualized needs, and require nearly every aspect of the school day to be differentiated in order to be accessible (Aylward & Neilson-Hewett, 2021). This is in addition to receiving little to no extra support or guidance on how to successfully be inclusive. All of this can be especially daunting given the fact that the rest of the class needs to be attended to as well. There are simply too many pressures placed on teachers that it is unrealistic to expect seamless integration, especially given the data on a general lack of training, knowledge, and resources available to teachers.

Challenging Behaviors

In many cases, students with ASD can exhibit challenging behaviors in the classroom. These behaviors can include defiance, tantrums/meltdowns, noncompliance, and socially inappropriate behavior (Westling, 2010). This is obviously stressful to deal with, especially in front of a whole class of students and even more so if the teacher does not feel confident in their ability to address the behavior. Unfortunately, when students

with ASD display challenging behaviors, it can cause teachers to have an unfair perception of them (Westling, 2010). Westling (2010) found that at least half of the teachers surveyed attributed students' challenging behaviors to their personality or as learned behavior. This is something that both students and their parents alike recognize as well. When asked, parents of children with ASD reported that their child's teacher had an unfair prejudice against them which ultimately led to exclusion (Hebron & Bond, 2017).

Separating Behaviors from Personality

Teachers need to work to change the perception of students with ASD who display challenging behaviors. There are many reasons that a student with ASD may show challenging behaviors including, but not limited to, being overwhelmed, being overstimulated, or trying to communicate a want or need and not knowing how to do so (Donnellan et al., 2013). While it is valid to feel frustrated at the situation, it is harmful to assume the behaviors are a reflection of a student's character. This not only damages the relationship between the teacher and the student and their parents, it also paves the way for even more unfair and biased treatment.

Rather than concluding behaviors are a sign of defiance, teachers need to recognize that behaviors can signal a number of things such as communicating a message, regulating sensory needs, attempting to form a relationship, or they may even be unintentional (Donnellan et al., 2013). This is yet another barrier to achieving inclusivity if students who have challenging behaviors are perceived as being disruptive and unfit for the mainstream classroom. With that being said, educators still need to be given the means to support students who have challenging behaviors and should not be expected to accommodate with little to no guidance (Westling, 2010).

Summary

There are clearly many obstacles that teachers undergo when striving to have an inclusive and accessible classroom. Any one of these challenges is enough to make inclusion nearly impossible for a general classroom teacher to achieve. It is unrealistic to expect teachers to make inclusion possible without changing the current realities of the training, strategies, support, and resources available. This is why it is imperative to continue to develop better supports and assistance for teachers educating their students with ASD.

While the current research and knowledge that we do have is valuable, it typically stems from a neurotypical perspective. This does not mean that the information available is useless. However, there is still a long way to go in regards to establishing wide-scale inclusivity. Preferably, we will continue to expand on these understandings and include the voices of students with ASD. It may be obvious, but it has been found that best practices are formed when educators learn directly from people with disabilities (Ha et al., 2022). This is why the next and final theme will examine the views, opinions, and accounts of direct experiences of people with ASD and those of parents of children with ASD.

Parent and Students' with ASD Perspectives on Mainstream School Inclusion

This section focuses on the voices, opinions, and perspectives of people with ASD and their families' as well. It is necessary to highlight the knowledge and experiences of people with ASD rather than presuming what needs to be changed in schools from a neurotypical lens. This theme will first examine the parent's perspective on what their child's school experience is like. It also covers the difficulties that parents face when

trying to establish necessary support in school for their child. This theme then explores the perspectives of people with ASD on what aspects of mainstream school are necessary in order for inclusion to be achieved.

Parent's Perspectives

Significant research has been conducted on the topic of ASD and how to best educate ASD students. However, it is highly beneficial to learn from the students and parents of these students themselves because they are the ones who are living the experience. This subsection explores the viewpoint of parents of students with ASD. Specifically, it delves into parents' involvement with their child's teacher and school and what is working in these relationships and what parents say needs to be changed. Finally, this portion of the review examines parents' opinions on the ways in which their child's needs are not being met at school and also ways in which they are.

Teacher Performance. One of the primary factors that determine a child's school experience is their teacher. This is especially true for students with ASD (Brede et al., 2017). In fact, the abilities of a classroom teacher can largely dictate the amount of time a student with ASD spends in the mainstream classroom. In cases in which parents were satisfied with their child's teacher, the main characteristic these teachers shared was "having the heart to teach" (Stoner et al., 2005, p. 46). These teachers did not necessarily have extra training or knowledge - although these are important factors - but they had a passion for educating all of their students. Parents are able to sense a teacher's devotion for their work and for their students and this makes a significant difference for both parents and students alike.

