

Students with Autism in Inclusive Classrooms

By

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Abstract

Many students with Autism Spectrum Disorder (ASD) are being integrated in inclusive classrooms and learning alongside their typically developing peers. The purpose of this study was to provide teachers with effective strategies to support students with ASD and help them achieve greater success academically, socially, and behaviourally. The related literature has been extensive but failed to provide a sufficient amount of evidence-based strategies for teachers to utilize when working with students with Autism in their inclusive classrooms. Analysis of both the related literature and the collected data suggests that there is a relationship between the challenges teachers experience and the factors that inhibit teachers to successfully include students with ASD. This qualitative study explores the understandings from two teachers in Ontario who experienced including students with ASD in their inclusive classrooms. They were chosen based on convenient and criterion sampling procedures. Both Participants engaged in separate semi-structured interviews and were asked a series of open-ended questions. Although the sample is limited, both participants provide insight on their perspectives, challenges, actions, including teaching strategies to facilitate a successful learning environment for students with ASD. Recommendations for increased support, adequate training, and pre-service teacher education programs are also discussed.

Key Words: autism, ASD, inclusive classroom, inclusion, teacher strategies

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Chapter 1: Introduction

“To measure the success of our societies, we should examine how well those with different abilities, including persons with autism, are integrated as full and valued members” (Ban Ki-moon, 2015).

1.0 Research Context

Autism Spectrum Disorder (ASD) and Autism are both general terms that are used to classify a group of comprehensive disorders that are associated with brain development. Each individual with ASD is unique, as they have their own degree of difficulty (Autism Speaks, 2015). Individuals who lie on the ASD Continuum may experience difficulty with social interaction, verbal and nonverbal communication and repetitive behaviours (Autism Speaks, 2015). Moreover, others may have intellectual disabilities and experience difficulty in motor coordination and attention. Some individuals with ASD are more advanced than others in visual, music, math, and art skills (Autism Speaks, 2015). After the establishment of the DSM-5 (Autism Speaks, 2015), all autism disorders were merged under one umbrella diagnosis of ASD (Autism Speaks, 2015, para. 1). The DSM-5 encompasses a set of criteria that is used to evaluate individuals who may have the disorder; these disorders include autistic disorder, childhood disintegrative disorder, pervasive developmental disorder-not otherwise specified (PDD-NOS) and Asperger Syndrome (Autism Speaks, 2015). “In the 2005-06 school year, school boards in Ontario reported that 7,888 students in publicly funded elementary and secondary schools were identified by an Identification Placement and Review Committee (IPRC) as exceptional under the Communication–Autism category” (Ontario Ministry of Education, 2007, p. 14).

1.1 Research Problem

Students with ASD in Ontario attend a regular school and are most often placed in an inclusive classroom (Hoffman, 2013). According to Hoffman (2013), “The number of students with ASD has increased dramatically even in the past 10 years” (para. 4). “For example, the Durham DSB, home to around 70,000 students had about 650 children with ASD in 2007–08. By 2012–13, that number had ballooned to over 1,100” (Hoffman, 2013, para. 4). In this study, the term ‘inclusive classroom’ refers to a classroom of typically-developing students. It is vital for teachers to know and recognize the value of strategies that can be used to help these students achieve educational success. Diagnosis and awareness of ASD has become increasingly prevalent and will continue to be widespread among students within the classroom. As a result, more students who lie on the ASD Continuum are being educated in inclusive classrooms and teachers are faced with establishing strategies to help these students succeed (Hoffman, 2013, para. 5). Although this task may seem daunting to some teachers, teachers play an invaluable role in helping students with ASD learn and achieve educational success. It is imperative that teachers empower one another and collaborate to share resources. This will help to overcome obstacles in order to make a difference in the field of education. This study will examine how teachers are facilitating successful inclusion of students with ASD in inclusive classrooms and provide a foundation of tools and strategies that can be utilized by others to successfully support students with ASD.

1.2 Purpose of the Study

The purpose of conducting this study is to provide general education teachers with effective strategies to facilitate successful inclusion of students with ASD in inclusive

classrooms. Teachers strive for their students to achieve a successful learning outcome regardless of ability. Therefore, teachers need to be equipped with effective strategies in order to prevent students with ASD from falling behind academically. Teachers need to recognize each student's strengths and needs to facilitate strategies for improvement.

Students with ASD in inclusive classrooms may not be given opportunities to receive adapted instruction and resources that are crucial for their educational success.

Additionally, general education teachers may not be aware of research-based strategies that are proven to be effective. General education teachers may find it intimidating to integrate students with ASD in their inclusive classrooms. It is vital to pinpoint the challenges general education teachers face when trying to include students with ASD in inclusive classrooms so changes can be implemented to further support and promote inclusion in schools. Additionally, it is significant to establish the value of support systems that are needed to assist teachers in supporting students with ASD in inclusive classrooms. It is imperative to extend on previous literature in order to give general education teachers the opportunity to pursue a wide range of strategies that will suit the needs of every unique student with ASD. The work of Crosland and Dunlap (2012) has influenced my own; they argue that a flexible standardized model is needed in order to come to a consensus regarding effective practices that can be utilized in general education classrooms. Consequently, this will help teachers accommodate students with ASD in inclusive classrooms and foster educational success.

1.3 Research Questions

The main research question for this study is *how are teachers including students with ASD in elementary inclusive classrooms?* The following sub-questions will help to

provide a framework for this study. What types of challenges and barriers are teachers facing when trying to include students with ASD in classrooms? What strategies are teachers utilizing in the classroom to foster inclusion and how effective are these strategies? What types of support systems are needed to ensure educational success and successful inclusion of students with ASD in all classrooms?

The data collected from this study has helped to enlighten others on effective and ineffective strategies teachers are utilizing in the classroom to help support students with ASD. Additionally, others may choose to incorporate these effective strategies in their own classroom to ensure students with ASD are thriving. My goal is to help inform others about the various types of support systems that are needed to ensure educational success of students with ASD in inclusive classrooms. This was discovered by analyzing and comparing my data with previous literature in order to establish existing trends that have been proven to be successful. The data has helped to get to the root of the issue by raising awareness about what is preventing teachers from promoting inclusion and the obstacles they are experiencing to help students with ASD succeed in the classroom. I want to pursue this topic of research to help teachers and pre-service teachers meet the learning needs of students with ASD and understand how to successfully integrate these students in inclusive classrooms. This provides equitable treatment for all students, as it gives them the opportunity to experience a smooth transition the following school year and achieve a successful learning outcome. Additionally, I want to gain insight on this topic of research in order to expand my own developing pedagogy. As a result, I will be prepared to help students with ASD achieve their fullest potential in my future inclusive classroom.

Through this qualitative research process, I have taken a case study approach as detailed by Creswell (2013) in an attempt to identify patterns and understand a specific issue. Hancock and Algozzine (2006) argued that researchers utilize case studies to understand a theory or problem by infusing information from smaller cases. A case study approach in qualitative research is used when the researcher attempts to address an issue or question; this helps to add insights to previous literature and further understand a theory (Hancock & Algozzine, 2006). Participants have been interviewed through a series of semi-structured questions. Participants are comprised of general education teachers who have experienced working with students who lie on the ASD Continuum in inclusive classrooms. The information derived from the case studies have been interpreted, analyzed, and coded through an inductive approach in order to identify reoccurring patterns and themes. Following this, connections were established when comparing similarities and differences to previous literature.

1.4 Background of the Researcher

There are various reasons why I chose to pursue research about the inclusion of students with ASD in inclusive classrooms. Before my educational journey, I did not know about ASD. I did not know any individuals with the disorder nor did I come into contact with anyone who lives with ASD. Throughout my studies, as I completed a degree and diploma program in Early Childhood Education, I have learned that students with ASD learn best in an inclusive classroom with appropriate support, modifications, accommodations and resources. I have had the pleasure of working alongside students with ASD in inclusive classrooms. Throughout my experiences, I have realized the prevalence of students with ASD across schools and childcare centers'. I have realized

that each student with ASD is unique. Strategies and tools need to be adapted according to each student and their needs. Therefore, it is vital to determine more effective strategies that can be utilized by general education teachers in inclusive classrooms. As a student teacher, I experienced challenges in trying to help these students succeed in inclusive classrooms. Throughout my experiences, I have noticed that many teachers found it challenging to include and support students with ASD in inclusive classrooms. Many teachers carried minimal knowledge in regards to effective strategies that can be utilized in the classroom to help foster inclusion and successful integration. Through this research study, my hope is to support teachers to help students with ASD achieve enriched learning experiences.

1.5 Overview

Chapter 1 includes the introduction and purpose of the study, the research questions, as well as how I came to be involved in this topic and study. Chapter 2 contains a review of the literature, which includes effective strategies and tools that can be utilized by teachers in inclusive classrooms, challenges that teachers experience, and the importance of collaboration to support students with ASD who are learning alongside their typically-developing peers. Chapter 3 provides insights on the methodology of this study, including information about the participants and data collection and analysis. Chapter 4 discusses the findings that emerged from the open-ended interviews with two participants. Chapter 5 addresses the similarities and differences that emerged from the literature and findings from this study. Additionally, it discusses the implications, recommendations, and areas for further research.

Chapter 2: Literature Review

2.0 Introduction

An increasing number of students with Autism Spectrum Disorder (ASD) are being integrated into inclusive classrooms. The general education curriculum can suit the needs of students with ASD depending on the severity of the disorder. However, students with ASD can thrive when being accommodated in a classroom of typically-developing students. An increasing number of professors that excel in special education and behavioural analysis (Anderson, 2001; Harrower & Dunlap, 2001; Hart & Whalon, 2011; Leach & Duffy, 2009; Chandler-Olcott & Kluth, 2009) have conducted quantitative and qualitative studies and have provided extensive literature reviews. Their work provides insight on the difficulties students with ASD experience, how general education teachers feel about inclusion, and how they can accommodate them successfully into inclusive classrooms.

2.1 Characteristics of ASD

When students with ASD are placed in an inclusive classroom, the experience can be valuable or unfavorable depending on how well teachers accommodate these students. Many students with ASD have social and behavioural issues that present challenges in an inclusive classroom. Relying on the research of Hart and Whalon (2011) helps to provide a valuable perspective when conducting my own study. They have conducted both quantitative and qualitative studies and compiled literature reviews regarding the inclusion of students with ASD in inclusive classrooms. The National Research Council (as cited in Hart & Whalon, 2011) highlighted that children with ASD have difficulty interpreting and utilizing verbal and nonverbal communication in social situations,

feeling empathy for others, forming and sustaining peer friendships, and developing the necessary skills to interact with others. It is important to note that these difficulties may differ across the ASD Continuum.

The study of Volkmar, Carter, Grossman and Klin (1997) stated that some children with ASD may engage in conversations that spark their interest while disregarding the perspective of the listener. In contrast, other children with ASD may rarely initiate conversation, avoid interacting with others, and use minimal eye contact (Volkmar et al., 1997). Children on the low end of the continuum have difficulty with verbal and nonverbal communication and experience learning difficulties (Humphrey, 2008). Alternatively, Wing's study (as cited in Humphrey, 2008) claimed that children with high-functioning ASD have enhanced language and intellectual skills. The American Psychiatric Association (as cited in Humphrey, 2008) claimed that children with ASD display repetitive behaviours such as preoccupations with parts of objects, hand flapping, or twisting and resist change in routines. Some students with ASD may exhibit severe behavioural issues such as tantrums, aggression, destructiveness, and self infliction of pain (Ontario Ministry of Education, 2007). These behaviours can be triggered by the difficulties they experience with communication, adapting to change, interpretations of situations, and their level of functioning (Ontario Ministry of Education, 2007). The question remains whether teachers are adequately equipped to serve the needs of students with ASD in inclusive classrooms.

2.2 Inclusion

The notion that emanates from inclusion is that every child should be an equally valued member of the school environment (Eldar, Talmor, & Wolf-Zukerman, 2010).

The term “inclusion” refers to teaching students with special needs alongside their typically-developing peers. It is beneficial for students with special needs to learn in inclusive classrooms, as it benefits both the included students and their typically-developing peers, who benefit from being exposed to a diversity of learners (Eldar et al., 2010). The study of Eldar et al. (2010) used a qualitative case-study approach to identify the effects of successful inclusion on students with ASD. Their findings indicated that students with ASD who are educated in inclusive classrooms have better social skills, exhibit increased engagement and assimilation, give and receive higher levels of social support, have a larger social network and more concrete educational goals (Eldar et al., 2010). Higher levels of success were associated with social skills (Eldar et al., 2010). In regards to behaviour, students with ASD exhibited the capacity for self-help, autonomy, meeting demands, smoother transitions to change, and better coping mechanisms towards self-restraint and determination (Eldar et al., 2010). Moreover, repetitive behaviours were diminished or nonexistent (Eldar et al., 2010). There were a few successes in the cognitive domain. For instance, a few reports indicated a progression in learning and academic skills in all subjects (Eldar et al., 2010). In a few cases, students with ASD reached the class average or remained above this average (Eldar et al., 2010). In contrast, the study discussed unsuccessful cases of inclusion. These participants stated that the difficulties arose from not coming to a consensus regarding effective classroom practices and lack of cooperation among members involved in the creation of an inclusive classroom (Eldar et al., 2010). This research shows the significance of appropriate collaboration and its impact on creating a successful inclusive classroom.

