Strategies for Including Students with Autism Spectrum Disorder in Mainstream Classrooms

By

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Abstract

Today, 1 in 94 children in Canada are diagnosed with autism spectrum disorder (ASD). With the growing number of students with ASD being included in mainstream classrooms, teachers are faced with the challenge of how to support the diverse learning needs of the students. This qualitative research study examines the first-hand lived experience of exemplary new elementary school teachers and what strategies, beliefs, and supports they believe are needed for successful inclusion of students with ASD into the mainstream classroom. The study consisted of semi-structured interviews with participants to gain insights into their experience with inclusion. This study found that beginning elementary teachers utilized a variety of different strategies to include students with ASD into the mainstream classroom. A sample of these strategies include the use of visuals, being clear with instructions, implementing reward systems, and receiving feedback from teachers and peers. Further analysis also revealed the importance of having school support from principals, and underscored how other teachers and paraprofessionals can impact the teachers’ work with including students. Findings also reveal the gaps in resources and supports available that need to be addressed in order for all teachers to be successful at including students with ASD into the mainstream classroom.

Key Words: Autism Spectrum Disorder, Inclusion, Strategies, Beginning Teachers
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Chapter 1: INTRODUCTION

1.0 Introduction to the Research Study

Today, 1 in 94 children in Canada are diagnosed with autism spectrum disorder (ASD) (Autism Ontario, 2014). ASD is a neurological disorder that affects the areas of behaviour, social interactions, and the ability to communicate (Autism Ontario, 2014). With the growing number of children being diagnosed with ASD, there is a need for these students to be included in classrooms at school. Research into the effects of inclusion for students with ASD in the general classroom has identified positive outcomes in social skills, higher classroom engagement, play, and joint attention (Ferraioli & Harris, 2011). In addition to the positive outcomes for students with ASD, there has also been research that shows the positive effects on peers' attitudes towards students with ASD in the classroom (Ibid). Although inclusion has been shown to have positive outcomes for students with ASD, inclusion can be difficult to achieve in classrooms. Teachers have reported that some of the barriers to inclusion include the lack of training provided, the lack of support in the classroom, and the amount of paperwork teachers need to complete (Thompson, Lyons & Timmons, 2014).

According to the Ontario Ministry of Education (2014), there were 191,600 students identified by the Identification, Placement and Review Committee (IPRC) as exceptional pupils in the school year 2010-2011. Furthermore, another 127,600 students who were not formally identified as being exceptional were provided special education programs and services (Ontario Ministry of Education, 2014). The Ontario Ministry of Education (2014) mandates that all students that are identified as exceptional shall be granted an Individualized Education Plan (IEP) to cater and build upon the student's ability to learn. An IEP is a written plan describing the special education program of the student with exceptional needs based on an assessment of their
strengths and needs. It outlines any accommodations a student may need to be successful in the class in addition to any modifications to the curriculum that are more suitable for the student. Furthermore, the document also outlines the specific skills and knowledge that will be assessed and evaluated according to the modifications to the curriculum (Ibid). Since students with ASD are being integrated, teachers face the challenge of how to include the student with ASD into the classroom as well as keeping all the different modifications of the curriculum and the accommodations in mind when teaching (Hundert, 2009). Moreover, it can be time consuming for the teacher if the student with ASD has challenging and disruptive behaviours that need to be addressed (Ibid). Therefore, having a student with ASD in a general classroom can be challenging, especially for new teachers.

1.1 Purpose of the Study

Knowing the challenges that teachers face in meeting the diverse learning abilities of students with ASD, the purpose of this paper is to learn how a sample of new elementary teachers are implementing instructional strategies that help students with ASD be more successful in the classroom. Many students will enter or re-enter the school system after receiving Intensive Behaviour Intervention (IBI), which provides students with ASD one-to-one support for 20-30 hours of intensive therapy that focuses on several school readiness skills (Surrey Place Centre, 2015). The goal of the program is to increase the students' learning trajectory in the brain; as a result, students will be better prepared to learn when they go back to school (Ibid). Moreover, research suggests that students who receive early IBI are more prepared to be in an inclusive classroom (Ferraioli & Harris, 2011). This study is important to the education community because the Ontario Ministry of Education mandates that schools demonstrate inclusiveness and equity in their classrooms. Therefore, it was important that I also
learn the factors that contribute to successful implementation of inclusion. By exploring these areas, I hoped to explore strategies and insights that new teachers will find useful in helping them become successful with implementing inclusion in the classroom.

1.2 Research Questions

The goal of this research project was to learn how new teachers are implementing effective strategies for including students with ASD into the classroom, explore the factors that affect inclusion, and to learn what kind of support new teachers need to be successful with inclusion. The following is a list of research questions I hoped to gain new insights into:

1. What are effective strategies that new teachers are using to include students with ASD into the classroom?

2. How are new teachers implementing these strategies?

3. What factors contribute to the successful inclusion of students with ASD into these teachers’ mainstream classrooms?

4. What do participating teachers believe new teachers need in order to be successful at including students with ASD into mainstream classrooms?