Unfortunately, many parents have a negative perception of their child's classroom teacher. In a study organized by Stoner et al. (2005) that sought out the opinions of students diagnosed with ASD on their relationships with their educators, the parents of children diagnosed with ASD reported that in their experience, teachers would not do more for their child than was absolutely necessary. In extreme cases, parents revealed that not only do teachers not understand how to educate, communicate with, or interact with their child, but they do so in an emotionally harmful way (e.g. yelling, humiliating, berating) (Brede et al., 2017).

Staff Knowledge. While one of the key qualities that parents seek in their child's teacher is a love for teaching, having a solid knowledge on ASD is another fundamental factor. In fact, research has shown that teachers having a thorough understanding of ASD was the biggest determinant of parent satisfaction with the education of their child (Whitaker, 2007). When teachers are well-versed in ASD characteristics, they are more apt to solve problems as they arise and plan lessons that are more accessible to all students (Tobias, 2009). In parents' viewpoint, inclusive environments are achieved when staff are knowledgeable and understanding of ASD and have a wealth of experience to employ (Blackmore et al., 2016).

School Performance

A child's classroom teacher is a huge component of an inclusive education. A student's education is not limited to just the classroom, and the overall school environment must be inclusive in nature as well. This is especially true for students with ASD and their parents because oftentimes, these students interact with a multitude of staff throughout the building. In order to best support students with ASD, parents and

staff need to collaborate closely. In fact, “IDEA mandates that parents of children with disabilities have the legal right to be involved in all aspects of their child’s education (Stoner et al., 2005, p. 39). This is why it is crucial that parents are able to access a school’s services, staff, and resources with ease.

School Services. Brede et al. (2017) reported that parents often felt like their child was being neglected by the school and they had to really advocate for their child in order to receive the necessary support. Additionally, Stoner et al. (2005) found that parents struggled to get adequate services for their child and also had difficulty knowing how to participate in IEP meetings to ask for these services. Parents are all too often left feeling as though they must endlessly fight for their child’s needs when in reality, it is supposed to be a feeling of collaborative teamwork between parents and the school (Hasson et al., 2022). Hasson et al. (2022) reported that the parents of children with disabilities, who were interviewed on their experience with their child’s school, gave very harrowing anecdotes. One participant in Hasson et al.’s (2022) study revealed that “It was very isolating in the beginning...you have to be proactive to fight for your child. You have to fight, is the word, to get basic needs...it is a fighting battle, but we all have to fight with it (p. 7). Another parent in Hasson et al.’s (2022) participant pool reported similar feelings. “I think you have to be really pushy, I mean you see some of the parents that come to the groups in tears because they’re getting pushed around and don’t know where to go. They’re getting really bullied by staff” (p. 7). While some of these accounts are extreme cases, it still highlights the immense difficulty that parents face when trying to fulfill their role in their child’s educational support team.

Communication. A hallmark of any good relationship is healthy communication patterns. While parents have detailed the hardships they face with their child's school, there are also statements on the importance of communication between home and school. Research by Whitaker (2007) has found a correlation between frequent two-way communication between parents and school staff and parents feeling satisfied with their child's education. Another reason why quality communication is so important is because children - whether they are neurodivergent or not - are typically unable to give a reliable account of their school experience. This is especially true for children with ASD who cannot always verbally communicate what is going on during the school day (Stoner et al., 2005). Parents have reported an appreciation for thorough communication, no matter how minor the issue, as it creates a relationship of trust and support (Tobias, 2009). Having open dialogue between parents and school staff allows parents to feel like they and their child are seen, heard, and held with their best interests in mind.

Child's Needs

Research has revealed the adversity that parents face when fighting for their children both on the classroom and school wide level. There is also data on what parents are asking for from their child's school and the ways in which they need better support. Unsurprisingly, parents are commonly dissatisfied and do not feel like their child's needs are being met (Lindsay et al., 2014). Specifically, parents are pushing for inclusion and are being met with resistance. Inclusive environments allow for opportunities for social, emotional, and communicative growth for children with ASD. In research conducted by Etscheidt (2006), it was found that it is all too common for school districts to override parents' wishes for their child to be in an inclusive classroom with supports and to place

students in autism-specific educational programs instead where there is not as much opportunity for social growth and development. Furthermore, Brede et al. (2017) found that every parent they interviewed had an example of at least one instance in which their child was excluded from mainstream school and forced to turn to an alternative setting for educational services.

There has also been an expressed desire from parents for schools to educate their whole child. Meaning, parents feel that when their child is placed in an inclusive environment, the focus is mainly on correcting behavioral issues and on academics and there is little to no attention placed on any social skills such as developing friendships (Calder et al., 2013). There are many obvious areas in which parents are identifying a strong need for change in their child's school setting. While this is a good reflection of the current school experience for students with ASD, there are also positive parent reports to investigate.

Parent-School Successes. While there is an overwhelming amount of testimonies of parents feeling like their child's needs were not being met at school, there are cases in which parents are satisfied with their child's education. It is important to examine these instances so that we know what is working in regards to obtaining an inclusive classroom. In Beresford et al.'s study, the parent participants agreed that "participating in everyday activities and exposure to the social interactions of non-disabled children [is] essential to social learning" (2007, p. 9). This is yet another reason why it is important for all students to have the chance to experience education in a mainstream setting.