2.2.1 Challenges of general education teachers in promoting inclusion

Through multiple research-based studies, it has been proven that inclusive education for students with ASD can lead to higher levels of student engagement in social situations, increased social support, social networks, and higher levels of educational competence in comparison to students with ASD involved in special education classrooms (Lindsay, Proloux, Thomson & Scott, 2013; Chandler-Olcott & Kluth, 2009; Eldar, et al., 2010; Vakil, Welton, O’Conner & Kline, 2009). However, despite these benefits, teachers find it challenging to include and support students with ASD in inclusive classrooms. Multiple qualitative research studies have been conducted to determine the obstacles teachers are faced with when trying to include and support students with ASD in inclusive classrooms (Eldar et al., 2010; Lindsay et al., 2010; Smith & Smith, 2000). Data was collected through semi-structured interviews and the results indicated that teachers reported experiencing challenges with understanding and managing behaviour of students with ASD, barriers with social structures in school policy, lack of training, support, and resources (Lindsay et al., 2013; Smith et al., 2000). Moreover, teachers reported challenges in creating an inclusive classroom due to lack of understanding from other teachers, students, and parents (Eldar et al., 2010; Lindsay et al., 2013). Lastly, teachers claimed that lack of time inhibited them to adequately support a student with ASD and meet the demands of planning and fostering an inclusive classroom (Lindsay et al., 2013; Smith et al., 2000). The success of creating an inclusive classroom largely depends on the principal’s attitude and dedication towards the project (Eldar et al., 2010). If teachers do not feel supported, they will feel too much pressure due to the overwhelming responsibilities to establish an inclusive classroom alone (Eldar et

al., 2010). Graydon's study (as cited in Eldar et al., 2010) claimed that the principal plays the leading role to effective school practices, which is reflected when they create the school's philosophy. In order to achieve successful inclusion, the principal must display positive behaviours that embrace inclusion, acceptance, and success of students with special needs in inclusive classrooms (Eldar et al., 2010).

2.2.2 Teacher Attitudes on inclusion of students with ASD

There has been extensive research regarding the analysis of general education teachers' attitudes towards inclusion of students with special needs: however, recent studies have focused on analyzing their attitudes towards the inclusion of students with specifically ASD and teacher awareness of evidence-based strategies to promote successful inclusion. Multiple quantitative research studies indicated that general education teachers held positive attitudes regarding the inclusion of students with ASD in inclusive classrooms (Segall & Campbell, 2012; McGregor & Campbell, 2001; Wilkerson, 2012). Alternatively, attitudes were affected based on specific elements such as experience and training, knowledge of ASD, and awareness of effective classroom strategies (Segall et al., 2012; McGregor et al., 2001; Wilkerson, 2012). Additionally, all studies have reported differences in attitudes of general education teachers versus special education teachers towards inclusion of students with ASD. General education teachers hold a less positive attitude towards inclusion in comparison to special education teachers, who are adequately trained to work with students who have ASD (Segall et al., 2012; McGregor et al., 2001; Wilkerson, 2012). Overall, many researchers have reported that although the attitudes of general education teachers were less positive and not as strong as special education teachers, they still supported inclusion (Segall et al., 2012;

McGregor et al., 2001; Wilkerson, 2012). All participants felt neutral about including students with ASD in inclusive classrooms and felt that the attitudes of other teachers and school administrators weighed heavily on the successful inclusion of students with ASD (Segall et al., 2012; Simpson, de Boer-Ott & Smith-Myles, 2003; Wilkerson, 2012). It has been argued by multiple researchers that the severity of the disorder influenced the attitude of teachers regarding the inclusion of students with ASD in inclusive classrooms (Lindsay et al., 2013; Segall et al., 2012; Smith & Smith, 2000; Wilkerson, 2012).

Moreover, some teachers supported a special education classroom as an option to help students with ASD achieve a higher level of educational success (Wilkerson, 2012).

Many professionals have claimed that when teachers are offered various support services, it positively impacts student performance and teacher attitudes towards inclusion (Wilkerson, 2012; Simpson et al., 2003).

2.3.3 Collaboration

Successful collaboration is essential to ensure that students with ASD receive the necessary support to thrive in their education. Leach and Duffy (2009) are both assistant professors in special education. They compiled a literature review to explicate successful ways of supporting students with ASD in inclusive settings:

Because children with ASD often have a variety of professionals working with them, it is necessary to include individuals such as special education teachers, speech/language pathologists, occupational therapists, psychologists, and behavioral analysts, as well as parents, in the problem-solving process in order to provide general education teachers with the necessary supports to address the challenges that may arise. (Leach et al., 2009, p.36)

Parents of a student with ASD play a vital role in working with the general education teacher to share effective strategies that can be adapted beyond the classroom walls. Both parents and school administration need to work together to meet the needs of the child and to ensure strategies and practices are in unison between the home and school environment (Leach et al., 2009).

The *Autism Spectrum Disorder Inclusion Model* has been established by Simpson et al. (2003) to help general education teachers achieve successful inclusion when integrating students with ASD alongside their typically-developing peers. The five major components of this model include modifications to the environment and teaching instructions, support, social support, coordinated team dedication, consistent evaluation of inclusion practices, and home-school collaboration (Simpson et al., 2003). Due to the complexity of the disorder, team collaboration, and support are essential. When school professionals, staff, and parents abide by this model, it positively impacts the educational outcomes of students with ASD and assists general education teachers in developing a higher level of acceptance within the classroom (Simpson et al., 2003). “Collaborative consultation is the most efficient and effective means of supporting general education teachers working with students with ASD, and preparing them to generalize and sustain problem-solving programs learned in collaborative consultative relationships” (Simpson et al., 2003, p.119). Correspondingly, Vakil et al. (2009) highlighted that collaboration transforms the dynamics of teaching by alleviating stress on the teacher to perform alone and sharing responsibilities such as planning, instruction, making decisions, finding solutions, classroom management, and assessment of student learning. General education teachers have claimed that if they do not receive the necessary support from qualified

professionals then they are unable to achieve successful inclusion and adopt effective teaching strategies (Simpson et al., 2003). It has also been argued through other researchers that the combination of expertise from special education teachers, parents, teachers, and school staff can prove to maximize success for students with ASD (Hart et al., 2011). Once a plan has been created and implemented by every individual that interacts with the student on a daily basis, it can prove to be successful for the student with ASD (Hart et al., 2011).

2.3 Teaching Strategies

Hart et al. (2011) claimed that the success of students with ASD in inclusive classrooms is influenced by the evidence-based strategies that teachers execute. The study of Dunst, Trivett, and Cutspec (as cited in Vakil et al., 2009) discussed the meaning of evidence-based strategies as those “that are informed by research, in which the characteristics and consequences of environmental variables are empirically established and the relationship directly informs what a practitioner can do to produce a desired outcome” (p.323). Hart et al. (2011) stressed the importance of teachers being exposed to an array of teaching strategies that have been informed by research; it is then up to the teacher to make careful judgments on what strategy can be implemented based on the student’s unique learning style and levels of difficulty. These strategies must reflect student strengths, knowledge of their characteristics, meaningful participation, and social communication (Hart et al., 2011).

2.3.1 Social Inclusion

Priming is a beneficial technique that can be used by general education teachers to promote social communication among students with ASD in inclusive classrooms.

Priming involves exposing the material to the student with ASD prior to the teacher delivering it to the whole class and the student engaging with the material (Harrower & Dunlap, 2001). Harrower et al. (2001) have comprised a literature review of evidence-based strategies that have been proven to be successful when promoting the inclusion of students with ASD in inclusive classrooms. Their literature review provides an abundance of successful intervention strategies and one may argue that one or more of the options could be utilized to foster inclusion and success of students with ASD. However, more research is needed to examine the various levels of functioning for students with ASD while particularly focusing on differences in intellectual and behavioural functioning (Dooley et al., 2001; Harrower et al., 2001). This will help to provide students with ASD more advanced opportunities in inclusive classrooms (Harrower et al., 2001). An example of priming as discussed by Harrower et al. (2001) involves reading a story to the student with ASD prior to reading the same story to the class. Priming is imperative in fostering an inclusive classroom, as it links individual instruction to whole-group instruction (Harrower et al., 2001). Zanolli, Daggett and Adams (1996) have conducted a quantitative research study that extended previous literature on the effectiveness of priming on students with ASD. Their results concluded that priming can increase social skills for students with ASD, as they can be taught to successfully initiate conversations with their typically-developing peers along with minimal teacher support in inclusive classrooms.

Peer tutoring involves training typically-developing peers to interact with students who lie on the ASD Continuum (Harrower et al., 2001). This strategy has also been proven to enhance social communication skills among students with ASD in

inclusive classrooms. To initiate peer tutoring, the general education teacher would assign each student with a partner. Dupaul and Eckert's study (as cited in Harrower et al., 2001) claimed that one student would provide their partner with feedback, support, and instruction during work experiences. This strategy has been shown to be effective in promoting social skills and interactions among students with ASD (Banda, Hart, Liu-Gitz, 2010; Harrower et al., 2001; Simpson et al., 2003). Banda et al. (2010) successfully extended previous literature on social skills training by verifying how direct instruction and peer training can be utilized together in inclusive classrooms, particularly during academic activities. Additionally, they have added their own research through the implementation of social skills training during academic activities rather than previous research that was geared towards play center activities (Banda et al., 2010). However, the results should be utilized as a starting point until the study has been replicated and further evidence has been established (Banda et al., 2010). The study of Hundert and Haughton (1992) concluded that increased social interaction took place once peer tutoring was in effect but it was not sustained or transferred overtime in other settings; therefore, one cannot generalize the results to extended periods of time and in various other settings.

Peer Support involves the student with ASD to be paired with a typically-developing student for the sole purpose of improving social interaction skills. Odom and Strain's study (as cited in Harrower et al., 2001) have found that peer support produced an increase in verbal skills and initiations of conversations when the teacher prompted social interaction between the student with ASD and typically-developing peers. Correspondingly, the results from a quantitative study conducted by Laushey and Heflin (2000) argued that training typically-developing peers to support their peers with ASD in

an inclusive classroom results in an increase of social skills among students with ASD. This study contributes to previous research by extending the training and support from peers to all students in the class rather than a selected number of students (Laushey et al., 2000). This maximizes the opportunities for the student with ASD to engage in universal practices of social behaviours (Laushey et al., 2000).

Cooperative learning refers to a small group of students with different levels of abilities working together to solve a problem or accomplish a learning goal (Dugan, Kamps & Leonard, 1995). Kamps, Leonard and Potucek (1992) have conducted a reversal design study in two classrooms to determine the effects of cooperative learning groups for students with ASD in inclusive classrooms. The results gained from the two experiments and teacher comments were favourable for students with ASD, as there was an increase in their social interaction skills and ability to work in groups (Kamps et al., 1992). The students with ASD spent more time interacting and it helped to increase the awareness of students and peers to one another (Kamps et al., 1992). The findings of Kamps et al. (1992) further support other research on the effects of cooperative learning groups for students with ASD (Dugan et al., 1995; Hart et al., 2011). These findings have a sharp correspondence to a quantitative study conducted by Dugan et al. (1995), which claimed that cooperative learning can increase learning, social skills, and engagement of students with ASD. Thus, cooperative learning can be utilized as a strategy to not only increase social skills for students with ASD but to promote and foster an inclusive environment. The findings derived from the study of Dugan et al. (1995) extends previous literature on the same topic by demonstrating that increased learning takes place for all students including those with ASD through cooperative learning groups rather than

through teacher lectures or whole-class discussions. Hart et al. (2011) further elaborated this point by highlighting that cooperative learning can help to enhance independence and initiations for students with ASD. This area of research is controversial, as most researchers agree that more studies are needed to establish the value and conclusiveness of cooperative learning groups (Dugan et al., 1995).

2.3.2 Behavioural Strategies

Visual Timetables are a series of pictures that show a student what is happening throughout the day or what activity is approaching. This strategy gives the opportunity for a student with ASD to anticipate change in the environment and helps the teacher to use minimal prompts throughout the day. I have witnessed a student with ASD who used a visual timetable in an inclusive classroom. The student would exhibit defiant behaviour during transitions of daily events before the visual support was introduced. However, once the visual support was introduced and used with teacher support, the student quickly conceptualized it. Overtime, teacher prompts were minimized and the student would independently walk to the schedule himself and verbally initiate the next event. Consequently, there was a drastic decrease in challenging behaviour in combination with other strategies that were being utilized in the classroom.