To respond to these questions, I sampled three new teachers who have demonstrated leadership in successfully including students with ASD into their classroom. For the purpose of this study I will be defining "new teacher" as a teacher who has been working for six years or less in the field of education. This study used a qualitative approach with a phenomenological lens to interview educators.
1.3 Background of the Researcher

After graduating from university, I was fortunate to get a job at the Geneva Centre for Autism. Before I started working there, I had no definite idea of what autism was. Over the last seven years working for the Geneva Centre, I discovered how important early intervention was for the future success of the children. I worked as an Instructor Therapist, implementing IBI through the principles of Applied Behaviour Analysis (ABA). ABA is the process of applying interventions based on the principals of learning theory to modify behaviours (Autism Canada, 2015). Through my work experience, I have seen effective strategies that can be derived from ABA such as using visuals, positive reinforcement, and prompting to help the student succeed across all domains of learning, including self-help skills. From this work experience, I have developed a passion for helping students continue their success once they leave the IBI program. Unfortunately, in my experience working at the centre, I have come across teachers that have no experience working with individuals with ASD and who are not familiar with the strategies through their visits to the centre. On top of that, the classroom ratio that the teacher has to endure often does not allow the teacher to give the one-to-one attention that the student had been receiving at the centre. This study is important to me because the results of the findings can help provide insights for other teachers and schools about how to successfully incorporate students with ASD into the classroom. Also, the study can inform and train the staff at the IBI centres so they are aware of what teachers are doing. My hope is that this research can serve to facilitate meaningful communication between IBI centres, schools, and teachers so that I can help continue that successful learning.
1.4 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 in the areas of what ASD is, benefits, limitations and barriers of inclusion, in addition to the various effective strategies for inclusion. Chapter 3 provides the methodology and procedure used in this study including information about the sample participants and data collection instruments. In Chapter 4 I report the research findings and discuss their significance in light of the existing literature and research in this field. In conclusion, Chapter 5 speaks to the implications of the findings for a range of educational stakeholders and for myself as a new teacher, and I also make recommendations for practice and further reading and study. References and a list of appendices follow at the end of this paper.
Chapter 2: LITERATURE REVIEW

2.0 Introduction (Chapter Overview)

In this chapter, I explore the literature in the field relating to the inclusion of students with ASD in classrooms. I begin the literature review by defining autism spectrum disorder. Then, I define what inclusion is by examining the benefits and limitations of inclusion of students with ASD in the classroom. Next, the chapter explores teachers’ attitudes towards inclusion and the impact it has on inclusion in the classroom. Furthermore, the chapter analyzes the barriers towards inclusion of students with ASD in the classroom. Lastly, the chapter delves into the research about the effective strategies used by teachers to include students with ASD into the classroom. The review of the literature will help me make meaning of participating teachers’ beliefs about inclusion and how their beliefs and experience can impact their ability to foster inclusion in mainstream classrooms. In addition, it will also inform a comprehensive response to my research question of “What successful strategies are new teachers using to include students with ASD into mainstream classrooms?”

2.1 Characteristics of Autism Spectrum Disorder (ASD)

Autism spectrum disorder is a life-long neurological disorder that can affect an individual's behaviour, communication skills, and social interactions (Autism Ontario, 2014). Impairment in behaviour for individuals with ASD is characterized by repetitive and stereotyped patterns of behaviour. Furthermore, impairments in communication skills may include nonverbal communication, delay in verbal communication, and repetitive or stereotyped spoken language. Other impairments in social skills include the inability to sustain conversations, difficulty with
eye contact, lack of social and emotional reciprocity, and difficulty with joint attention (Hundert, 2009). ASD is a spectrum disorder and the degree of challenge an individual may have varies from mild to severe (Autism Ontario, 2014). In the classroom, students with ASD face the challenge of interacting and relating to peers, being able to follow the school curriculum, dealing with changes in the environment or routine, and a range of language difficulties that impact their communication skills (Simpson, de Boer-Ott and Smith-Myles, 2003). With all the challenges students with ASD face in the classrooms, teachers now have the challenge of how to successfully include them in mainstream classroom settings.

2.2 Inclusion

Inclusion is based on the idea that all students are different; they have different needs and abilities that are not limited to their disability and to accommodate their learning needs, schools must adapt and change in order to include all students into the mainstream classroom (Sharma, Loreman & Forlin, 2012). Four broad areas that inclusion promotes are the presence of the student in mainstream classrooms, participation (e.g. quality of the students' experiences), acceptance from all members of the school environment, and achievement (e.g. in all areas including academic, social, and emotional well being) in mainstream classrooms (Humphrey, 2008). Over the last two decades, there has been a shift from segregating students with ASD to inclusion of students with ASD in the general classrooms (Thompson, Lyons & Timmons, 2014). In 1998, 75% of students with disabilities in Southern Ontario attended preschools (Hundert, 2009). This shift towards inclusion was influenced by a number of different policies around the world. In Canada, the Charter of Human Rights Part 1 has policies in place to support the rights of individuals with disabilities (Thompson et al., 2014). Furthermore, in 2006 the United Nations Convention of the Rights of Persons with Disabilities outlined the rights for inclusive
education for individuals with disabilities (Ibid). As a result of the policies enacted around the 
world, the argument here is not about fighting for inclusion but rather what we can do to support 
students and teachers (Ibid).