Parents have also noted that they feel like their child is most included and valued when the whole staff, from teachers to administrators to cafeteria staff, show a true

commitment to inclusion (Hebron & Bond, 2017). Working towards an inclusive environment is something that involves everyone in a school. There is a clear desire from parents of children with ASD for reform in schools. When parents are being listened to, when their child's needs are being met, and when school staff have a true and genuine commitment to their child and fostering inclusivity, students are able to have success and make progress in a mainstream environment (Blackmore et al., 2016).

Student's Perspective

In research, it is important to verify information to the best of one's ability rather than to make assumptions. That is why it is crucial to dedicate this section to investigating and listening to the perspectives of students, children, and adults with ASD. It has been found that people with ASD feel as though the research that is being done around the topic of ASD is not necessarily what is needed (biological research) and that there needs to be more of an emphasis on researching improved supports, education, and services (Parsons et al., 2020). This subsection will focus on the voices of people with ASD and what they identify as current issues in schools along with the aspects of schools that are beneficial in the areas of academic learning, teacher support, and the overall school environment.

Academic Learning

Academic learning is one of the most basic, fundamental gains that children make at school. One of the challenges of teaching is trying to deliver curriculum in a way that works best for each student's individual learning style. While it is unrealistic to achieve this for every student for every lesson, it is still important to make academic learning as accessible as possible. One component that has been identified by students with ASD that

makes learning challenging in mainstream classrooms is the level of pressure that teachers put on their students (Sproston et al., 2017). There needs to be a general understanding that students may not understand the content the first time it is delivered and further explanation may be needed. There is a fine balance to achieving this additional support. While it is typically helpful for students with ASD to receive extra attention from teachers, it can also be harmful. Students with ASD revealed that when they are given too much individual attention too often, it can make their learning differences exacerbated and give the feeling of being under a spotlight amongst their peers (Humphrey & Lewis, 2008).

In a different study, students with ASD detailed what is helpful to their learning. The findings included having a quiet classroom, having a choice in learning activities, having access to assistive technology, and working in small groups rather than whole class learning (Connor, 2000). Another attribute that people with ASD have acknowledged as being helpful to their learning is individually-tailored learning (Tobias, 2009). This includes keeping the aforementioned recommendations in mind and not planning lessons that, for example, require only whole-class activities and learning. Again, it is an unattainable expectation for teachers to be able to make every lesson perfectly designed to accommodate every need of every student. However, students with ASD are asking to be considered in curriculum planning like their neurotypical peers are.

Teacher Attributes

Another crucial aspect of an educational experience is the job and responsibilities of a teacher. In fact, it has been found that people with ASD view a teacher and their role as being one of the most impactful factors in achieving an inclusive environment

(Saggers, 2015). Just as with neurotypical students, teachers need to view students with ASD as a whole child to educate and as a child with unique and cherished characteristics. Students with ASD have expressed that all too often, teachers do not know how to connect with them and are only focused on academic results and not helping them grow as a person overall (Goodall & MacKenzie, 2019).

On the contrary, students with ASD have described teacher qualities that do make them feel supported at school. One of the most significant attributes a teacher can have is connecting with students from an emotional standpoint. A student with ASD who was interviewed in a study done by Hummerstone & Parsons (2021) recounted a past teacher citing, “he gave me chances, he understands me...[if all my teachers could be like him] that would be the best thing in the world” (p. 617). When teachers make their students feel seen, heard, and valued, it makes a world of difference in the educational experience. A student participant in Spronston et al.’s 2017 research attests to this and affirms that when her teachers understand her, “the value of being somewhere where you feel safe [and] comfortable cannot be underestimated” (p. 5).

Clearly, forming personal relationships with students with ASD is an area of growth needed for most teachers. In order to do so, staff need to be educated on how to connect with people with ASD. Educators need more training and knowledge on ASD, and adults with ASD agree with this and add that it is not people with ASD’s duty to pass knowledge on to professionals, rather, they need to take the initiative to educate themselves (Camm-Crosbie et al., 2019).

Environmental Factors

Thus far, the focus of this section has been mainly on the influence teachers have in both positive and negative ways. Another major component of a school setting is the overall environment, both physically and socially. Students with ASD have listed a wide range of factors including, but not limited to, friendships, volume levels, and access to breaks as all being aspects that influence their school experience (Hasson et al., 2022). It is next to impossible to think of every individual factor that impacts one's life at school. There are a few key elements that when combined, encompass most of a school's environment. The first being the physical environment.