Multiple studies have investigated the effectiveness of visual timetables with different levels of guidance for students with ASD (Bryan & Gast, 2000; Dooley, Wilczenski & Torem, 2001; Humphrey, 2008; Macduff, Krantz & McInahan, 1993). The results indicated that students with varying levels of ASD quickly learned and understood the visual timetable with support that was later diminished (Bryan et al., 2000; Macduff et al., 1993). The participants with ASD were staying on-task and on-

schedule with minimal teacher prompts, displayed a decrease in defiant behaviour and benefited students in understanding social cues and regulating their emotions (Bryan et al., 2000; Dooley et al., 2001; Macduff et al., 1993). The study of Macduff et al. (1993) extended previous literature by measuring and specifying visual prompts. Dooley et al. (2001) argues that there is a need to fill the gap between our understanding of the different learning styles of children who have minimal social skills and educational or behavioural interventions. Humphrey (2008) compiled a literature review of recent evidence-based strategies to promote successful inclusion of students with ASD in inclusive classrooms. Humphrey (2008) discussed the benefits of visual schedules for students with ASD, as it makes them feel more comfortable and experience less anxiety in the school environment because they know in advance what events will be occurring. Additionally, it promotes competence in young students with ASD and helps them to get familiar with the daily routine (Bryan et al., 2000; Dooley et al., 2001).

2.3.3 Instructional Approaches and Differentiated Learning

Students with ASD who are working in an inclusive classroom are exposed to a balanced and broad curriculum. Given the characteristics of students with ASD, teachers may find it challenging to adapt the curriculum to suit their needs (Humphrey, 2008). However, these challenges can be overcome to ensure that students with ASD achieve educational success like everyone else (Humphrey, 2008). Humphrey (2008) illustrates prominent subjects that are taught world-wide and discusses the difficulties students with ASD may experience and the strategies to help them succeed.

Learning science through direct observation and hands-on experiences can prove to be beneficial for students with ASD, as they tend to learn better through visual support

systems (Humphrey, 2008). In contrast, learning scientific concepts that cannot be done through experiments or direct observation can be challenging to understand for students with ASD; therefore, teachers can make adaptations by providing concrete examples to help students with ASD understand the concept through a visual tool (Humphrey, 2008). Mathematics can be taught by making similar adaptations by providing students with ASD the opportunity to work with manipulatives in order to solve equations (Humphrey, 2008).

General education teachers need to be cautious when reading a story to the whole class. If teachers do not provide appropriate accommodations then students with ASD may become excluded and disengaged, as they are unable to sit and listen for a lengthy period of time (Chandler-Olcott & Kluth, 2009). Therefore, teachers can make accommodations by giving students with ASD a notebook to write key ideas or draw pictures that pertain to the story, as they are listening (Chandler-Olcott et al., 2009). Teachers can also provide cards that include images that pertain to the book and the student can lift up the card according to the page that is being read (Chandler-Olcott et al., 2009). Additionally, teachers can provide a tactile seat in order to give the student the opportunity to sit quietly for a longer period of time (Chandler-Olcott et al., 2009). Writing can also be accommodated to help students with ASD; Chandler-Olcott et al. (2009) stated that teachers can offer other writing tools such as letter or word magnets, markers, pencil grips, and various writing surfaces, or a peer scribe can be assigned to write down their ideas if they have difficulty writing.

In order to keep the student with ASD engaged in learning experiences, it is beneficial for general education teachers to use differentiated learning approaches.

Multiple studies and literature reviews have been created in order to explicate the effectiveness of differentiated instruction and learning on students with ASD (Anderson, 2007; Chandler-Olcott et al., 2009; Leach et al., 2009). Differentiated instruction and learning is crucial in maximizing the capabilities of all students and helps to keep students with ASD engaged during lessons (Anderson, 2007; Chandler-Olcott et al., 2009; Leach et al., 2009). For instance, teachers should alternate between whole-group learning, small-group learning, peer teaching, cooperative learning, hands-on learning, and technology integration throughout the day in order to provide flexibility in meeting the needs of all students (Anderson, 2007; Chandler-Olcott et al., 2009; Leach et al., 2009). This will prevent the student with ASD from disengaging and participating in learning experiences (Anderson, 2007; Chandler-Olcott et al., 2009; Leach et al., 2009). To illustrate an example of this concept, the teacher may choose to teach literacy as a whole-class lesson and teach mathematics in small-groups.

Anderson (2007) has referenced an abundance of research to emphasize the importance of differentiation on learner achievement. Anderson (2007) discussed the importance of general education teachers using differentiated assessment procedures to determine what the student knows. This can be beneficial for students with ASD, as it gives them the opportunity to present what they know through oral presentations, drawing pictures, creating models, role-playing, or written responses (Anderson, 2007). It is crucial for teachers to understand the students' strengths and base their assessments on those particular strengths (Anderson, 2007).

Throughout my experiences of working with students with some form of ASD in inclusive classrooms, I witnessed the benefits of meeting the students' needs by

providing visual supports and manipulatives to provide hands-on learning opportunities. Students with ASD were able to grasp the concepts easier and learn in a way that was engaging. I witnessed a verbal student with ASD, who was able to share his ideas while the teacher scribed. Additionally, I was able to witness a teacher write down the student's ideas and the student would copy their ideas onto their own worksheet. This would help the student with ASD to write more efficiently. Through my experiences, I was able to observe students with ASD work in small groups while their typically-developing peers would help them through the process. Additionally, I have provided tactile seats that were beneficial for students with ASD, as it allowed them to stay on the carpet for a lengthier period of time while causing minimal distractions for other students. Lastly, I have witnessed the infusion of technology during learning, which helped the student with ASD become actively engaged. Ultimately, these modifications and accommodations have helped to alleviate teacher support, increase student participation, and foster inclusion.

2.4 Gaps in the Literature

Although there has been extensive research regarding the inclusion of students with ASD in inclusive classrooms, there are still gaps in the literature that need to be bridged in future studies. Firstly, the characteristics of ASD are very broad and there needs to be more of an understanding on how to include students with ASD with varying levels of difficulties (Dooley et al., 2001; Harrower et al., 2001). My study will assist in bridging this gap, as the participants involved in the study have experienced including a non-verbal and behavioural student with ASD in an inclusive classroom. Secondly, more research is needed to address the characteristics of an effective inclusive school and how parents and staff could be included in the process of creating an inclusive school (Eldar et

al., 2010). Through continued research on general education teachers that receive adequate training, support, and resources, it will help others to understand that inclusive schools could benefit students with ASD both socially and academically. The participants involved in my study receive adequate support from staff and resources to assist them in the inclusion process. This will assist in bridging the gap in the literature. My study will take a qualitative approach in understanding general education teachers' views on inclusive practices, which could prove to be helpful to research on this topic, as it offers a personal approach to collect data rather than other studies that collected data through checklists and monthly reports. Lastly, more research is needed to confirm whether or not teacher characteristics such as support, resources, and training correlate to having a positive attitude regarding the inclusion of students with ASD in inclusive classrooms (Wilkerson, 2012). My study will aim to determine how teachers feel about the inclusion of students with ASD in inclusive classrooms and examine the factors that determine their attitude. It is also important to determine more teaching strategies that can be used in an inclusive classroom in order to help general education teachers have access to a wide-range of strategies that can be chosen based on the needs and characteristics of the student with ASD (Hart et al., 2011).

2.5 Conclusion

Teachers need to be aware about the various strategies and resources that are at their disposal to help them support students with ASD in inclusive classrooms. Although some strategies may not be effective given the varying levels of difficulties students with ASD experience, more studies will be conducted to extend the number of effective strategies in the literature base. More strategies, inclusion, and successful collaboration

are the ingredients in ensuring successful learning outcomes for students with ASD in inclusive classrooms.

The present study explores how teachers in Ontario are including students with ASD in elementary inclusive classrooms. This study provides further insight into the types of challenges and barriers that Ontario teachers are facing when trying to include students with ASD in inclusive classrooms. Moreover, it provides effective strategies that can be utilized in the classroom to foster inclusion and further support students with ASD. This study examines an in-depth analysis of the feelings of general education teachers towards inclusion and the types of support systems that are needed to ensure educational success and successful inclusion of students with ASD in inclusive classrooms. Chapter 3 provides insights on the methodology of this study, including information about the participants and data collection and analysis.

Chapter 3: Research Methodology

3.0 Introduction

This research study was conducted in order to determine the strategies teachers are using in inclusive classrooms to accommodate and support students with Autism Spectrum Disorder (ASD). This qualitative research has been conducted by collecting and reviewing literature in the field and by carrying out face-to-face interviews with two exemplary teachers. The data has been transcribed and coded according to themes that emerged in the data and in the existing literature on inclusion. Throughout this chapter, I will discuss the research approach and procedures, instruments of data collection, participants, sampling criteria and recruitment, data analysis, ethical review procedures, and the limitations/strengths of the study.

3.1 Research Approach & Procedures

Qualitative case study is an approach to research that assists in the investigation of a phenomenon within its context using different sources of data (Baxter & Jack, 2008). This ensures that the research question is not being explored through one perspective, but rather a variety of perspectives to ensure multiple aspects of the research topic are explained and understood (Baxter & Jack, 2008). The main duty of the researcher is to collect the data and interpret the information to discover patterns and themes (Hancock & Algozzine, 2006).

Given my research purpose and the questions that I have, a qualitative approach is suitable for this study, as my goal is to gain an in-depth understanding of the situation under investigation from the viewpoints of the participants' rather than my own. From this kind of approach, I can anticipate to receive a rich database of information that can

be beneficial to add to the existing literature on the inclusion of students with ASD in inclusive classrooms. A qualitative approach has been adopted in this study, as it provided extensive information that has been analyzed to adequately represent the area being researched. A qualitative research study encapsulates the "...[V]oices of participants, the reflexivity of the researcher, a complex description and interpretation of the problem, and its contribution to the literature or a call for change" (Creswell, 2013, p.44).

3.2 Instruments of Data Collection

Given the parameters that are given for the Master of Teaching Research Paper (MTRP), the primary instrument for data collection used in this study is the semi-structured interview protocol, as it suited a case study approach. These interviews will be fairly informal, focused, and fairly short. Through a semi-structured interview approach, the researcher attains personalized and rich information from participants (Hancock & Algozzine, 2006). Once the participants were identified and agreed to be apart of the interview process, I created an interview protocol. The interview protocol is comprised of a series of open-ended questions that was asked by me to both participants. The first set of interview questions were about the participant, as I discovered their backgrounds in the educational sector and made them feel comfortable simultaneously. Following this, the rest of the questions were designed to gain insights into the study's fundamental research questions. Some example interview questions are as follows (Appendix B): Describe how you learned how to accommodate learning needs of students with ASD? What types of challenges have you experienced when working with students with ASD in an inclusive

classroom? What effective strategies have you used to foster inclusion and educational success for students with ASD?

When researchers adopt a semi-structured approach to interview participants, the questions are predetermined and flexibly worded to illicit answers that are tentative in nature (Hancock & Algozzine, 2006). Furthermore, semi-structured interviews involve the researcher asking follow-up questions that are designed to delve deeper in issues of interest to the participant (Hancock & Algozzine, 2006). “In this manner, semi-structured interviews invite interviewees to express themselves openly and freely and to define the world from their own perspectives” avoiding an analysis that emerges “solely from the perspective of the researcher” (Hancock & Algozzine, 2006, p.40). Given my research purpose and questions, the semi-structured interview protocol is suitable for this study, as categories and themes emerged from the participants’ responses. This is as an integral component of my evolving research process, as it is receptive to emerging insights of strategies utilized by teachers to include students with ASD in inclusive classrooms.

3.3 Participants

In this section, I established the sampling criteria and a range of possible avenues for teacher recruitment. Additionally, I have included a section where I will introduce each of the participants. The two participants in this research study were selected from the York Region District School Board (YRDSB) and York Catholic District School Board (YCDSB) and have experience teaching identified students with ASD in inclusive classrooms. The goal of the semi-structured interview process was to identify strategies teachers are using in the classroom in order to accommodate students with ASD

effectively. In addition, the participants emphasized the challenges, resources, benefits, and support systems that are needed to ensure educational success for students with ASD.