### 2.3 Benefits of Inclusion

There is a great deal of literature that shows the inclusion of students with ASD is 
beneficial to both the student with ASD and their peers in mainstream classrooms (Harrower & 
Dunlap, 2001). According to past research, students with ASD who have been mainstreamed 
have shown improvements in a) increased level of social engagement and interaction, b) received 
higher level of social supports, c) larger friendship networks, and d) more advanced 
developmental individualized goals set than those who have been segregated (Ibid). The 
modeling of typically developing peers also benefit students with ASD. With peers’ help there is 
more opportunity to practice social situations, and as a result, students with ASD become more 
engaged and their social skills also increase (Hundert, 2009). In addition, there is more 
opportunity to learn joint attention and social skills through playing with typically developing 
peers (Ferraioli & Harris, 2011). With this positive peer modeling, it allows students to open up 
to the possibility of developing larger friendship groups based on their peer interactions. 
Similarly, inclusion benefits the typically developing student because they develop positive 
attitudes towards individuals with special needs (Ibid). Peers report feeling more comfortable 
socially and emotionally when interacting with their peers who have ASD (Ibid). Therefore, 
inclusion has positive outcomes for both the student with ASD and the typically developing 
peers in the mainstream classroom.


2.4 Limitations to Inclusion

Although inclusion has many positive outcomes for students in the classroom, it does have some limitations. There has been limited research to suggest that students with ASD make greater gains academically in mainstream classrooms than they would if they were in segregated classrooms (Harrower & Dunlap, 2001). According to the limited research, students with ASD can get left behind academically, tend to be off task more often because they cannot stay engaged academically, and the students take up more of the teacher's time (Hundert, 2009). Other researchers have found that the students with ASD that are perceived as having more challenging behaviours such as hyperactivity/impulsivity and/or opposition/defiance commonly results in a lower quality teacher-student relationship in mainstream classrooms (Robertson, Chamberlain & Kasari, 2003). Similarly, research has found that when teachers perceive students with ASD in their classrooms to be confrontational or inattentive, student peers in the classroom also typically perceive the student with ASD to be more socially isolated (Ibid). Therefore students with ASD that are perceived positively by teachers have a higher quality teacher-student relationship, and as a result those students with ASD have an elevated social status in the classroom which allows them to be more socially accepted by peers (Ibid). Furthermore, research in the field also suggests that students with ASD who are mainstreamed into classrooms often experience bullying (Humphrey, 2008). The study suggests that students with ASD are naturally at a higher risk to being exposed to bullying because of the difficulties they experience with communication, social skills, and social isolation (Ibid). Research on the limitations of inclusion underscore the importance of investigating more closely how best to support teachers in successfully including students with ASD into the mainstream classroom. The goal of my study will be to gain further insights into how teachers are addressing barriers to inclusion.
2.5 Teachers’ Beliefs Towards Inclusion

Over the past decade, there has been a push in teacher education towards preparing new teachers to understand the significance of inclusion (Peebles & Mendaglio, 2014). According to all of the Teachers Associations across Canada, there is a consensus that members are commonly aware of the inclusive education policies in their province or territory (Thompson et al., 2014). Although teachers may be aware of the policies, however, some research has found that the initial reaction of teachers towards inclusion in their class is that it is a "policy doomed to fail" (Jordan, Schwartz & McGhie-Richmond, 2009; 535). Teachers that react this way towards inclusion report feeling that having students with ASD in the classroom can take time away from supporting typically developing peers (Hundert, 2009). The participating teachers in the study conducted by Jordan et al. (2009) also reported feeling that they lacked the training to work with students with ASD as well as the special teaching skills and instructions needed to cater to the needs of these students (Ibid). Furthermore, many studies have shown that teachers with high self-efficacy and strong beliefs towards inclusion are often more successful at including students with ASD into the classroom (Sharma et al., 2012; Ferraioli & Harris, 2011). The negative reactions from some teachers towards inclusion may stem from the limitations of teacher training they received prior to starting their professional careers (Peebles & Mendaglio, 2014).

One study conducted by Peebles & Mendaglio (2014) looked at pre-service teachers in a Bachelor of Education program at a western Canadian university. Pre-service teachers are defined as teachers who are candidates in a teacher education program (Ibid). They broke down theories of inclusion into smaller modules and also provided field experience to the teacher candidates so they could gain experience working with individuals with ASD. As a result, pre-service teachers in that program had higher self-efficacy and more confidence in implementing
inclusion into the classroom. This study points to the gaps and inconsistencies in teacher training that many teacher candidates experience. In addition, research has found that teachers who believe that students with ASD in their classrooms are their responsibility will be effective overall with all students (Jordan et al., 2009). Ultimately, the effectiveness, preparation, and commitment are clearly key elements to the successful inclusion of students with ASD in their class. Research has also found that some Principal beliefs about inclusion of students with ASD align with those of teachers. In a study conducted by Horrocks, White, and Roberts (2008), when it came to inclusion, principals had mixed feelings about the benefits of the inclusive education model for students with ASD. However, the study found that if participating principals had experience working with students with ASD, they had a more positive attitude towards inclusion and were more likely to make higher placement recommendations for students (Horrocks et al., 2008). Conversely, if principals did not have experience with students with ASD, they had less positive attitudes towards inclusion (Ibid). Therefore, there is a strong connection between self-efficacy and the belief that inclusion leads to effective outcomes for students with ASD.