Class Size. Having a small class size is almost always beneficial for everyone involved for obvious reasons. Teachers are able to pay more attention to each of their students. They are not spread as thin and are able to devote more time to attending to the individual needs of their class. This is especially helpful for students with ASD who often need additional support and attention. Not only does a small class size allow students with ASD to get more time from their teacher, but it also reduces the amount of sensory overload that can be experienced in a mainstream classroom (Sproston et al., 2017). This segues into the second key element in a school environment - the sensory impact.

Sensory & Physical Environment. One trait that is shared among many people with ASD is having heightened sensory perceptions. This is something that can make mainstream school challenging to navigate and the loud, crowded spaces can induce major anxiety in students with ASD (Saggers, 2015). One student with ASD attested that, "it's very difficult to learn when there is a lot of noise going on" (Sproston et al., 2017, p. 4). Being in a noisy environment is far from the only sensory difficulty that children

with ASD face. Students with ASD also listed the following as additional aspects of school that overwhelm their senses: little personal space, temperature of spaces, not enough movement breaks, presence of strong scents and smells, and high visual input (Hummerstone & Parsons, 2021).

With so many various factors that can cause sensory overload, it takes a toll on students' well-being. One student with ASD was asked what effects the chaotic school environment has on them to which she disclosed, “I am physically, mentally and emotionally drained...I am done with this. Talking about it makes me angry...very angry and upset” (Goodall & MacKenzie, 2019, p. 506). Not only do students have to try and navigate the overwhelming sensory environment of a mainstream school, but an additional challenge is the changing and fluid nature of a regular school day. People with ASD cited having order and predictability as essential to feeling comfortable and secure (Humphrey & Lewis, 2008). There is structure and predictability to the average daily school schedule such as having lunch at the same time every day. However, there are many changes, such as an unannounced fire drill, that makes a school day very unpredictable. This is yet another part of mainstream school that is difficult to cope with for students with ASD.

Peer Relationships. Although there are many things that can make school an overwhelming and anxiety-provoking environment, there are benefits that an inclusive school can also provide. One of these is the opportunity to develop peer relationships. Forming positive friendships has been found to be one of the most enjoyable aspects of an inclusive classroom for students with ASD and leads to a largely positive school experience (Saggers, 2015). In a different study, all but one student with ASD

interviewed stated that friendships were a highly important aspect of their life (Beresford et al., 2007). That being said, it is important to acknowledge that the current reality of mainstream schools is that it is all too common for students with ASD to be bullied by their peers (Humphrey & Lewis, 2008).

Despite these circumstances, there is still great value in giving students the opportunity to develop friendships in a general education classroom. Children are able to learn from each other and it is a teacher's responsibility to facilitate an environment of inclusion, respect, and tolerance for differences to help mitigate bullying behavior. Additionally, it has been theorized that student friendships are a bigger determinant of inclusion than the role of the classroom teacher (Humphrey & Lewis, 2008). This makes it all the more important to strive for inclusivity and give children the opportunity to grow positive, valued friendships together.

Summary

Both people diagnosed with ASD and their parents have attested to fundamental issues that make school inclusion challenging, if not nearly impossible in many cases. It has also already been established that every child deserves the right to a fair education. Although there are many policies that are in place to protect and ensure this right, many people with ASD and their loved ones have verified that this is not the typical experience. At the same time, people with ASD and their families have identified great growth and development occurring when inclusion does happen. This is why it is essential to listen to the voices of people with ASD and use their suggestions and knowledge to assist in creating change towards fostering inclusive mainstream classrooms.

Connection to Research Question

The research findings supported the notion that overall, mainstream school has not and still does not provide an inclusive or beneficial education for students with ASD. The literature review examined the research and voices of teachers, parents, and people with ASD and the general consensus is that inclusivity has not been achieved. Furthermore, it was largely agreed upon that school is a negative environment for students with ASD, despite global and national legislation mandating that every child deserves a fair and equitable education and should be provided with the necessary supports to ensure this.

In addition, the research also revealed that teachers need much more support, training, and resources than are currently available. While there are methods and strategies that educators have been using, these are typically inaccessible and unrealistic to apply in a mainstream classroom. This is why it is essential to continue to research and develop improved ways to support teachers in creating an inclusive classroom.

Conclusion

School has historically not been able to serve the needs of students with ASD which ultimately, leads to outright exclusion. In an attempt to correct this trend, there have been a multitude of laws and policies that have been enacted that promote equity in education and mandating that all children's educational needs are met. Even with this legislation, teachers, parents, and people with ASD alike all attest that mainstream education still is not accessible and students with ASD are still being excluded from school. There are many reasons why educators feel as though they are unable to create an inclusive and equitable classroom. The structure of schools and the available services are

geared towards educating neurotypical students. Additionally, teachers are not given practical training and evidence-based practices to utilize in their classrooms.

Given this reality, there is a clear need for better, more effective, and more practical support for educators to rely on when it comes to teaching students with ASD. The next chapter will detail the methods that were used to develop an enhanced professional development course on educating students with ASD in the mainstream classroom. This is meant to bridge the gap between the knowledge available on best practices for creating an inclusive classroom for students with ASD and delivering it in an accessible way that gives educators concrete and practical tips and strategies to achieve inclusivity.