3.3.1 Sampling Criteria

The participants in this study were selected based on the following criteria:

Criteria 1:

Participants must practice inclusion and be ‘TRIBES’ trained. The TRIBES program involves various steps, as it is a learning process to achieve specific learning goals regarding academic material and self-responsive behaviour (TRIBES Learning Community, 2015). Through TRIBES, teachers utilize various methods of brain compatible learning along with multiple intelligences, cooperative learning, and social development research (TRIBES Learning Community, 2015). The rationale behind this specification is to ensure that teachers are using a variety of inclusion strategies to integrate students with ASD effectively while helping them to achieve educational success.

Criteria 2:

Participants must have over 5 years of teaching experience. The rationale behind this specification is to ensure that participants have a wealth of experience to share in the interviews in regards to various inclusion strategies and the challenges they have faced throughout these teaching experiences. This specification is valuable towards my research study, as inclusion strategies and other insights gained will not be limited.

Criteria 3:

Participants must have experience in teaching students with ASD in inclusive classrooms. The rationale behind this specification is to inform my research purpose and

questions, as it is critical for participants to have taught students with ASD in an inclusive classroom. This specification is valuable for the study I am conducting, as it encapsulates the basis of my research study through the investigation of inclusion strategies, resources, and support systems that are currently being utilized. Additionally, this will provide insights into the challenges, barriers, and significance of utilizing inclusion strategies effectively for students with ASD. As a result, these strategies may help these students attain educational success and add to the existing literature on the inclusion of students with ASD in inclusive classrooms.

3.3.2 Participant Recruitment

The researcher's duty is to select participants who have the knowledge and experience the researcher needs and the ability to reflect and articulate these experiences in an interview (Denzin & Lincoln, 1994). When researchers use the above criteria, they are using primary selection of participants (Denzin & Lincoln, 1994). Secondary selection occurs when researchers cannot meet the primary sampling criteria and thus recruits participants in other ways, such as through advertising (Denzin & Lincoln, 1994).

There are various forms of purposive sampling strategies and qualitative researchers must think purposively and theoretically which sampling procedure is best suitable to obtain their data (Denzin & Lincoln, 1994). "Sampling choices within and across cases are powerfully determinative of just which data will be considered and used in analysis" (Denzin & Lincoln, 1994, p.441). Extreme or deviant sampling is used when the researcher has intentions on selecting participants who exemplify characteristics of interest, as these factors pertain to the research purpose or question (Denzin & Lincoln,

1994). On the other hand, intensity sampling is chosen with the researcher selects participants who have experienced the research topic and are experts about those particular experiences (Denzin & Lincoln, 1994). Criterion sampling is suitable to obtain data when all participants studied have experienced the situation and have met the criteria listed to ensure quality (Creswell, 2013). Furthermore, convenient sampling is when the researcher chooses participants that are convenient to study, as they are available and have a story to tell (Creswell, 2013). Lastly, maximum variety sampling is when the researcher selects participants who had different experiences and analyzes the experiences of each participant to determine commonalities (Denzin & Lincoln, 1994). This is utilized by researchers when investigating theoretical concepts (Denzin & Lincoln, 1994). Interestingly, researchers may choose more than one sampling strategy in a single study (Creswell, 2013).

In this research study, I have used convenience sampling and criterion sampling with both participants, as they have experienced the phenomenon of the research study, have stories to tell, met the criteria listed, and were convenient to study. Although both participants were convenient to study, they have consented to be interviewed and provided insightful information about the inclusion of students with ASD in inclusive classrooms.

To recruit participants I have contacted previous placement teachers. I have provided information about the study to both participants, as it will help to ensure that teachers are volunteering to participate in the interview rather than feeling pressured. James was my Associate Teacher during my first practicum in the Master of Teaching program. As a teacher candidate, I was able to witness his work with in an inclusive

classroom with a student identified with ASD and felt that he would be able to draw upon his vast experience. Marisa was my Associate Teacher during my second practicum, which allowed me to witness her work with an identified student with ASD in an inclusive classroom. Furthermore, she was able to draw upon her wealth of experiences.

3.3.3 Participants Biographies

Marisa is a TRIBES-trained primary/junior teacher in her twelfth year of teaching. Currently, her permanent position is in the York Catholic District School Board (YCSDB). She received her teaching certificate from D'Youville College in Buffalo, New York. She has taught students in Grades 3 to 6 and most frequently taught in Grade 6. Throughout her twelve years of teaching, she has experienced teaching approximately 20 students with ASD in an inclusive classroom. Marisa has learned to accommodate the learning needs of students with ASD through reading materials, talking with board consultants/school staff, taking Additional Qualification courses in special education, websites, and the internet. Through these elements of expanding her knowledge, she has learned that all students with ASD are not alike and they are very different. Strategies that work for one student may not work for another student with ASD. She was able to learn about different strategies and implement specific strategies according to the needs of each student. Both teachers readily agreed to be participants in my study.

James is a TRIBES-trained primary teacher in his seventh year of teaching. He has taught in Grades 1 and 2 and most frequently taught in Grade 1. Currently, his permanent position is in the York Region District School Board (YRDSB). Throughout his seven years of teaching, he has experienced teaching approximately 10 students with ASD in an inclusive classroom. He has learned how to accommodate students with ASD

through his initial teacher education program at the Ontario Institute for Studies in Education (OISE) and through taking an Additional Qualification course in special education upon graduating. Furthermore, he has expanded his knowledge by learning within the context of the school and speaking directly with special education resource teachers (SERT).

3.4 Data Analysis (Coding and Transcribing)

Currently, there is a plethora of research about strategies to accommodate students with ASD successfully in inclusive classrooms. Initially, I conducted a literature review and continued to analyze the research throughout this study by organizing the data into themes that were reoccurring and drawing similarities and differences. Following this, the primary means of data collection was done by conducting two face-to-face interviews with teachers who have experienced or currently teaching students with ASD in an inclusive classroom. Each interview was comprised of 20 semi-structured interview questions to draw upon the participants' experiences of teaching students with ASD, their teacher education experience, resources, support systems, challenges, and inclusion strategies they utilize within the classroom. Both participants were asked the same questions. The interviews were conducted at a time and location that was suitable for both participants.

Each interview was approximately 40 minutes in length and audio recorded to facilitate transcription of the data. Analysis of the data was initiated when I read the transcripts several times to establish themes and patterns. The central themes that emerged from the data address the knowledge of ASD from teachers' perspectives, effective classroom strategies and resources to ensure meaningful learning experiences,

the importance of collaboration and support systems, and the challenges that arise when fostering inclusion for students with ASD. The data was analyzed by highlighting parts of the transcripts that pertained to the questions. Each question was assigned its own colour and the corresponding data was highlighted using the same colour. Following this, the data was analyzed to see if the colour codes were present in both transcripts and looked over to ensure it pertained to the research questions. The data was then grouped and assigned theme names.

When data is being analyzed through the process of coding and transcribing, the researcher must extract meaning from the data and organize the research findings. Given my research questions, the themes that emerged were: (a) teacher beliefs/attitudes; (b) teacher strategies; (c) resources; (d) benefits and challenges of Inclusion; (e) support systems; (f) teacher challenges; (g) advice to teachers entering the field of education. The data under each theme was then coded using one colour according to similar responses shared by both participants. On the other hand, responses that were different based on the same set of questions were coded with a different colour and placed under the same general theme.

3.5 Ethical Review Procedures

This study followed the ethical review approval procedures for the Master of Teaching program. It is critical for a qualitative case study researcher to follow all ethical review procedures regarding research participants (Hancock & Algozzine, 2006). Researchers are required to minimize risks and to inform participants about risks that maybe involved (Hancock & Algozzine, 2006). Firstly, participants that are being interviewed must provide informed consent to participate in the research study and are

given anonymity and confidentiality (Hancock & Algozzine, 2006). These participants have the right to withdrawal at anytime and should be talked too after the interview to ensure that no mental, physical, or psychological injury has occurred (Hancock & Algozzine, 2006).

Prior to the interview, research participants were provided with letters of informed consent (Appendix A) in which they were required to read and sign if they agreed to participate in the audio recorded interview. The consent letter provides an overview of the study, addresses ethical implications, and specifies expectations of participation. For instance, the letter contains information about what is expected in terms of one interview that will last up to 40 minutes in duration. One copy of the consent letter was provided to the participant, and the second copy was kept for the records of this study. Additionally, the research participants were also provided with information regarding the nature of confidentiality in an effort to ensure their comfort and willingness to partake in the interview process. The contents of this interview have been used for my assignment, which includes a final paper, as well as informal presentations to my classmates and at a conference/publication.

Before beginning each interview, I reviewed my research topic with the Marisand reminded them that if they did not feel comfortable commenting on a certain question, they could refrain from doing so or withdraw from the study without a consequence. I will minimize this risk by sending the interview questions ahead of time and reassuring them that throughout the interview and in the consent letter that they have the right to withdrawal from participation. Additionally, I mentioned that they have the option to review or revise their answers or change their mind about the use of their data at any

point in the research process. Participants have reviewed the transcripts in order to review the authenticity of their answers thus validating the data. As Densin & Lincoln (1994) explain, “Validity in qualitative research has to do with description and explanation, and whether or not the given explanation fits a given description” (p.216). In order to ensure confidentiality and keep the anonymity of the participants in the written work, oral presentations, or publications, the use of pseudonyms were used for individuals and institutions. In the consent letter, participants were also made aware of confidentiality regarding all data, in other words the audio recordings, that have been stored on my password protected computer, laptop, and phone and will be destroyed after 5 years. Lastly, the participants were notified once the research study was complete and given a copy upon their request.

3.6 Methodological Limitations and Strengths

This MTRP provides an opportunity to expand my developing pedagogy on the successful inclusion of students with ASD in inclusive classrooms; however, there are some limitations in regards to this research process that need to be addressed. This study was only limited to a single data collection method, which was semi-structured interviews. This limitation hindered my study by preventing me to utilize other methods of collecting data such as observations. Observations would have enriched my research by developing a holistic understanding of the phenomena under study and increasing the validity by seeing if the participant responses correlated to their practice. Additionally, new information could have been discovered, as observations allow for richly detailed descriptions of students and teachers in their natural environment.

In selecting two participants, the sample size was small due to other requirements of the program that needed to be fulfilled such as course work and field experiences. Due to the small sample size, results cannot be generalized. In addition, given the ethical parameters provided to complete my research study, I can only interview teachers. It was not possible to conduct surveys and interview other participants such as parents or students. This parameter limited the choice of participants that were studied.

In terms of some of the strengths, I chose to speak about the significance of selecting teachers as participants. The information provided by both participants was valuable to the existing literature, as it helped to solidify some of the results from other researchers in the field. Moreover, the participants' were able to speak about their own experiences and have the opportunity to reflect on their own practices. The answers obtained from the interviews provided rich information from the lived experiences of the participants. As a result, this helped to validate the data and establish credibility by creating a connection between existing literature and my research purpose. Although there is a grand literature base on this topic, it will continue to be further researched and the data will continue to evolve both theoretically and practically.

3.7 Conclusion

The focus of this chapter detailed a qualitative research study that encompassed a semi-structured interview protocol with two participants who are exemplary teachers and have met the criteria outlined. This chapter emphasized how the data has been gathered and analyzed. The qualitative sampling procedures used were discussed along with a rationale for utilizing those procedures. Additionally, ethical review procedures and the

study's limitations and strengths were addressed. Next in Chapter 4, the research findings are discussed.

Chapter 4: Research Findings

4.0 Introduction

The following research findings were gathered and analyzed from two semi-structured interviews conducted in October 2015. Both participants were full time teachers with experience teaching students with Autism Spectrum Disorder (ASD) in inclusive classrooms. The responses of Marisa and B are presented by discussing the overarching themes that emerged from the one-on-one interviews. The themes that emerged through data analysis will be presented in this chapter, as they reflect how teachers are including students with ASD in their classrooms. The seven themes that emerged are: (a) teacher beliefs/attitudes; (b) teacher strategies; (c) resources; (d) benefits and challenges of inclusion; (e) support systems; (f) teacher challenges; (g) advice to teachers entering the field of education. This chapter provides insights into how teachers successfully include students with ASD in their classrooms and the benefits and challenges that arise.

4.1 Teacher Beliefs/Attitudes

This section discusses the beliefs and attitudes of some teachers including both participants regarding the inclusion of students with ASD in the classroom. Both rated the importance of students with ASD being educated in an inclusive classroom on a scale from 1 to 10. 1 signified it was the least important and 10 signified that it was very important. Marisa rated the importance of students with ASD being educated in an inclusive classroom an 8 out of 10. She stated that if the student with ASD was high functioning then it was a lot easier, as the student is capable of completing the academic components but have behavioural issues that can be easily accommodated.