2.6.0 Barriers to Inclusion

In this section I have identified areas in the research literature that discuss the challenges teachers commonly encounter in their daily practice that hinders their ability to successfully foster inclusion for students with ASD in mainstream classrooms. The most common barriers that have been identified to date include lack of training, lack of support, and the attitudes of principals and school staff.
2.6.1 Lack of Training

As previously mentioned, inclusion has been widely taught in teacher education programs. However, teacher candidates have been critical about the training they have received, citing it as mainly theoretical without having practical skills and strategies to use in the classroom (Peebles & Mendaglio, 2014). Teachers in a study conducted by Lindsay, Prolux, Scott and Thomson (2014) stressed the importance of continued teacher training and training in the teacher education program in order to be more successful working with students with ASD in their classrooms. One participant stated:

There needs to be more workshops. We need to be trained but at the same time the training is really expensive. It’s definitely a learning curve for myself as a new teacher to figure out how to include kids with autism. Having people in the school to help me and different strategies like visual supports really help because they can kind of gain some independence in knowing what to do next in their routine. (p. 109)

Similar requests for additional training were found amongst members of various Teachers Associations across Canada (Thompson et al., 2014). Teacher training is important; however it can be expensive and time consuming for teachers. A potential solution is having teachers that attend workshops present the information during “lunch and learns” to their colleagues (Lindsay et al., 2014). In other countries such as Australia, it is mandatory that teachers take a course in special or inclusive education (Sharma et al., 2012). At the same time, while having mandatory courses in special or inclusive education is important, the theoretical coursework needs to be coupled with field experience. Peebles & Mendaglio (2014), for example, found that teachers who have had the opportunity to practice inclusive strategies coupled with their coursework will
likely be more successful at implementing inclusiveness into mainstream classrooms. Another study also examined the experiences of secondary school pre-service teachers when they were provided with additional field experience working with students with special needs (Jobling & Moni, 2004). The study noted that pre-service teachers felt they were unprepared and lacked the experience to work with students with special needs even though they had learned about it during their teacher education program (Ibid). When new teachers felt unprepared to teach students with special needs in the mainstream classroom it negatively affected their perception of students with special needs as well as their attitude toward inclusion (Ibid).

Relatedly, research has also found there is a need for paraeducators to receive additional training (Simpson, de Boer-Ott and Smith-Myles, 2003). Paraeducators in this case would be Resource Teachers, Teacher's Assistants, and Educational Assistants. Often times in a classroom, work with students with ASD tends to fall heavily on paraeducators (Hundert, 2009). Paraeducators’ role in the classroom is often seen as relieving the classroom teacher’s time so they can focus their attention on the rest of the class (Hundert, 2009). If paraeducators were provided with additional training on strategies to work with students with ASD, they could help teachers be more successful in implementing inclusion through their assistance (Simpson et al., 2003; Symes & Humphrey 2012). For example they could practice social skills with students, re-explain teachers’ instructions for table work, and be better able to support the student (Ibid). Although many researchers have noted the positive relationship between teachers and paraeducators as well as the importance of having the help in the classroom, there are also some known limitations to having a paraeducator in the classroom (Robertson et al., 2003). Paraeducators that work with students with ASD tend to reduce the interaction and role of the classroom teacher with those students (Marks, Schrader & Levine, 1999). Since paraeducators play a vital role in
working with students with ASD in mainstream classrooms, it is also important to provide training and support in order help paraeducators become more successful with inclusion (Symes & Humphrey, 2012). For this reason a component of this study looked at participating teachers’ past history of training and work with paraeducators.

### 2.6.2 Barriers to Inclusion: Lack of Support

Generally, teachers feel they lack a variety of different supports in order to make inclusion more successful in the classroom (Hundert, 2009; Simpson et al., 2003). Some of the supports teachers have reported they need include: additional time to plan lessons, time to collaborate with other professionals, specialized equipment, and reduction of class sizes (Hundert, 2009; Simpson et al., 2003). First, teachers need time in their schedules to plan lessons ahead of time. When teachers are able to plan lessons ahead of time, they are able to plan more flexibility in the lesson to accommodate the student with ASD (Lindsay et al., 2014). In addition, teachers also need time to collaborate with other professionals such as Occupational Therapists, Psychologists, Speech Language Pathologists, Resource Teachers, and Behaviour Consultants. Teachers that have been provided with time to collaborate with other professionals have found that they were able to implement a wholesome approach to inclusion that utilized a variety of different strategies to help support the students (Ibid). Furthermore, teachers have found it difficult to implement strategies without being provided specialized equipment such as timers and visuals (Hundert, 2009). Without being provided with these resources, teachers find it difficult to find the time to make the resources (Lindsay et al., 2014). Similar research by de Boer (2009) echoes the importance of using aids to support students in the classroom. Aids such as visual schedules, video modeling, and social scripts have all been shown to be effective for including students with ASD (de Boer, 2009). It may seem that investing and allocating funds to
purchase resources for teachers will be costly and research has shown that investing in resources up front is indeed costly; however in the long run the cost per student is reduced (Ibid). Since more students are included into classrooms, fewer resources need to be allocated towards transporting the student to a specialized classroom (Ibid). Therefore, teachers need to be able to connect and access these resources in order to be more successful in including all students. Lastly, teachers have long argued that a reduction in classroom sizes would be beneficial to both the teacher and the student because the teacher could allot more time and attention to the student with ASD (Simpson et al., 2003). Without these supports in the classroom, teachers have a higher rate of experiencing burnout (Harrower & Dunlap, 2001). Schools need to find solutions to better support teachers in providing effective inclusion for students with ASD. Given the existing research in this area, it was important to me that I also investigate what resources support participating teachers in my research study.