CHAPTER THREE

Project Description

Introduction

Chapter Two explored the research on ASD education and the barriers that teachers face when trying to have an inclusive classroom. This information further supports the need to research the question: *How does a general elementary classroom teacher create an equitable and accessible learning environment for students with ASD?*

This chapter will connect to the research in Chapter Two and summarize the key findings from each of the main participant groups: parents with children diagnosed with ASD, people diagnosed with ASD, and educators. I will then connect my personal experience and connections to the research. All of this information will justify the need and credibility of this project - a professional development course - which is designed to help teachers make their classrooms equitable and accessible for their students diagnosed with ASD.

This chapter will also give an overview of the content and objectives of the professional development course. Additionally, it will detail the methods used to create the course along with the timeline of its development. Finally, this chapter will describe the assessment procedure to evaluate the effectiveness of the professional development training.

Connections to Research

Previous research has found that it is common for mainstream classroom teachers to be inadequately trained and prepared to teach students diagnosed with ASD. There are many different perspectives and thoughts on how to address this issue. The three main

groups of participants that the research in Chapter Two explored were educators, people diagnosed with ASD, and the parents and guardians of children diagnosed with ASD. Each of these identities bring valued insight.

Parent Participants

In Chapter Two, one of the points that the parents of children diagnosed with ASD made is that they feel as though their child's teacher did not have enough knowledge about ASD. This led to feelings of mistrust, unease, and exclusion (Brede et al., 2017). The parents believed that their children were not understood by their teacher, and that they were ultimately not receiving the services, support, and education that their student deserves (Brede et al., 2017). One of the key findings from research involving this participant pool is that the participants saw a need for mainstream classroom teachers to have more knowledge and a better understanding of ASD (Whitaker, 2007).

Student Participants

Chapter Two also looked into the research of the perspectives of people with ASD, what their school experience was, and what changes were suggested. It was also shared that the participants in this group did not feel like their teachers had a solid understanding of ASD and how it affected them (Sproston et al., 2017). Similarly to the parent participants, the people diagnosed with ASD in the studies did not feel a sense of belonging in the mainstream classroom (Goodall & MacKenzie, 2019). The research participants expressed a desire for mainstream classroom teachers to be able to have better connections with students diagnosed with ASD (Goodall & MacKenzie, 2019). One of the ways this can be achieved is if teachers have more knowledge about ASD (Tobias, 2009).

Teacher Participants

Finally, Chapter Two also looked into what the research shows in regards to teachers' experiences with teaching students diagnosed with ASD. It has been established that in general, students diagnosed with ASD are not having their educational needs met in many mainstream classrooms. Research has revealed that there are many reasons for this reality. The educators who were participants in the research that was covered cited that they felt as though most teachers did not have enough knowledge to successfully educate students diagnosed with ASD (Busby et al., 2012). Part of this is due to the notion that most teacher prep programs do not provide teachers with enough ASD specific training (Al Jaffal, 2022). Additionally, the research revealed that ASD training needs to be more practical for teachers to implement in their classroom (Goodman & Williams, 2007).

Personal Connections

In Chapter One, I detailed my experience working with and educating children diagnosed with ASD. I believe that my time as a Behavioral Interventionist at a children's autism center was one of the most impactful and eye-opening experiences for me in regards to this research. One key observation is that many of the children received services at the center because their school did not meet their needs. Specifically with my brother, the staff at the center went so far as to teach him academic skills because he was enrolled there full-time. This was the case for a handful of the children at the center. In my experience, private settings were able to provide a better education for children diagnosed with ASD than not only mainstream classrooms, but SPED classrooms as well.

While I worked at the center, I also felt as though I was able to observe first-hand what conditions led to progress and growth for the children who were receiving services. One of the main determinants that led to success between the therapists and their clients was having a trusting and positive relationship. This is something that I took with me and applied in my own classroom once I became a mainstream first and second grade, split classroom teacher.

Classroom Experience

In my first year of teaching, I had two students in my class that were diagnosed with ASD. One of them in particular was characterized by his previous educators as being extremely quiet, reserved, not able to participate with the group, and not able to complete tasks independently. Once I became his teacher, I focused on getting to know him, building trust, and helping him feel safe and a valued member of the classroom community. He still participated in all of the classroom activities and academics, and I prioritized his feeling of belonging and value in the classroom. By the end of the school year, this student was able to function in school almost entirely independently, was able to advocate for himself, and had formed many friendships with his peers. I firmly believe that if teachers are able to build a genuine rapport with their students diagnosed with ASD, that many aspects of the mainstream classroom become accessible.