On the other hand, if a student with ASD is non-verbal, it is more challenging to keep them in a classroom. Correspondingly, it has been argued by multiple researchers that the severity of the disorder influenced the attitude of teachers regarding the inclusion of students with ASD in inclusive classrooms (Lindsay et al., 2013; Segall et al., 2012; Smith & Smith, 2000; Wilkerson, 2012). However, Marisa discussed the benefits by stating that it is beneficial for them to be integrated in an inclusive classroom, as they are encouraged to socialize and interact with their peers. Similarly, James rated it a 10, as he claimed that it “helps them academically through scaffolding and even socially, as they are encouraged to interact with their peers on a daily basis.” Marisa stated, “An ASD student should be with their peers. They just learn differently and because we have differentiated instruction we should be able to accommodate those learning differences.” This statement highlights the value of differentiated instruction for students with ASD. Through her experiences of including students with ASD in her classroom, she has come to realize that they are very special children and they have given her the biggest reward, as she witnessed them progress to new levels of success. She further explains, “I’ve learned a lot about my teaching strategies and they’ve built up my patience. It also taught me how to teach better not just ASD students but everyone. I find my biggest reward working with my ASD students.”

Both participants commented about the overall attitudes of other teachers regarding the inclusion of students with ASD in an inclusive classroom. Marisa claimed that other teachers generally have accepting attitudes, realizing that students with ASD are merely students who learn differently. As such, these teachers acknowledge their own role in using differentiation and accommodation to better meet such students’ needs. This

statement directly aligns with the results from various quantitative research studies. Many researchers have found that general education teachers held positive attitudes regarding the inclusion of students with ASD in inclusive classrooms (Segall & Campbell, 2012; McGregor & Campbell, 2001; Wilkerson, 2012). On the contrary, James claimed that the overall attitudes of other teachers is “scared and reluctant,” as they do not know what they are getting into. This is significant, as research suggested that attitudes were affected based on specific elements such as experience and training, knowledge of ASD, and awareness of effective classroom strategies (Segall et al., 2012; McGregor et al., 2001; Wilkerson, 2012). However, he further explained that every classroom has a lot of needs and one is bound to get a student with special needs. Both participants readily agreed that teachers should not see it as a challenge but instead as an opportunity to teach some students in different ways to better meet their needs.

Through the research findings of this study, one may argue that having low-functioning non-verbal students with ASD integrated in inclusive classrooms may alter their perception regarding acceptance of inclusion. Additionally, given James’s insights of other teachers feeling “scared and reluctant,” one may argue that these teachers may not be trained or have had previous experience teaching students with ASD in inclusive classrooms. Based on the data that has been analyzed, it is vital for teachers to understand differentiated instruction and how students learn most effectively. Following this, teachers should have an abundance of strategies to implement, as this may result in a more accepting attitude towards inclusion of students with ASD.

4.2 Teacher Strategies

This section highlights effective strategies that both participants utilize in order to support students with ASD in inclusive classrooms. Within this section, I will describe strategies suggested by the participants, which include peer-support, scribing, hands-on learning, cooperative learning, visual schedules, TEACCH bins, technology, strategies to build behaviour and social skills, physical adaptations, and TRIBES strategies.

Marisa and B highlighted the importance of really getting to know each student in the classroom and not just the student with ASD in order to determine what effective strategies can be implemented to help students with ASD achieve success.

Correspondingly, Hart and their colleagues (2011) highlighted that strategies must reflect student strengths, knowledge of their characteristics, meaningful participation, and social communication. Marisa claimed that how she differentiated for the student with ASD was dependent on the student and how he or she learns most effectively. She further explicated, “If he was a visual learner, well, then I had to make sure that everything I did was either on the board or hands-on activities where he could physically see what he was doing.” Moreover, “If he learned best by moving around, well, then I created activities that allowed him to move and learn.” Correspondingly, James stated, “Varying instructional strategies is key to adapting to the needs of students with ASD and all the students, as each student learns differently.” Likewise, researchers suggest that it is imperative for teachers to make careful judgments on what strategy can be implemented based on the student’s unique learning style and levels of difficulty (e.g., Hart et al., 2011).

Marisa discussed the importance of one-on-one direction and giving the student with ASD a pre-amble to the expectation that you are going to teach, as this will give them an idea of what to expect. This is a strategy called *priming*, as suggested by researchers. Harrower and their colleagues (2001) and Zonolli and their colleagues (2006) have discussed the value of priming in fostering an inclusive classroom, as it links individual instruction to whole-group instruction and can increase social skills for students with ASD, as they can be taught to successfully initiate conversations with their typically-developing peers along with minimal teacher support in inclusive classrooms. Marisa highlighted the value in providing accommodating activities that are geared toward the learner's interests, as such activities help to propel the learning outcomes of students with ASD. According to research, this can be beneficial for students with ASD, as it gives them the opportunity to present what they know based on their strengths and what they enjoy doing (Anderson, 2007).

Through the research findings, one may understand that in order to help propel students with ASD to success, it is imperative for teachers to gain an in-depth understanding of the student as a whole and determine student interests and how the student learns most effectively. Given this information, teachers should implement several strategies to pinpoint what strategies most effectively meet the learning needs of the student.

Peer-Support

Marisa highlighted the value in implementing peer-support for students with ASD, as it helps them to control their emotions during a meltdown. The peer is able to help the student cope in moments of frustration. She further explained, "Peers offer

support, encouragement, and opportunities to learn that interaction and how to deal with other people.” Furthermore, she claimed that peers also benefit from supporting students with ASD, as it gives them the opportunity to help and interact with the student, while retaining the information that everyone just learned. Ultimately, it motivates students with ASD to complete their work, as they gain the confidence through the help of their peers. She further discussed the importance of peer-support, as it helps to improve social skills for students with ASD, as they are more encouraged to interact with their peer by making eye-contact and talking to them. Similarly, researchers have found that peer-support is effective in promoting social skills and interactions among students with ASD (Banda, Hart, Liu-Gitz, 2010; Harrower et al., 2001; Simpson et al., 2003). Marisa claimed that assigning a peer to help a student with ASD helped to alleviate her workload, as the peer would help the student with ASD write his or her thoughts through scribing or typing.

Likewise, James stated, “This is key to being extra hands for me where it alleviated the need to have a Child and Youth Worker (CYW) for most of the day.” It is interesting to note that Marisa added in other valuable insights by stating, “The key to peer-support for kids with ASD to learn in a classroom setting is that they need to be paired with the right student or students.” She highlighted the importance of choosing a student that can take on the responsibility, bring out the best in the student with ASD, and who is willing to volunteer.

The data gained from this part of the study is valuable to existing literature, as previous research failed to mention how peer-support helps to alleviate the workload of teachers and can help the student behaviourally. Additionally, this data adds to existing

literature, as it highlighted the importance of strategizing when assigning a specific peer to help support a student with ASD. Ultimately, the data garnered reinforces the fact that peer-support helps to increase social skills in students with ASD.

Scribing

Both participants stated that if students with ASD have difficulty writing then they would assign a peer to scribe for the student. If assigning a peer was not an option, then they would choose to scribe for the student. If the student with ASD was assigned a peer-scriber, the peer would ask the student what they want to write down and he/she would write it on their behalf. Marisa further explained that after she scribed for the student, she would look at it and claim that it was missing some important components. The student with ASD would then pinpoint the incorrect punctuation and she would edit it for the student. She claimed that students with ASD who have difficulty writing often have difficulty typing. Consequently, scribing is crucial in order for the student with ASD to produce work. Both participants highlighted that this strategy is valuable for high-functioning ASD students, as they are able to communicate their thoughts in order to get scribed. Researchers also suggested that writing can be accommodated through the use of scribing in order to help students with ASD (Chandler-Olcott et al., 2009). When further analyzing existing literature, researchers have not provided a sufficient amount of information regarding scribing. The data garnered from this section may prove to be beneficial for existing literature, as it provides an overview of scribing in more detail and a rationale as to why it is being used as a strategy.

Hands-on Learning

Both participants claimed that they consistently incorporated concrete materials into learning experiences for students with ASD. They highlighted the value in hands-on learning by claiming it is integral to their learning, as they are able to visually see the concepts being taught and learned. Similarly, Humphrey (2008) suggested that teachers can make adaptations by providing concrete examples to help students with ASD understand the concept through a visual tool. For instance, Marisa explicated, “If I was teaching addition or fractions, I would give them fraction strips or an addition symbol so they could feel it and touch it instead of the words up on the board.” Correspondingly, James claimed that in his classroom, Mathematics is taught in 3-part lessons and he provides hands-on materials for students with ASD to solve equations rather than out of a textbook. Humphrey (2008) has also suggested that Mathematics can be taught by providing students with ASD the opportunity to work with manipulatives in order to solve equations. Both participants claimed to have incorporated experiments when they taught Science in order for the student with ASD and others to gain a visual concept of the learning goal. Marisa highlighted the importance of hands-on learning as being invaluable to their learning, as they are able to “understand the concepts more successfully.” Likewise, Humphrey (2008) has claimed, learning Science through direct observation and hands-on experiences can prove to be beneficial for students with ASD, as they tend to learn better through visual support systems. The findings from this section are validated through existing literature. Consequently, one may conclude that hands-on learning helps students with ASD to gain a better grasp of the material being learned, as it provides a concrete visual depiction of the concept being taught.

Cooperative Learning

Cooperative learning is a valuable strategy to implement for ASD students. According to Marisa, it allows the student with ASD to take ownership of their learning, as they are encouraged to socialize and interact in small groups. She claimed that in a big classroom, students with ASD tend to hide and refrain from participating. On the contrary, when the student is placed in a small group there are average students asking the student with ASD questions. Consequently, he or she is more likely to respond. She further explicated, “Working in small groups helps the student gain more confidence in their abilities and they tend to give more answers and participate more in a welcoming atmosphere. Cooperative learning really brings that out for ASD kids.” Similarly, according to Dugan and their colleagues (1995), cooperative learning can increase learning, social skills, and engagement of students with ASD. Quite the opposite, James claimed, “Cooperative learning groups helped them socially but not to the length that I found it could have. It wasn’t the best strategy, as sometimes they were intimidating to the child.” This statement is significant to note, as it somewhat opposes data garnered from previous literature that claimed cooperative learning groups helps to increase social skills. Also, other researchers did not mention any unconstructive aspects to cooperative learning such as the student feeling intimidated. The data from Marisa and existing literature share a sharp correspondence to one another in retrospect to the data collected from James.

Visual Schedules

Both participants highlighted the importance of using a variety of pictures in combination with words to help students with ASD understand learning concepts more

effectively. Firstly, Marisa discussed that visual schedules with pictures allow the student to internalize what is happening during each period of the day and to understand what to expect. For instance, “A working period would have a picture of a chair and desk on the schedule so they know it is time to do work.” She further explained, “I would have a visual schedule up on the wall, and it would be both pictures and words and then on top of that they had their own visual schedule on their desks.” Both participants discussed the importance of visual schedules to provide students with ASD a lot of “predictability and consistency.” According to both participants, utilizing visual schedules helped the student with the ease of their transitions, as they knew what to expect. Correspondingly, Humphrey (2008) explicated that it makes them feel more comfortable and experience less anxiety in the school environment because they know in advance what events will be occurring. Likewise, James highlighted that “visual schedules help to reduce anxiety for students with ASD, which can diminish challenging behaviours. They can transition independently and gain a better sense of time.” Similarly, Marisa highlighted that visual schedules are imperative for students with ASD, as she claimed in most cases it prevents meltdowns, as students with ASD often have difficulty dealing with transitions. Many researchers have tested the effectiveness of visual schedules for students with ASD. In the same way, researchers have suggested that it promotes competence in young students with ASD and helps them to get familiar with the daily routine (Bryan et al., 2000; Dooley et al., 2001). Multiple research studies have indicated that their participants with ASD who were utilizing a visual schedule were staying on-task and on-schedule with minimal teacher prompts, displayed a decrease in defiant behaviours and benefited students in understanding social cues and regulating their emotions (Bryan et al., 2000;

Dooley et al., 2001; Macduff et al., 1993). The data gathered from the two participants in this study share a sharp correspondence with the results from previous studies. Based on the results, teachers should place more emphasis on creating visual schedules in order to witness the effectiveness and the benefits it brings to students with ASD in an inclusive classroom.

Treatment and Education of Autistic and Related Communication-Handicapped Children (TEACCH) Bins

Marisa reflected on her most recent experience of teaching a student with ASD in an inclusive classroom. She claimed that this student was below grade level and involved alternative planning. She learned about TEACCH bins through her special education course. TEACCH bins involve setting up a box or a bin. Following this, the teacher puts activities in there according to each subject. She claimed that the bins she used were coordinated with what she was teaching throughout the day and incorporated a variety of small activities that allowed the student to complete them independently, as each activity was based on the student's abilities. She explained that the student would complete these activities with limited prompts. Furthermore, the activities were habitual and would build on one another, as the student successfully internalized certain concepts. The student would complete these activities while she taught the rest of the class. Once she was done teaching, the student would show her what he had completed. Marisa highlighted, "You can make whatever you're doing in your classroom with your average students, and you can accommodate it and modify it for the kids with ASD, so they all feel included."