2.6.3 Attitudes of Teachers, Principals, and School Environment

Another known barrier to inclusion is the negative attitudes of teachers and principals that create a negative school climate. Research in the field suggests a strong link between the positive attitudes of teachers and principals that produce a positive school climate where inclusion can foster (Simpson et al., 2003). Principals act as leaders in the school and when they have a positive attitude towards inclusion it in turn affects teachers’ attitudes and subsequently the rest of the school environment (Horrocks et al., 2008). Therefore, the attitudes of the principals, teachers, and the overall school climate are strong indicators for positive outcomes of inclusion (Sharma et al., 2012). Similarly, a positive school climate also has a strong correlation
to positive teacher beliefs, roles, and responsibilities towards inclusion (Jordan et al., 2009). Teachers also contribute to the positive school climate by building acceptance of disabilities in schools (Jordan et al., 2009; Lindsay et al., 2014). Teachers that are successful in implementing inclusion find that it is important to build a school community where other students are aware of the disabilities and are accepting of them (Lindsay et al., 2014). Teachers may have discussions or play games with students to help better understand disabilities in their community as well as exploring the idea of fairness (Ibid). Therefore, it is important to foster a positive attitude beginning with the principal, which in turn affects the teachers who help promote a school climate that is positive towards inclusion.

2.7.0 Effective Strategies for Inclusion

In this section I examine the various strategies that are most prevalent in the literature that contribute to the success of students with ASD in mainstream classrooms. Effective strategies that will be examined include antecedent strategies, self-management of behaviours, peer tutoring, and token economy.

2.7.1 Antecedent Strategies

Antecedent strategies derived from the principals of ABA have long been successful at teaching students various skills (Ashcroft, Argiro and Keohane, 2010). Antecedent strategies are important to implement in the classroom because they involve looking at situations proactively rather than reactively (Simpson et al., 2003). There have been several antecedent strategies that research has found to help promote inclusion (Ashcroft et al., 2010; Hundert, 2009; Simpson et al., 2003). The strategies most discussed in the field include prompting, priming, and visual
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schedules (Ashcroft et al., 2010; Hundert, 2009; Simpson et al., 2003). There are a variety of different prompts that a teacher could use to help the student with ASD be successful in the classroom. A prompt is described in ABA as an added stimulus used to help a student gain the skill (Ashcroft et al., 2010). In addition, by providing a prompt when teaching, it allows the student to finish the task successfully and eventually leads to independence in acquiring the skill (Ibid). Some prompts are teacher directed while others are built within the teaching stimuli (Hundert, 2009). The research shows that there are different prompts that include physical, gestural, verbal, visual, positional, and modeling (Ibid). Physical and gestural prompts are more helpful in teaching tasks that require motor skills such as writing (Ibid). Most of the time, teachers may not be able to provide physical and gestural prompts due to the student teacher ratio in the class, instead the use of visual or positional prompts can be more helpful (Ibid). For example, if you are teaching the student to spell the word “cattle” you may start with the full word. Then in the next line you spell out “cattl” leaving out the last letter and so forth until the spaces are blank. Eventually over time, the student will be able to spell the word independently (Ibid). Although prompting can be a useful strategy to help students learn new skills independently, research has shown there are limitations to using prompts. Researchers such as de Boer (2009) have cautioned that prompt dependency may develop if prompts are not systematically faded. When prompts are not faded, students with ASD are at risk for learning to respond only if that additional stimulus is present. Therefore, when using prompts the teacher must also consider fading the prompt, depending on the success level of the student, by delaying the prompt or the amount of prompt given (Hundert, 2009). Similarly, problems can also arise if prompts are not delivered consistently (Ashcroft et al., 2010). For example, if the teacher does a gestural prompt and the paraeducator was unaware of the prompt and they go in with a physical
prompt, the paraeducator has now used a prompt that is unfamiliar and the student may get
confused with the expectation. Thus, it is important to implement prompts systematically, as well
as systematically fading it in order for this strategy to be effective.

Another common strategy discussed in the literature is the use of priming. Priming is
described as a previewing of information, activities, or events that will be coming up (Hundert,
2009). Predictability can be difficult for students with ASD; therefore, priming is an effective
tool for providing inclusion. It allows students to prepare themselves to deal with the new
information or activity and thus connecting them to the larger group instruction. As a result,
students are able to participate more in social situations (Harrower & Dunlap, 2001). Events like
fire drills and assemblies can become unpredictable and challenging for students. However, by
providing priming, the students will know what to expect and are better able to manage the
situation (Crosland & Dunlap, 2012). By priming, it also reduces any potential behavioural
issues for the teacher that might arise from students’ unpredictable activities (Lindsay et al.,
2014). Therefore, it is beneficial for teachers to use priming as an inclusive strategy in the
classroom.

In addition to priming, researchers agree that the use of visual schedules in the classroom
is effective for including students with ASD (Ashcroft et al., 2010; Crosland & Dunlap, 2012;
Hundert, 2009; Lindsay et al., 2014; Simpson et al., 2003). Similar to priming, visual schedules
help students to keep track of where they are in the day and helps warn them about transitions
that will happen throughout the day (de Boer, 2009). Research has shown that students with ASD
have a difficult time with auditory processing (Ashcroft et al., 2010). Therefore, they have a
harder time processing verbal instruction. The use of visual schedules helps to reinforce the
teacher's verbal instruction for the change in the schedule. In addition, the student also learns the
labels of the activity (Ibid). In one study, approximately 90-100% of students who used visual schedules were able to use it independently (Crosland & Dunlap, 2012). This independence allows students to be validated socially and allows students to participate more socially (Harrower & Dunlap, 2001). The use of antecedent strategies such as prompting, priming, and visual schedules help to reduce challenging behaviours that can be a result of unpredictability (Ashcroft, et al., 2010; de Boer, 2009; Lindsay et al., 2014). It also allows the student to be prepared to participate more in the group setting and allows students to develop additional social skills (Lindsay et al., 2014). When implemented on a regular and consistent basis these strategies help to include students with ASD into the classroom.