Justification for Project

The research covered in Chapter Two highlighted a shared belief amongst the three different participant groupings: parents with children diagnosed with ASD, people diagnosed with ASD, and mainstream educators. All three of these demographics of participants saw a need for mainstream classroom teachers to have more knowledge and

training on ASD. The research has also shown that most training that is currently available to teachers do not give practical strategies that can be implemented in the mainstream classroom. For this reason, I completed a professional development course with the goal of providing mainstream elementary school classroom teachers with strategies for making inclusion for students diagnosed with ASD more effective and accessible.

Overview of Professional Development

This professional development workshop has three main objectives. The first, is to provide teachers with more knowledge on ASD. The second is to give teachers strategies and ideas that are meant to be applied in the mainstream classroom on how to create a safe environment that every student feels valued in. The third objective is to focus specifically on strategies and resources for teachers to use as a support to educate their students with ASD. All of the strategies and resources detailed in the workshop are meant to be applied in a mainstream classroom setting.

Session One

There is a dedicated workshop session that is correlated with each main objective. The first session, titled, *Overall Knowledge on ASD*, is a 90 minute workshop that gives participants comprehensive knowledge and information on ASD. This session gives educators research-based information on common physical and sensory needs of people with ASD and how this may translate to the classroom. It also gives participants opportunities to discuss ways in which they can improve their physical classroom environment.

This session also targets common language processing qualities and needs of people with ASD. This portion is also backed by research and acknowledges common patterns of speech and language in the context of being a learner in a mainstream classroom that can be challenging and inaccessible for people with ASD. This part of the session also gives participants the chance to reflect on their own teaching practices, and discuss how they can apply the knowledge to their teaching.

Session Two

The second session of this professional development workshop, *Creating a Safe Environment of Belonging and Inclusivity*, has approximately 90 minutes of content and activities. This session gives participants research-backed information and advice on how to make your classroom space safe, welcoming, and evokes a sense of belonging in all students. It also gives participants resources to help promote inclusivity in their classroom. This session first focuses on how teachers can communicate and connect with their students with ASD in a positive and affirming manner. Participants get to practice this through role-playing scenarios. Then, the content opens up to discussing ways in which teachers can positively encourage class-wide inclusivity amongst students and peers.

Session Three

The last session of this workshop, *Resources and Strategies to Support Teachers*, has a runtime of approximately 120 minutes. This session completes the workshop series by providing participants with resources and strategies that they can use in their classrooms to help support their students with ASD. All of the suggested resources and strategies are meant to be applied in a mainstream classroom setting. Additionally, all of

the recommended approaches are flexible in nature and can be applied in a variety of settings and can be used to target a wide range of goals and/or behaviors. Participants have the opportunity to practice using the strategies listed in the session and to brainstorm how they might use these strategies and resources in their classroom.

ASD Knowledge

The first identified goal of this professional development of increasing teacher knowledge on the topic of ASD is backed by research as being a significant need in order to progress inclusive education. I also incorporated my seventeen years of personal experience and knowledge into this professional development workshop. This portion of the professional development workshop gives an overview of what ASD is, the different behaviors and qualities that ASD can entail, and some key differences between neurotypical learners and learners diagnosed with ASD.

Practical Strategies

The second need that has been recognized by multiple studies is for there to be more practical strategies for teachers to utilize in order to create an accessible classroom for students diagnosed with ASD. This professional development workshop provides classroom teachers with strategies to promote inclusion that are intended to be used in a mainstream classroom setting during the regular school day. I drew on my experience as a general elementary first and second split grade teacher to aid in the creation of this section of the project.

Building Rapport

Finally, research shows that people diagnosed with ASD and parents with children diagnosed with ASD want to be better understood by their educators. This is addressed in

this workshop by giving teachers specific information and tips on how to build relationships with neurodivergent students. I again incorporated my seventeen years of knowledge and experience of working with and forming relationships with people diagnosed with ASD when creating this part of the workshop.

Project Audience

This professional development workshop is intended for mainstream K-6 classroom teachers. Research has shown that many educators of all experience levels feel inadequately prepared to properly teach students with ASD (Busby et al., 2012). For this reason, most K-6 mainstream classroom teachers would benefit from this professional development workshop. This workshop also has useful information for virtually any K-6 educator, even if they are not mainstream classroom teachers, as it has also been found that an important factor in true inclusivity is if it is practiced amongst all the staff across a school (Roberts & Webster, 2022).

Setting

This professional development workshop is beneficial at any point in an educator's career. This training would be especially impactful for pre-service teachers and teachers that are early in their teaching career. Additionally, this training should be applied in small or whole group settings to allow for discussion and collaboration to further increase learning. This workshop can be delivered at any point during the school year, but it would be the most useful prior to the start of a new school year. Finally, there should be approximately 4-6 weeks in between the delivery of each session of the workshop. This is to allow participants ample time and opportunity to apply their learning to their own classroom before learning the content of the next session.