Utilizing TEACCH bins was solely mentioned by Marisa and not discussed in previous literature that primarily focused on teaching strategies to help students with ASD. These insights are significant, as the information can expand the existing literature base in

regards to strategies that teachers could utilize to help include students with ASD in inclusive classrooms.

Technology

Marisa and B claimed to incorporate a variety of technological devices in their lessons to teach students with ASD as well as their other students. Both participants have utilized a SMART board in order to write things on it and for students to immerse themselves in interactive activities. James claimed, “SMART boards establish inclusion because all students can use it including those with ASD and it provides visuals for them.” Likewise, Marisa claimed that all students could get involved in the activities by touching the screen and performing an action. Furthermore, Marisa would utilize the SMART board to show educational videos to the class. Additionally, she has claimed to use Promethean Planet, which is touch screen and also incorporates interactive lessons. She further explained, “They could either write it on the screen or use the pointer to press the object so they could physically see it.” Marisa discussed incorporating iPads for students with ASD, as she believes they are beneficial for their learning. She further articulated, “I would teach math and then the student with ASD would use a specific app that correlated to the math concept. This would reinforce the learning concept for the student. So iPads can really come out good as reinforcement.” Similarly, James also incorporated iPads to reinforce learning in mathematics and literacy. Moreover, he claimed that iPads could help students with ASD who are non-verbal. He claimed that an app called “Prologue2go” involves typing in a word and assigning a picture or symbol to the word. The student then finds the pictures and strings them together to formulate a sentence. James stated, “It is valuable because it promotes language development and

provides them with an outlet to communicate.” It is interesting to note that technology to help meet the needs of students with ASD in inclusive classrooms was not discussed in the existing literature mentioned in this study. As a result, these findings can not only add to existing literature but prove to be beneficial for teachers who have access to technology in their school or classroom.

Strategies to Build Behaviour and Social Skills

Marisa discussed the use of social stories to teach behaviour management skills to students with ASD. She used written or visual guides depending on the student and these guides would describe social interactions, situations, behaviours, skills or concepts. She discussed how she would extend these stories beyond just discussion but acting it out. For instance, “You’d setup a game for ASD kids, and we’d show them how to take turns.” Additionally, she would show videos to the student with ASD that were centered on social stories and how to interact with others. She explained, “Like if I wanted the student to learn how to raise their hand then I would find a video that will help to reinforce that concept.” Also, she would show anger management videos that teach students with ASD how to control their frustration. Marisa claimed that regularly modeling appropriate social skills to the student with ASD helped them to internalize how to interact with others. Additionally, she would offer prompts throughout the day to remind the student how to behave. She explained that if the student was planning to go outside and play basketball with his peers, she would ask “What are you going to do in order to play with them? “What are you going to say to them?” Her rationale behind using this strategy was to help them understand how to properly word interactions. Strategies utilized by teachers to help students with ASD understand concepts in social situations/interactions and to

increase behavioural skills were not mentioned in existing literature. Therefore, the insights gained from this section can add to previous literature by discussing ways in which teachers could help students with ASD learn social and behavioural skills effectively.

Physical Adaptations

Both participants agreed that physical adaptations could be made to the classroom environment to help meet the needs of students with ASD. Marisa claimed that she strategically placed the student's desk in a group with other students who had higher abilities and who the student felt comfortable with. She further explicated that the rationale behind this arrangement was for the student with ASD to have effective peer-support, as students with high abilities would finish their work faster. Therefore, they would have the time to help the student with ASD complete his/her work. Also, she claimed that it was more effective when implementing think-pair-shares, as the student with ASD was paired up with somebody who they were comfortable with.

Correspondingly, James stated, "I would place their desk with someone they know and are comfortable with." Consequently, both participants believed that strategically placing the student's desk based on specific criteria produces effective outcomes. Marisa further explained, "Often what I found was that the average student helped the student with ASD come up with an answer that they didn't even think of." Marisa highlighted that when she has a low-functioning student with Autism in her classroom, they have their own area but also have a desk and chair integrated with the rest of the class. She further elaborated on this point by stating that the student with ASD would be at their integrated desk with the rest of the class when he/she would have lunch and snack, and perform group tasks

when needed. She stated that a low-functioning student with ASD takes up a lot of space, as they have bins, binders, various accommodations, and assistive objects. Both participants stated that they would have students with ASD sit at the front on the carpet or in front of the board in order to prevent distractions and to maximize their learning. James stated that being in close proximity to the teacher and the board is beneficial for students with ASD, as they would be closer to visuals or writing that is occurring during the lesson and the teacher gets a better view of what the student is doing.

James claimed that students with ASD often exhibit behavioural issues. Therefore, he created a specific area in the classroom, which he coined the “chill-out zone.” This quiet area includes a poster board with strategies and sensory manipulatives to help students with ASD self-regulate themselves in moments of frustration. He further explicated, “The chill-out zone has truly helped increase their self-regulation skills and it puts less pressure on me to have to drop what I am doing to deal with their behaviour.” Adapting the physical classroom environment was not discussed in the previous literature mentioned in this study. Therefore, this data can offer new insights to previous literature by expanding strategies to include changes that can be made in the environment to better meet the needs of students with ASD in inclusive classrooms.

TRIBES Strategies

Both participants in this study claimed to have used TRIBES strategies for all students in their classroom in order to foster inclusion. Both participants stressed its value in creating a classroom environment that is welcoming and inclusive. Both participants have implemented a variety of TRIBES strategies such as think-pair-share, four corners, and class circle discussions. Think-pair-share strategy is used when a teacher asks a

question to the class and students formulate an answer with their elbow partner. Following this, one partner may choose to volunteer and share their discussion with the rest of the class. Through this strategy, students build off of each other's knowledge and work collaboratively. Four corners is a warm-up activity that requires students to show their position based on a statement posed to the class (strongly agree, agree, disagree, strongly disagree). Both participants claimed that they would structure class circle discussions by getting the average students to answer first, as this would give an opportunity for the student with ASD to hear the responses of others. This would help the student to gain a deeper understand of the discussion and encourage students with ASD to participate. Both participants highlighted that TRIBES strategies encourages all students to participate, fosters inclusion, and allows them the comfort of knowing they have the right to pass when they do not want to share their responses. James further explained, "It helps them to learn with others in a non-intimidating setting and in a controlled way. It helps them to get to know their classroom peers and alleviate anxiety. These strategies go a long way." TRIBES strategies were not discussed in previous literature that focused on inclusion strategies. Therefore, this data can add value to the existing strategies mentioned in the literature, as TRIBES strategies place an emphasis on helping all students feel welcomed and apart of the classroom community.

4.3 Resources

This section highlights effective resources aside from technology that are available to both participants in order to help support students with ASD. Both participants mentioned that they use the Pre-Referral Intervention Manual (PRIM) to help with classroom management. This book incorporates a vast amount of specific student

behaviours and provides insights regarding strategies on how to deal with each behavioural issue. Other resources they use include sensory toys, as these help some students with ASD deal with their fidgety behaviour and sensory issues. For instance, James stated, “I had one student with ASD who couldn’t sit at the carpet so I got him a tactile seat to sit on and it helped him to sit for a longer period of time.” Correspondingly, other researches have claimed that it gives students with ASD the opportunity to sit quietly for a longer period of time (Chandler-Olcott et al., 2009). James further discussed that he is lacking an individual interactive SMART board to help his students with ASD and more access to programs that create visual aids. He discussed that a license is needed in order to gain access into the program and it is given to the SERT. He claimed, “If I had access to it I could create more visual aids for myself.” On the other hand, Marisa stated that she uses websites that are geared towards Autism and community programs/partners to help support her in the process of including students with ASD in inclusive classrooms. She claimed that she is lacking iPads in the classroom, as she is forced to use her own in order to help the student with ASD. The data gained in this study helps to reinforce the results from existing literature by teachers claiming to lack resources that would help benefit students with ASD (Lindsay et al., 2013; Smith et al., 2000). Additionally, the data reinforced the effectiveness of implementing a tactile seat for students with ASD to help sustain their attention for longer periods of time. It is significant to note that the data gained from this section helps to add to the existing literature by both participants making reference to the PRIM, which may help provide teachers with new insights on how to effectively deal with challenging behaviour.

4.4 Benefits and Challenges of Inclusion

This section highlights the value of being integrated in inclusive classrooms and presents the challenges students with ASD experience when being included. Marisa explained that an inclusive classroom provides social and academic benefits for students with ASD. She further elaborated, “They get frequent opportunities to interact and socialize with other students and are encouraged to look at people, as they often have difficulty making eye contact with others.” On the contrary, James stated that social development was more difficult to attain versus academic development. He reflected upon his experiences of working with students with ASD and stated, “Socially, they progressed minimally and still remained below the standard in comparison to their average peers.” Alternatively, Eldar and their colleagues (2010) indicated that higher levels of success in inclusive classrooms were associated with social skills. However, Marisa highlighted that being in an inclusive classroom offers students with ASD an opportunity to receive support from their typically-developing peers and through regular interactions with others. Through this element, they gain a deeper understanding of how to deal with others. Eldar and their colleagues (2010) suggested it benefits both the included students and their typically-developing peers, who benefit from being exposed to a diversity of learners. Similarly, James stated that all the students can learn from each other and this helps the student with ASD to move along in a faster pace. He also stressed that in an inclusive classroom, scaffolding is more prominent in comparison to a special education classroom and students with ASD can build on that foundation. This statement has a sharp correspondence to the data mentioned in multiple research studies, as it suggested that inclusive classrooms can lead to higher levels of student engagement in social

situations, increased social support, social networks, and higher levels of educational competence in comparison to students with ASD involved in special education classrooms (Lindsay, Proloux, Thomson & Scott, 2013; Chandler-Olcott & Kluth, 2009; Eldar, et al., 2010; Vakil, Welton, O’Conner & Kline, 2009). James further discussed the value in including students with ASD in inclusive classrooms. He explained:

I feel it doesn’t segregate them for the entire day so when you include them you are giving them that positive motivation as well, by allowing them to understand that they are amazing at some things but also there are things we all struggle with and just like other students leave for other things throughout the day whether it be for speech or reading, it makes the student with ASD not feel any different.

On the other hand, Marisa discussed her own insights on inclusion and explained that students with ASD were able to identify their emotions and use less physical aggression to get what they wanted. Similarly, research suggested that students with ASD exhibited the capacity for self-help, autonomy, meeting demands, smoother transitions to change, and better coping mechanisms towards self-restraint and determination (Eldar et al., 2010).

In regards to academic benefits, both participants claimed that it was heavily dependent on the initial academic level of the student. Marisa explained, “If they’re low, meaning they’re not doing grade-level work, it’s still good to have them in the classroom because that peer interaction is very important.” However, she has witnessed students with ASD master concepts and move forward with more difficult concepts. She articulated, “You see the student struggled with it and then be able to do it by the time the term is done; it’s fantastic to watch!” Correspondingly, James reflected on his recent

experience of including a student with ASD in his classroom. He explained that the student started the school year with his reading and writing level really low. By the end of the term, the student was reading at grade level and able to write 2-4 sentences on his own with correct punctuation and spaces. It is interesting to note that based on research, a few reports indicated a progression in learning and academic skills in all subjects (Eldar et al., 2010). In a few cases, students with ASD reached the class average or remained above average (Eldar et al., 2010). Aside from the benefits of inclusion, it is significant to note that there are also challenges.

Both participants shared their views on the challenges of inclusion for students with ASD. Marisa explained:

It's very difficult for them to get on task. It takes them longer to settle down to get to their work so you need to be able to accommodate that frustration. If they can't talk to you then you need to set up certain things for them to do in order to build up the time that they need to sit down and do the academic part; that piece of the day.

Correspondingly, James stated that students with ASD have difficulty staying on task and he is constantly prompting the student with ASD in order to redirect his attention back to completing his work. Ultimately, based on the data collected from this section and existing literature, one may infer that there are more benefits for a student with ASD to be integrated in an inclusive classroom verse being segregated in a special education classroom. The data from this section reinforces that of previous literature, as students with ASD increase their social skills, competence, and learn how to cope with their frustrations in inclusive classrooms. It is significant to note the discrepancy between the

data from this section and existing literature regarding the amount of social and academic skills gained from being educated in an inclusive classroom. Some of the data from this study claimed that students with ASD gain more academically in comparison to previous literature that claimed students with ASD gain more socially. Additionally, previous literature did not heavily discuss the challenges of inclusion, as it appeared to emphasize more of the positive aspects. Consequently, the challenges of inclusion could add some valuable insights to existing literature.