2.7.2 Self-Management of Behaviours

Another effective strategy for inclusion that researchers suggest is the implementation of self-management of student behaviours (Ferraioli & Harris, 2011; Harrower & Dunlap, 2001). Teaching students to manage their own behaviours is effective and can be less stigmatizing for the student (Ferraioli & Harris, 2011). This strategy alleviates the teacher's time in dealing with inappropriate behaviour and teaches students to recognize and manage their behaviours while positively reinforcing themselves for the appropriate behaviours (Ibid). Self-management can be successful if the students are taught to identify appropriate and inappropriate behaviours, evaluate themselves, monitor their behaviours, and to reinforce themselves for good behaviour (Harrower & Dunlap, 2001). Research has shown that when students are able to self-manage their behaviours, they are less likely to require one-to-one support from adults, thus freeing the student and allowing them to be more involved in classroom activities (Ibid). Furthermore, when
students with ASD are more engaged in classroom activities, it provides more opportunities for the students to socialize with peers in the classroom (Crosland & Dunlap, 2012). When students are able to self-manage their behaviours, it also promotes classroom independence (Ibid).

Teaching students self-management skills can have a positive outcome for inclusion because students will decrease their disruptive behaviours. There is less reliance on one-to-one support, and it frees up time for the student to participate as a member of the classroom. This creates opportunities for an increase in social skills for the student.

2.7.3 Peer Tutoring

Much of the literature in the field supports the role of the peer in working with students with ASD. It has resulted in positive outcomes such as increase in social skills and on-task behaviour (Harrower & Dunlap, 2001). Inclusive classrooms that have been successful have been able to pair students with ASD with a typically developing peer. The peer is able to provide instructions, assistance, as well as feedback to the student with ASD (Ibid). Similarly, Lindsay et al. (2014) found that teachers were successful if they created a buddy system where a student with ASD is paired with a typically developing peer. The peer would assist with class work which would alleviate the need for more one-to-one work with the teacher, and it also allowed students to develop a larger network of friendships in the classroom (Ibid). In addition, the opportunity to work with typically developing peers allows students with ASD to experience more positive emotional outcomes, as well as encourage more opportunities for students to practice their social skills (Ferraioli & Harris, 2011). Furthermore, by pairing students up, it also helps to foster positive and accepting relationships between the students (Simpson et al., 2003).
Typically developing students are also able to help keep the student with ASD on track by consistently providing feedback which results in the student with ASD functioning and learning in a manner of a typical classroom (Harrower & Dunlap, 2001). Studies have also shown that peer tutoring has resulted in increased fluency for math and reading for students with ASD (Ferraioli & Harris, 2011). The research in the field has revealed only positive outcomes for peer tutoring. I have found no research to suggest that peer tutoring has any negative effects on students with ASD and typically developing students.

2.7.4 Token Economy

Students with ASD generally have difficulty being intrinsically motivated to work (Lindsay et al., 2014). Instead, students with ASD commonly rely on external motivators in order to learn (Ibid). Research in the field of ABA has shown that the use of positive reinforcement is linked to the increase in desired behaviour (Ashcroft et al., 2010). Therefore, teachers in the classroom can use a token economy to motivate students to learn. The students are taught that when they perform a desired behaviour, they are reinforced with a token. The student with ASD earns a set amount of tokens that can be exchanged for a reward (Ibid). Teachers who implemented the token economy noted how successful it is as a proactive measure to manage challenging behaviours (Lindsay et al., 2014). Tokens can be used effectively only when they have been used to increase the desired behaviour. The tokens also have to be portable and when the set amount of tokens is earned, the access to reward is granted (Ashcroft et al., 2010). Similar research goes on to mention that the motivators/rewards need to be interesting to the student. If the student is not interested in the reward, then there is no motivation for the student and the
token economy would not work (Lindsay et al., 2014). Also, in some token economies when undesired behaviours occur, tokens can be removed. The student will need to earn the tokens back by displaying the desired behaviours (Ashcroft et al., 2010). Therefore, the use of a token economy can be beneficial in motivating students with ASD to be on task, display desired behaviours, and to learn. By having this strategy in place, students will be in a better position to learn in a general classroom.

2.8 Conclusion

The review of the literature has helped clarify the significance of inclusion through an examination of the benefits and limitations of the inclusive classroom model. Research to date has found that there are links between teacher’s beliefs about inclusion and the successfulness of inclusion in their classrooms. The range of known barriers facing teachers and students in this area underscores the importance of learning more from exemplary teachers who do this work and how they confront and respond to these in their practice. Research on known effective strategies used to include students with ASD helps inform the main research question while providing a lens through which to make meaning of the practices reported by participating teachers. The results of my study will therefore contribute meaningful insights into this research base by learning how new teachers become successful at including students with ASD into mainstream classrooms. This information could be used by teacher education programs to improve their special education courses as well as workshops for school boards in order to better assist teachers with including students with ASD into mainstream classrooms.
Chapter 3: RESEARCH METHODOLOGY

3.0 Introduction (Chapter Overview)

In this chapter I describe my research methodology. I begin by reviewing the general research approach, procedures, and data collection instruments before elaborating more specifically on my participant sampling and recruitment. Next, I explain my data analysis procedures and review ethical procedures pertinent to my study. Furthermore, I identify the range of methodological limitations but I also speak to the strengths of the methodology. Finally, I conclude the chapter with a brief summary of key methodological decisions and my rationale for the decisions given the scope of the research purpose and question.