Rationale for Professional Development

This professional development workshop was developed and grounded in adult learning theory. According to adult learning theory, adults learn best when the information has a direct and tangible use (O'Neill, n.d.). The strategies and materials in this training are meant to be used in participants' own classrooms and to improve their abilities to educate students diagnosed with ASD. Furthermore, the adult learning theory also states that adults prefer to connect to their own real-life experiences (O'Neill, n.d.). This is why this training provides learners with content that applies to their own classrooms and students.

This capstone project was designed using the source, *Effective Teacher Development*, by Darling-Hammond et al. (2017) as a guide. The knowledge from this source was used to ensure that the content of the training is organized in a simple and accessible manner. It was also used to make the training materials engaging for the audience. One characteristic listed as an effective teaching method for adult learners is using active learning (Darling-Hammond et al., 2017). This capstone project engages learners in activities that align with the content of the workshop and that directly apply to their classroom and students which is a key feature of active learning (Darling-Hammond et al., 2017).

Finally, this professional development workshop also provides participants with plenty of opportunities for collaboration and reflection which are further hallmarks of engaging learning (Darling-Hammond et al., 2017). The sessions in this capstone project allow participants to reflect on their own learning and how they can apply it to their own profession. Additionally, participants of this workshop get to discuss their ideas and

takeaways together both in small-group and whole-group settings. These learning experiences and activities allow participants to play an active role during these professional development sessions.

Timeline

This project was developed over the course of 14 weeks. Additionally, the research and planning that contributed to this project took place 3 months prior to its creation. This professional development workshop was presented to a class of educators who completed their own capstone project in order to receive a Masters of Arts in Teaching.

Assessment

The effectiveness of this professional development workshop is measured by a course evaluation survey that is taken at the conclusion of the final session. The survey is conducted through Google Forms, and consists of two questions posed on a Likert-scale and three short answer questions. The survey asks participants to give feedback on the structure and content of the workshop along with how prepared they feel to teach students with ASD in their classroom. The collected data serves as a reflection of the effectiveness of the workshop's ability to increase participants' knowledge on ASD and how to create a more inclusive classroom.

Conclusion

This chapter synthesized the research highlights from Chapter Two and used the information to justify the need for this project. My personal experience and background along with the research provides a basis for the content and objectives of the professional

development course. Chapter Four will analyze the results of this professional development project.

CHAPTER FOUR

Conclusion

Introduction

Autism Spectrum Disorder education is a topic that holds significant personal and professional importance to me. My brother - who is diagnosed with ASD - was severely underserved in public schools to the extent that since he was in fifth grade, he has received full-time therapy services instead of a public school education. As a researcher, I have found a wealth of evidence that supports his experience and attests to the notion that currently, mainstream education is not accessible or equitable for students with ASD. This is what led to the research question: *How does a general elementary classroom teacher create an equitable and accessible learning environment for students with Autism Spectrum Disorder?*

This chapter serves as a conclusion to this capstone project. It first details what I personally learned throughout the research process and creation of this project. It also covers the findings and significant insights that came out of the literature review. Then, this chapter shifts the focus to the capstone project itself - a three-part professional development workshop for K-6 mainstream teachers. The overarching objective of this workshop is to provide mainstream educators with knowledge and strategies that they can use in their classroom to support and include their students with ASD. It discusses the possible implications and limitations of this project and the research it is substantiated on. Then, further recommendations for research are suggested. Finally, this chapter describes how the results of this project will be shared, along with the benefits this project provides.

Personal Learning

The research that went into this project validated my personal insights and experiences that I had going into this capstone project. It was beneficial to my learning and understanding to look at the topic and research question from multiple lenses. I examined the perspectives of mainstream teachers, students with ASD, and parents of students with ASD in regards to the topic of inclusivity in mainstream classrooms. All three demographics revealed that most mainstream classrooms are inaccessible to students with ASD and teachers need more support and training in order to make inclusivity possible.

These findings aligned with my original thoughts and opinions that I had prior to my research. One area of my research findings that I learned from is that attending and being included in a mainstream classroom may not be the preferred choice for every student and family. My misconception was that everyone desires to be in a mainstream classroom setting. I recognize that this opinion was due to my lens and biased perspective as a neurotypical person. This further shows the great importance of learning from multiple perspectives during the research process.

Literature Review

The literature review process was an essential component to the creation of this project. There were multiple key elements of the research process that were especially vital to this capstone project. The first, is that I was able to come to a deeper understanding of the perspectives of students with ASD and their families on the reality of mainstream education. The student participants in the conducted research shared many aspects of school that are challenging and are hindering their education. One of the main

findings is that many students with ASD do not feel understood or accepted by their teachers or peers (Goodall & MacKenzie, 2019). Parents of students with ASD share this feeling as well (Brede et al., 2017). The parent participants also expressed the need for teachers to have more overall and comprehensive knowledge on ASD in order to best educate their child (Whitaker, 2007).