4.5 Support Systems

This section highlights the importance of utilizing support systems in order to propel students with ASD to achieve greater success. Both participants claimed to have worked with board consultants, parents, and special education resource teachers (SERT) when they were working with students with ASD in inclusive classrooms. Both participants stressed the importance of having a support system in place in order to provide the student with “consistency” and successful outcomes. It has also been argued through other researchers that the combination of expertise from special education teachers, parents, teachers, and school staff can maximize success for students with ASD (Hart et al., 2011). Marisa highlighted the importance of utilizing support systems in order to help support and provide structure for students with ASD. Upon reflecting on her experiences, she stated the following:

When I had an ASD student in Grade 3, and he wasn't very high functioning, there was a lot of dialogue between me and the SERT, as to how to set up his morning so that he knew when he came in that he had to do one, two, and three before he starts doing his reading or math.

She emphasized constant communication with the student's parents, program consultants within the school board, and the principal. She claimed that she is comfortable dealing with high-functioning students with ASD. However, when she experienced working with non-verbal students with ASD, she found it extremely challenging. She further explicated, "A kid who can't orally communicate his feelings, his frustrations, and his inability to do something is probably the hardest thing to plan for because you don't know how to. If they can't tell you, how are you going to know?" She explained that accessing support always helps teachers, as those individuals can help to strategize and pinpoint certain triggers that set the student off, which the teacher could have missed. Both participants claimed that dialogue with the student's parents has a profound impact on the student's success, as it provides "consistency." James further elaborated on this statement by saying, "It is important that you meet early on and frequently so that you can exchange strategies and at all times everyone is working together on the same page providing consistency for the student." Correspondingly, Leach and their colleagues (2009) stressed the importance of collaboration among parents and school administration in order to effectively meet the needs of the child and to ensure strategies and practices are in unison between the home and school environment (Leach et al., 2009). Similarly, Marisa also discussed the importance of doing similar activities at home and at school otherwise the student gets a mixed message. Additionally, she highlighted that parents may have effective strategies that work for the student and vice versa. She further elaborated on this point by stating the following:

It allows me to provide more consistency for our student with ASD, because that's key to them. Consistency is key. The minute that they know that things

aren't being done in the same manner, they have a hard time dealing with it, and then they become focused on that difference and they can't get past it, which then leads to other behavioural issues in the classroom.

Based on the sharp correspondence between these results and the data extracted from previous literature, it is crucial that teachers take the time to collaborate with parents, school staff, and others to effectively meet the student's needs, gain insights about the student, and provide structure. Reaching out for support not only helps student behaviour but it is interesting to note the positive impact it could have on teachers, as the responsibility becomes more manageable and their practice becomes more effective.

4.6 Teacher Challenges

This section highlights some challenges that teachers experience when including students with ASD in inclusive classrooms. Marisa reflected on the challenges she experienced when working with students with ASD in inclusive classrooms. She stated that she found it difficult to divide her time between the student with ASD and the rest of the class. She further explained, "I always have to ask for patience from my average students so that I can meet the needs of the student with ASD." Correspondingly, existing literature suggested that lack of time inhibited teachers to adequately support a student with ASD and meet the demands of planning and fostering an inclusive classroom (Lindsay et al., 2013; Smith et al., 2000). Marisa elaborated on the challenges she has been confronted with by discussing the difficulty of dealing with some behavioural issues that occur within the classroom. For instance, she remembered one time when a student with ASD threw a desk and a chair. She had to clear out the room to give that student the space he needed in order to express his frustrations. She further explained that if she is

unable to understand the precursor to the student's constant meltdowns then it is difficult, as she is forced to drop her teaching and help the student with ASD. She emphasized the need for more support, as students with ASD can use the one-on-one support.

Furthermore, she explained, "Sometimes it's hard for the teacher to give them one-on-one the way the student needs and someone is going to suffer whether it is the average student or the student with ASD."

On the contrary, James claimed that he had no issues with dealing with challenging behaviour, as he always had a CYW or an Educational Assistant (EA) working with him in the classroom. However, he claimed that his challenge deals with not having the resources to accommodate students with ASD. He explained that implementing strategies is easy but finding the resources to coincide with the strategy is difficult. Also, he emphasized that having a variety of hands-on manipulatives and classroom technological devices will make it easier for him to accommodate the student with ASD successfully. The results from both participants coincide with the results from other research, as teachers reported experiencing challenges with understanding and managing behaviour of students with ASD, barriers with social structures in school policy, lack of training, support, and resources (Lindsay et al., 2013; Smith et al., 2000). However, it is interesting to note that Marisa found it difficult to deal with challenging behaviour, as she had no support in the classroom. In contrast, James had support in the classroom. Consequently, it was not challenging for him to deal with behavioural issues. Therefore, based on the results, one may argue that support offered in the classroom can help to alleviate some challenges that teachers experience when including students with ASD. Additionally, the data gained from this section validates the results extracted from

previous literature regarding lack of time and resources that may pose challenges to teachers regarding effective inclusion.

4.7 Advice to Teachers Entering the Field of Education

This section highlights the advice from both participants to future teachers who are thinking about entering the field of education or who are enrolled in teacher education programs. Marisa offered useful advice for teachers who are entering the field of education. She maintained that it is imperative to have a lot of patience. Furthermore, she stated, “Don’t set very high goals for a student with ASD and instead set reasonable goals and reward them every step of the way.” Marisa also cautioned against placing too much emphasis on the end product. “Don’t reward the end result; reward the progress” she stated. She further emphasized the importance of observing these students carefully and working with them closely, as teachers will learn a tremendous amount of valuable information that will benefit one’s class as a whole. Additionally, both participants advised future teachers to take special education courses in order to understand how to accommodate these students successfully in an inclusive classroom. James explained, “Taking special education courses will help to reduce anxiousness and help teachers learn strategies on how to properly accommodate students with ASD in inclusive classrooms.”

4.8 Conclusion

When analyzing the data garnered from this research study and comparing it to existing literature, there were more similarities than differences. However, some components of the data collected from both participants can prove to be valuable in adding to the existing literature. It has been argued that the attitude of teachers regarding students with ASD in inclusive classrooms heavily relies on the severity of the disorder

and whether or not teachers have experience, support and the background knowledge to integrate students with ASD successfully.

Several strategies and resources mentioned in this study can provide new insights for teachers and expand the previous literature base. For instance, TEACCH bins and the use of technology appear to be two effective strategies that can be utilized in the classroom to help students with ASD gain more independence, reinforce learning concepts, and increase expressive language skills. Furthermore, the PRIM can be utilized by teachers to positively impact classroom management skills, as it targets general behaviours and those associated with students with ASD. Additionally, it highlighted the use of technology such as SMART boards and iPads and how some classrooms may be lacking these types of technologies and other programs to help students with ASD achieve greater success. The use of sensory items was also mentioned and these insights can be used to expand research discussed in previous literature.

The data extracted from this study also expands on previous literature by discussing strategies teachers can use to help enhance behavioural skills in students with ASD. The existing literature heavily relied on academic and social based strategies that can be implemented in the classroom and did not touch deeply upon behaviour based strategies. Additionally, physical adaptations in the classroom environment were not heavily discussed within the existing literature and widely discussed in this study. Although existing literature highlighted the value in peer-support, it did not discuss the strategizing element teachers should use when assigning a peer to support a student with ASD.

The data extracted from the benefits and challenges of inclusion section of this study can provide new insights to the existing literature by emphasizing the academic benefits verse the social benefits. Furthermore, discussing the challenges of getting the student with ASD to stay on task can also be valuable to add to the existing literature. The data from this section reinforces the benefit of daily interactions for students with ASD and being around their typically-developing peers to help promote communication skills and assistance.

The data gained from the use of support systems to help students with ASD can reinforce the data from existing literature by validating its importance and the value of keeping routines consistent for students with ASD. Furthermore, the data emphasized the value in communicating with parents, SERTS, staff, and other program consultants in order to help teachers implement effective strategies to help students with ASD achieve a successful outcome.

The data gained from the challenges teachers experience through inclusion can validate the insights gained from previous literature by highlighting the value of extra support in the classroom in order to help teachers manage the classroom and divide their time more effectively. Furthermore, the data from this study validated the insights gained from previous literature by rediscovering the fact that some teachers lack resources that can be implemented to further help the student with ASD achieve greater educational success. Next in Chapter 5, the implications, recommendations, and areas that should be further research are addressed and discussed.

Chapter 5: Implications

5.0 Introduction

The purpose of the present study was to explore how teachers are integrating students with ASD into their inclusive classrooms. This chapter highlights the research findings and their significance in relation to the literature. Based on the data collected and conclusions that were drawn from the present study, the implications for the educational community and for myself as a teacher and researcher are discussed. Specific recommendations for teachers and educational administrators have resulted from these findings and are presented to help cultivate more support and responsive pedagogy in regards to Autism within an educational context. In order to advance future literature and enrich learning experiences for students with ASD in inclusive classrooms, areas for further research are identified and discussed.

5.1 Overview of Key Findings and their Significance

The findings that emerged from the two interviews and previous studies reveal that teachers are more inclined to successfully include students with ASD if they have the background knowledge about effective strategies tailored to meet the needs of students with ASD combined with guidance and the appropriate support to help alleviate the additional workload (Lindsay et al., 2013; Smith et al., 2000). Furthermore, teachers who have the knowledge, experience, and support are more inclined to display a positive attitude in regards to including students with ASD and helping them to attain greater success (Wilkerson, 2012; Simpson et al., 2003). Additional insights from the present study and those from previous literature suggest that the attitudes of teachers regarding inclusion are heavily dependent on the severity of the disorder (Lindsay et al., 2013;

Segall et al., 2012; Smith & Smith, 2000; Wilkerson, 2012). Furthermore, it highlights the importance of collaboration among parents and school administration in order to effectively meet the needs of the student and facilitate greater success (Hart et al., 2011; Leach et al., 2009). The present study and many others emphasize the importance of ensuring that strategies and practices are kept in unison between the home and school environment (e.g., Hart et al., 2011; Leach et al., 2009).

The findings from the present study validated the insights gained from previous literature by rediscovering the fact that some teachers lack resources that can be implemented in the classroom to help the student with ASD achieve greater success (Lindsay et al., 2013; Smith et al., 2000). However, the data collected from the present study revealed new strategies and resources that were not discussed in previous literature such as the PRIM and TEACHH bins. SMART boards and iPads were also discussed in the present study and these insights will add to the narrow literature base about the effects of technology on students with ASD. Adaptations to the learning environment were not heavily discussed in previous literature. However, the present study revealed new insights regarding physical adaptations that can be established in the classroom to help students with ASD experience greater success. Additionally, the findings revealed strategies to help increase behavioural skills for students with ASD and other research relied heavily on strategies to help promote social skills and academic outcomes. The present data also revealed the positive academic outcomes that are established when students with ASD are educated in inclusive classrooms and reinforced the social benefits when interacting with typically developing peers on a daily basis.

The data garnered from the present study and related literature discussed the value of hands-on learning for students with ASD by emphasizing that these students gain a deeper understanding of concepts through the integration of concrete manipulatives and visual tools (Humphrey, 2008). Additionally, it emphasized the benefits of using visual schedules, as students with ASD experienced smoother transitions, gained a better understanding of social cues and enhanced their self-regulation skills, which led to a decrease in defiant behaviours (Bryan et al., 2000; Dooley et al., 2001; Macduff et al., 1993). The data collected from the present study and Hart and their colleagues (2011) highlighted the importance of teachers getting to know students with ASD by recognizing their strengths and characteristics. Consequently, strategies can be individualized to reflect their needs.

Overall, the data extracted from the present study shares a sharp correspondence to the data derived from previous literature, as it suggested that inclusive classrooms can lead to higher levels of student engagement in social situations, increased social support, social networks, and higher levels of educational competence in comparison to students with ASD being educated in special education classrooms (Lindsay, Proloux, Thomson & Scott, 2013; Chandler-Olcott & Kluth, 2009; Eldar, et al., 2010; Vakil, Welton, O'Conner & Kline, 2009).

5.2 Implications

Based on the data collected and conclusions that were drawn from the present study, there are three implications for the educational community and for myself as a researcher/teacher that are discussed below.

5.2.1 Implications for the Educational Community

Based on the data that emerged from both interviews and related literature, it is safe to say that having the appropriate support within the classroom and from the outside community can prove to be beneficial not only for teachers but for students with ASD who are integrated in inclusive classrooms. The experiences presented in the findings of this study provide some insights into the types of strategies teachers are implementing to effectively support students with ASD. The two participants in the present study appeared to successfully integrate students with ASD in their classrooms and this could stem from their background knowledge attained through special education courses, having appropriate resources, dealing with program consultants, and having support personnel in the classroom. It is important to note that not all teachers have these positive experiences, as some teachers and schools are not adequately prepared to meet the complex needs of students with ASD. Consequently, teachers who experience a lack of resources, support, strategies, and knowledge of the disorder will find it more challenging to attain a positive outcome and they will not feel inclined to put forth their best effort when including students with ASD.