3.1 Research Approach & Procedures

This research study was conducted using a qualitative research approach involving a literature review and semi-structured interviews with three teachers. A qualitative research approach was used because it provides opportunities for the participants to describe their lived experiences and it allows me to understand the setting and context of the participants in order to better address the research problem (Creswell, 2013). The value in using a qualitative research method is that it enables me to learn through the lens of the first hand experiences provided by the participants. These experiences provide opportunities for me to delve deeper into the significance and meaning of their stories (Ibid). In addition, this research method is important in providing information to participants based on the results of my findings (Ibid). By using a qualitative research method it provides my participants and I with an opportunity to be reflexive on the findings in order to improve our practices and address the research problem (Ibid).
3.2 Instruments of Data Collection

Given the parameters of the ethical protocol approved for the Master of Teaching program, I conducted this study using semi-structured interviews (See Interview Protocol in Appendix B). A semi-structured interview allows for flexibility with asking follow-up questions based on the participants' response to the previous question (Turner, 2010). In addition, in a semi-structured interview there is a clear set of questions, but with enough flexibility to change questions, which allows the researcher to direct the interview while being open to new directions raised by participants (Denscombe, 1998).

An interview method was the most appropriate instrument to use in this research study because it provided a platform for participants to give an in-depth account about their experiences that relate to the research problem (Turner, 2010). Also, a face-to-face interview gave the participants an opportunity to elaborate in detail on their first hand experiences and allowed for the flow of information to be directed straight from the participant to the researcher (Denscombe, 1998).

3.3 Participants

In this section, I review the sampling criteria I established for participant recruitment and the range of avenues I took to recruit teacher participants. I also introduce the research participants.

3.3.1 Sampling Criteria

The goal of my research study was to investigate what successful practices new teachers are using to include students with ASD into mainstream classrooms. I began my data collection
by establishing sampling criteria as guidelines for recruiting my participants. Below is the criteria used to select my participants:

1. They had one to six years teaching experience in a full-time position.
2. They had experience working with students with ASD in mainstream classrooms or they had experience working with mainstream classroom teachers to integrate students from other classroom settings.
3. They were teachers in the primary/junior elementary grade.
4. They had demonstrated leadership in the area of including students with ASD into the mainstream classroom.

I chose to select teachers with less than six years teaching experience to reflect the scope of my research problem. The goal of my research was to find out how new teachers were successfully including students with ASD into mainstream classrooms. Therefore, the information gained from this study can potentially be beneficial in helping all teachers be successful at including students with ASD into mainstream classrooms. In particular, I have defined “new teacher” as having one to six years of full-time teaching experience to account for the high levels of unemployment that beginning teachers face right after graduating (Ontario College of Teachers, 2013). In a recent study published by the Ontario College of Teachers (2013) they found that since the year 2002 the number of graduates that were getting jobs was decreasing; in 2013, only half of recent graduates were able to get daily supply teaching work and 1 in 5 teachers in their third to fifth year of teaching were still doing daily supply work (Ontario College of Teachers, 2013). Therefore as a result of these findings, I have set my sampling criteria to one to six years teaching experience in a full time position to account for the
daily supply teaching and the lack of full-time employment that new teachers face after graduation.

Next, I established that the participants needed to have experience working with students with ASD in mainstream classrooms or experience supporting classroom teacher in integrating students into the mainstream since this was the primary focus of my research goal. In addition, I also established that the participants needed to be in the elementary grades since I was interested in how the results could inform my own practice as a beginning teacher in these grades.

Lastly, I established that the participants needed to have demonstrated leadership in the area of including students with ASD into mainstream classrooms. Some examples of how they might have demonstrated leadership included participating in additional workshops or training, as well as going above and beyond the IEP to help support the student with ASD in mainstream classrooms. I was also open to receiving recommendations from paraprofessionals, colleagues, or principals based on the quality of leadership they observed through their work with new teachers. These established criteria are guidelines that helped me find my sample of participants to interview.

3.3.2 Sampling Procedures

Once I established guidelines for my sampling criteria, I started the recruitment process for locating potential participants. One of the strategies I used to find my participants was purposeful sampling. I reached out to my network of former colleagues from the Geneva Centre for Autism as well as former colleagues from Surrey Place Centre. I purposefully reached out to a transition worker at Surrey Place Centre whose job is to transition students out of the IBI program into school classrooms. By reaching out to this former colleague, I was able to find
participants that would have significant impact on my research topic (Teddlie & Yu, 2007). Another strategy that I used to recruit participants was the use of convenience sampling. Although participants were purposefully selected, they were also convenience samples since I relied on my existing network of colleagues and peers to recruit participants who were readily available and willing to participate in the study (Collins, Onwuegbuzie & Jiao, 2007). The use of convenience sampling was beneficial to this research study given the parameters established by the Master of Teaching program as well as the time frame for this research study.

When recruiting participants I followed guidelines by explaining that the study was being conducted as a program requirement for the Master of Teaching degree at the University of Toronto to ensure participants understood that this was an authentic research study (Denscombe, 1998). Another ethical guideline I used when locating participants was to explain the purpose of the study and to ask participants for their permission to participate. This helped to ensure that participants knew they were not obligated to participate in the study (Creswell, 2013).