Findings from Teacher's Perspective

Another crucial area of research was delving into the perspectives of mainstream classroom teachers. It was unsurprising to find that most teachers would benefit from more ASD-specific training. However, it was unexpected to find that many teachers, regardless of their level of experience, do not feel knowledgeable enough to teach students with ASD and mainly rely on a “trial and error” approach (Anglim et al., 2018). This demonstrates the clear need for educators to access more training on ASD.

There are currently many ASD trainings available for educators, however many of them cite and recommend strategies and practices that are not necessarily intended to be used in a mainstream classroom (Goodman & Williams, 2007). Rather, there is a more specific need for ASD training that is intended to be applied in a mainstream classroom setting.

Connections to Project

Overall, the literature review revealed that mainstream classroom teachers need more training, knowledge on ASD, and a better understanding of how to connect with their students with ASD. It is also important for this information to be both research-based and field-tested (Goodman & Williams, 2007). This project bridges this

gap, and is a comprehensive ASD-focused training that is meant to be delivered to general education classroom teachers and applied in a mainstream classroom setting.

Possible Implications

This research has highlighted the multi-faceted needs and challenges of equitably educating students with ASD in a mainstream classroom. The CDC (2023) has reported that approximately 1 in 36 children have ASD. With the prevalence of ASD, it is essential that teachers receive adequate and applicable training and feel confident in their skills to educate all students. This project has demonstrated the need for flexible strategies, resources, and knowledge to be available to teachers. It is important that these suggested measures can be applied in a variety of contexts and with a variety of students. There is already a wealth of evidence-based practices and ASD-related training, but there is a large-scale lack of practices and strategies that are intended to be implemented in a mainstream classroom.

Limitations

One of the most significant limitations in the development of this capstone project is my personal lens as a neurotypical person. While this research did include the direct perspectives and voices of people with ASD, I am still reporting and synthesizing the research through my neurotypical perspective. In future studies, it would be beneficial to incorporate interviews with people with ASD throughout the research process. Furthermore, it would be valuable to ask students with ASD directly what specific supports they want and need in the mainstream classroom.

A limitation of the workshop series is that there are only a handful of concrete strategies recommended for teachers to use in their classrooms. These approaches are

adaptable, but some educators may benefit from a wider variety of strategies offered. The flexibility of the suggested strategies also depends on the teacher being able to adapt it to their classroom and student needs. Some workshop participants may benefit from more instruction on different variations of the listed strategies.

Recommendations

While this capstone project is a step in the right direction in providing teachers with practical ASD-related training, there is still a large gap in teacher education and training that needs to be addressed. There needs to be further research done on how to best support teachers and students with ASD in mainstream education. Additionally, it is recommended that more research is devoted to creating training and strategies that are field-tested and intended to be applied in a mainstream classroom setting. Finally, it would be beneficial to accumulate ASD-related understandings, knowledge, and information in an accessible way for teachers to access.

Communicating Results

I plan to communicate these results by presenting this project to K-6 educators. First, I will present it to the K-6 teaching staff at Friends School of Minnesota. I am also planning on uploading this project to the Digital Commons database at Hamline University. I also intend on presenting this capstone project at professional conferences - either in-person or at virtual webinars. Ultimately, my goal is to make this professional development workshop and the information available and accessible to as many K-6 educators as possible.

Benefits of Project

The main benefit of this project is that it provides educators with strategies to support their students with ASD that are meant to be applied in a mainstream classroom setting. Additionally, the strategies that are suggested in this workshop series are flexible, and can be utilized in a variety of contexts. Educators can use the approaches for any goals or skills that would be most useful - both academically and socially.

This project also provides participants with a multitude of resources for their own further learning as well as resources to use in the classroom. These resources are available via handouts, so participants can store and reference the information when needed. Finally, the participants will also be able to access the shared resources that were accumulated on Padlet during the workshop sessions.

Lastly, this project gives educators a wealth of knowledge and information on ASD. It starts with providing a comprehensive overview of ASD, which then branches into detailing the common physical sensory needs and challenges and the common language processing needs and challenges. This project also gives insight into how to support students with ASD socially and emotionally in the mainstream classroom. Finally, much of the information in the workshop is available in physical handouts as well for educators to refer back to as necessary.

Conclusion

This chapter provided a conclusive overview of this research project. First, it went over the personal and professional learning that arose from the research process. Then, the connections between the research and the capstone project were listed along with the possible implications, limitations, and recommendations of the project. Finally, this

chapter also discussed how this information and research will be utilized and the benefits that this project provides.

This capstone project is a culmination of seventeen years of personal and professional experience and six months of research. This project is only the beginning in an effort to strive for inclusive and equitable mainstream education for students with ASD. There is much to be done in terms of giving mainstream classroom teachers the resources, knowledge, and support that they need to be able to confidently and effectively educate students with ASD. It is my hope that this capstone project and the research behind it is a small, yet significant step towards creating inclusive and equitable mainstream learning environments for students with ASD.

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