Most pre-service teacher education programs include some information regarding ASD and how to work with these students, but they may fail to go in-depth regarding the different forms of ASD and strategies that can be implemented for each form of Autism. Additionally, the information heavily focused on high-functioning Autism and not low-functioning Autism. In an inclusive classroom, teachers may find themselves working with low-functioning students or students with other forms of Autism that are different from high-functioning.

5.2.2 Implications for the Researcher

After listening to the experiences of both participants when including students with ASD and analyzing the data from related literature, I have understood the significance of reaching out for support from other teachers, parents, and program consultants in order to expand my knowledge about different strategies that I may not have known about and to help gain a deeper understanding of the student with ASD to plan accordingly. It is imperative to build a positive relationship with parents/guardians in order to help keep routines consistent between the home and school environment. Thus, these factors are significant to help alleviate the challenges associated with students with ASD. Based on the findings from the present study and previous literature, students with ASD gain in all domains if teachers embrace inclusion, employ effective strategies and are adequately equipped to put forth their best effort. Each student with ASD is unique and progresses differently in an inclusive classroom, as this is heavily dependent on the student's characteristics and the severity of the disorder. However, inclusion can have lifelong positive effects on all students despite the severity of the disorder and as a researcher and teacher I take pride in that. Taking the initiative to expand professional development by keeping up-to-date with current research regarding inclusion and students with ASD can prove powerful in enhancing competency and shaping developing pedagogy when working with students with ASD.

5.3 Recommendations

Based on the implications for the educational community and for myself as a researcher and aspiring teacher, the present study points specifically to several

recommendations for school and board administrators, teachers, and professional development. Three recommendations are outlined below:

1. Having more support in the classroom and access to a wide-range of resources are crucial components in developing a classroom environment that will help students with ASD succeed. Consequently, funding for the educational sector is essential in providing more resources and meeting the demand for extra support within the classroom and beyond the classroom walls. If the needs of the students are not being met then it is up to the Ministry of Education to provide the support that is needed. Autism specialists and consultants can help teachers by providing them with additional strategies, training, and a deeper understanding of the student. Extra support in the classroom can help alleviate some challenges for teachers by giving them the opportunity to have more time and less work. Administrators of schools should further enforce inclusion and help to support teachers by providing them with adequate resources, training, and support personals.
2. Pre-service teacher education programs should heavily discuss all disorders across the ASD Continuum. For instance, low-functioning Autism should be emphasized in the same way that high-functioning Autism is widely discussed. Also, these programs should provide a central focus on strategies to help students with all forms of Autism in order to foster equity and help all students achieve greater success.
3. It is imperative that teachers gain adequate training that will allow them to feel competent in their abilities when working with students with ASD. Consequently, teachers will put forth their best effort to help motivate students with ASD and

create a successful learning environment. Therefore, the Ministry of Education should place an emphasis on offering more courses and workshops that deal directly with Autism in order to give teachers the opportunity to expand their knowledge and feel more inclined to teach students with ASD. As an incentive, the Ministry of Education could over subsidize Additional Qualification courses for teachers who want more expertise in working with students with ASD.

5.4 Areas for Further Research

As previously stated, the goal of this research project was to examine how teachers are effectively including students with ASD in their classrooms and to gain insights for my own developing pedagogy. The findings of this study have demonstrated that there are similarities and some differences that exist within the literature. It must be acknowledged that, due to a small sample size, the findings of this study cannot be generalized across other educators or other classroom settings that include students with ASD. Consequently, more studies need to be conducted with a larger sample of participants in order to establish stronger correlations between teacher challenges, beliefs, and practices. This will yield more information on how to provide successful learning experiences for students with ASD.

Aside from the questions that were explored in the present study, there are other questions that have emerged from this research which are areas to consider for further study. Further studies need to be conducted with a central focus on the academic outcomes verse the social outcomes when students with ASD are being educated in inclusive classrooms. Furthermore, new research should focus on the types of strategies that can be implemented in an inclusive classroom in order to reduce challenging

behaviour and increase self-regulation skills. Future studies should also emphasize all areas of Autism, as studies tend to focus on solely students with high-functioning Autism. It would be beneficial to have research on effective strategies that can be used for students with low-functioning Autism, as these students could also be integrated in an inclusive classroom. Further studies should also consider the physical environment of the classroom and how this could be adapted to help further support students with ASD.

5.5 Concluding Comments

It is significant to note that in order for teachers to effectively plan for and support students with ASD in their classrooms there needs to be a support structure in place and this should include administration, Autism specialists and consultants, staff, and parents. Collaboration between teachers and support personnel can prove powerful in helping students with ASD achieve greater success. Teachers should expand their developing pedagogy by learning about effective strategies to help further support students with ASD and how these strategies can be tailored to meet the needs of the student. By taking the initiative to get to know the student, teachers could implement strategies and use trial and error to determine what works best for the student. It is imperative that teachers acknowledge the strategies that can be integrated in the learning environment and strategies that are geared towards all levels of development (social, behavioural, academic). When all of these elements are taken into consideration and established within the school then teachers can be better prepared to overcome challenges and work effectively with students who lie on the ASD Continuum.

Pre-service teacher education programs should adequately prepare aspiring teachers to work with students with ASD by offering a course that is specifically geared

towards all forms of Autism and offering evidence-based strategies and resources that could be implemented in the classroom to help these students thrive in all aspects. More funding is needed to ensure teachers are adequately equipped with the knowledge, support and expertise to meet the needs of students with ASD and maximize their potential. It would be highly beneficial if school administration would offer more support within the classroom and beyond the classroom, appropriate training, adequate resources and professional development opportunities to help increase teacher competence when working with students who lie on the ASD Continuum.

It would be valuable to conduct research in other areas in order to draw stronger correlations between studies and to discover new insights. Future research should focus on other areas across the ASD Continuum and strategies to ensure positive behavioural outcomes and academic success. Additionally, there is a need for more research regarding the adaptations that can be made to the learning environment in order to help maximize learning opportunities for students with ASD. As researchers and teachers, it is our responsibility to provide the best learning opportunities for students with ASD. We must take the initiative to enhance our professional development and see what more we can do to make a difference and help these students become productive citizens of society.

Appendix A: Letter of Signed Consent

UNIVERSITY OF TORONTO
OISE | ONTARIO INSTITUTE
FOR STUDIES IN EDUCATION

Date:

Dear

My Name is Amanda Decristofaro and I am a student in the Master of Teaching program at the Ontario Institute for Studies in Education at the University of Toronto (OISE/UT). A component of this degree program involves conducting a small-scale qualitative research study. My research will focus on the inclusion of students with Autism Spectrum Disorder (ASD) in inclusive classrooms. I am interested in interviewing teachers who have had the experience teaching students with ASD in inclusive classrooms. I think that your knowledge and experience will provide insights into this topic.

Your participation in this research will involve one 45-60 minute interview, which will be transcribed and audio-recorded. I would be grateful if you would allow me to interview you at a place and time convenient for you, outside of school time. The contents of this interview will be used for my research project, which will include a final paper, as well as informal presentations to my classmates. I may also present my research findings via conference presentations and/or through publication. You will be assigned a pseudonym to maintain your anonymity and I will not use your name or any other content that might identify you in my written work, oral presentations, or publications. This information will remain confidential. Any information that identifies your school or students will also be excluded. The interview data will be stored on my password-protected computer and the only person who will have access to the research data will be my course instructor Ken McNeilly. You are free to change your mind about your participation at any time, and to withdraw even after you have consented to participate. You may also choose to decline to answer any specific question during the interview. I will destroy the audio recording after the paper has been presented and/or published, which may take up to a maximum of five years after the data has been collected. There are no known risks to participation, and I will share a copy of the transcript with you shortly after the interview to ensure accuracy.

Please sign this consent form, if you agree to be interviewed. The second copy is for your records. I am very grateful for your participation.

Sincerely,

Amanda Decristofaro
416-858-4909

Amanda.decrisofaro@hotmail.com
Course Instructor's Name: Ken McNeilly
Contact Info: Kenneth.mcneilly@utoronto.ca

Consent Form

I acknowledge that the topic of this interview has been explained to me and that any questions that I have asked have been answered to my satisfaction. I understand that I can withdraw from this research study at any time without penalty.

I have read the letter provided to me by _____ and agree to participate in an interview for the purposes described. I agree to have the interview audio-recorded.

Signature: _____

Name: (printed) _____

Date: _____



Appendix B: Interview Protocol/Questions

Introductory Script:

Thank you for agreeing to participate in this research study, and for making time to be interviewed today. This research study aims to learn how general education teachers are including students with ASD in inclusive classrooms. This interview will last approximately 45-60 minutes, and I will ask you a series of questions focused on inclusiveness and effective strategies that can be used to help these students. I want to remind you that you may refrain from answering any question, and you have the right to withdraw your participation from the study at any time. As I explained in the consent letter, this interview will be audio-recorded. Do you have any questions before we begin?

In this study/interview, the term ‘inclusive classroom’ refers to a classroom of typically-developing students.

Background Information

1. How many years of experience do you have in the teaching profession?
2. What grades have you taught?
3. What grade have you taught most frequently?
4. Approximately, how many students with Autism Spectrum Disorder (ASD) have you taught in an inclusive classroom?
5. Describe how you learned to accommodate learning needs of students with ASD? (ex: workshops, courses, research, support programs)
 - what did these courses discuss?
 - What did these workshops discuss?
 - How did these courses/workshops impact your teaching?

Teacher Perspectives/Beliefs

6. On a scale of 1-10, 1 being least important and 10 being very important how important is it for students with ASD to be educated in an inclusive classroom? Why?
 - What are the benefits of inclusion for students with ASD? Social perspective, academic perspective
 - What are the drawbacks of inclusion for a student with ASD if any?

- What kinds of successes have you seen with ASD students being educated in an inclusive classroom?
7. How did you feel when you first had a student with ASD in your classroom?
 8. How have your experiences changed your perceptions of students with ASD?
 9. What is the overall attitude you have seen of teachers that work with ASD students in an inclusive classroom?
 - why do you think teachers feel that way?

Teacher Practices

10. Thinking about your most recent student with ASD..How was *his or her* academic development? social development? Behaviour?
 - How did she perform socially in comparison to her typically developng peers?
 - How did she perform academically in comparison to her typically-developing peers?
11. What are your effective strategies to foster inclusion for students with ASD (ex: TRIBES)?
 - what types of TRIBES strategies have you used?
 - How did it help to foster inclusion?
 - How did you teach students to respect differences? (read books?)
12. What are your effective strategies to foster educational success for students with ASD? (EX: peer support, cooperative learning groups, variation of instructional strategies, hands on learning, the use of manipulatives, technology)
 - what did the peer do to help the student with ASD?
 - How did cooperative learning experiences help the student with ASD?
 - How do you differentiate instruction for the student with ASD?
 - How did you incorporate hands on learning in math? Science?
What were the benefits of hands-learning/use of manipulatives for the student with ASD?
 - How did you incorporate technology for the student with ASD?
What were the benefits of this for the student with ASD?
 - What strategies do you feel helped to improve social skills for the student with ASD? And WHY?
13. What are some strategies that you feel may be effective but have not yet used?
 - why do you feel that it would be effective for the student with ASD?

14. What physical adaptations have you made to the classroom to create a successful learning environment for students with ASD? (ex: making student sit at front, having pictures on wall/desk, seating arrangement of student, chill out zone)
 - how did it benefit the student?
 - What was your rationale for doing this?
15. What resources are available to you to support students with ASD? (ex: visual aids, sensory items, visual time table)
 - how did you incorporate visual aids in learning experiences?
 - How did the visual time table help the student with ASD?

Supports and Challenges

16. What types of challenges have you experienced when working with students with ASD in an inclusive classroom?
 - how do you think it effected the student with ASD
 - How did you respond to these challenges?
 - How might the education system further support you in meeting these challenges?
17. If any, describe some challenges the student with ASD experienced while being educated in an inclusive classroom?
- 18. What support systems did you utilize to better meet the needs** (learning, behaviour, social) **for the student with ASD?** (ex: parents, school staff)
 - a. How did involving the parents help the student with ASD? How did it help you?
 - b. How did involving school staff help you? ...how did it help the student with ASD?

Next Steps

19. What advice do you give teachers who are just entering the field about including students with ASD successfully in inclusive classrooms?
20. Is there anything else that you would like to offer that I did not specifically ask about?

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