3.3.3 Participant Bios

For the purposes of this study I recruited three participants that met my sampling criteria.

Carol

The first participant was a female teacher who had been teaching for six years with the Peel District School Board. Carol was on maternity leave at the time of the interview, but prior to that she was working in a middle school teaching grades 6, 7, and 8 rotary math. In Carol’s teaching career she had experience integrating students from a contained ASD classroom into her mainstream classroom, working with students with ASD in her mainstream classroom and working with students with ASD in a gifted classroom. In teachers college Carol explained that
their were no specific courses on ASD, however she did have unit work that had to do with supporting students with ASD in the classroom. In addition, Carol has taken an additional qualification course on special education.

**Megan**

My second participant was a female teacher who had been teaching for four years with the Toronto District School Board (TDSB). At the time of the interview, Megan taught a grade 1, 2 split at a primary junior school. Megan had some previous experience integrating students with ASD into mainstream classrooms, she demonstrated leadership through her work with the ASD team at her school to integrate a student with ASD into her mainstream classroom. Moreover, Megan also had past experience integrating a student with ASD into her French immersion primary classroom in the TDSB. Her passion for including students with ASD into mainstream classrooms originated from her experience in seeing her brother grow up and go to school with a learning disability. In teachers college Megan took a course called Understanding, Managing Social-Emotional Behaviour Problems in the Classroom. Megan felt that the course provided her practical strategies for understanding and addressing students’ social-emotional behavioural needs.

**Kelly**

Kelly was a female teacher who had been teaching for four years with the TDSB. At the time of the interview, she was working in an autism classroom in a primary junior public school in the TDSB. Prior to working as a teacher, Kelly had worked at the Geneva Centre for Autism for three years as an instructor therapist before pursuing her Masters of Arts in child study at
OISE. Kelly has demonstrated leadership by training and supporting mainstream classroom teachers on how to integrate students from her autism classroom into the mainstream classroom.

The three participants brought a variety of different experiences and backgrounds to this study. Their lived experiences helped provide insight into how beginning teachers are supporting the inclusion of students with ASD in mainstream classrooms.

### 3.4 Data Collection and Analysis

The interviews were audio recorded using an iPad in order for the responses to be transcribed, analyzed, and coded. I used the research questions as an interpretative tool to gather information from the participants. Each interview was transcribed individually line by line and read over thoroughly in order to better capture the participants' stories (Creswell, 2013). In addition, when rereading the transcripts, I made memos on ideas or key concepts that emerged throughout the interviews (Ibid). By making memos on the individual transcripts, I coded them before categorizing the data and identifying themes (Ibid). The process of coding the transcripts involved reading the text and assigning codes for certain key concepts (Ibid). Coding the text allowed for a comparison of the interviews side by side in order to categorize emerging themes (Scheurich, 2006). Once the transcripts were coded, I was able to synthesize themes across the transcripts in order to make meaning and interpret the information to see how it connected to the larger scope of the research literature that I have reviewed (Creswell, 2013). By interpreting themes focused on certain elements that emerged (for example, the limitations of teacher training). It also allowed me to identify convergences and contradictions with the literature that was reviewed and to investigate the silences of what was not said directly by participants (Ibid).
Therefore, the process of transcribing, coding, and analyzing, the data helped me to identify themes and interpret the data within the scope of the research in this field.

3.5 Ethical Review Procedures

Throughout the process of this research study, every effort was made to address ethical considerations that could arise. The process began when participants were told the purpose of the study. They were also informed multiple times throughout the stages of the research that they could withdraw from the study at any time (Creswell, 2013). Once participants agreed to the study they had to sign a consent form (appendix A) acknowledging their participation, the purpose, and the process and expectations of the study (Ibid). The consent form asked for permission to be interviewed and audio recorded for 45 to 60 minutes. Moreover, the consent form also assured participants that any information collected and stored would be destroyed after five years to protect the participants' privacy (Ibid). They were also assured that the data would be stored electronically on a password protected computer in order to secure the data (Ibid). For the purposes of this study, all participants were assigned a pseudonym in order to protect the identities and confidentiality of the participants (Ibid). Any other markers related to the participants' information about the schools and students were excluded. In addition, there were minimal risks of participating in the study. Participants were reminded that they could refrain from answering any questions they were not comfortable with answering. Similarly, I sent the participants a copy of the transcript to be reviewed and invited them to let me know of any information they did not wish to be included (Schurich, 2006; Denscombe, 1998). Finally, all efforts were made to select a location that minimized any noise distractions, but allowed participants to feel comfortable when sharing their experiences (Creswell, 2013).
3.6 Methodological Limitations and Strengths

The methodological limitations included the limited size of the sample, use of a single research method, the absence of body language in the transcripts and the power relationship between the participant and I. Given the parameters of this research study and the scope of research that was approved by the University of Toronto, the sample size was limited to only three participants. Although the sample size is small, it still helped inform my research study but it did not allow for generalization (Collins et.al, 2007). Similarly, I was also limited to using a single research method. By only using semi-structured interviews I was unable to use other methods such as observing participants in their classrooms, conducting surveys, or focus groups. If I was able to use a mixed research method, it could have provided additional information about the participants' practices and provided quantitative data for the research (Ibid). Another limitation was the absence of the physical body language and the intonation of the verbal responses by the participants when the interviews were transcribed (Scheurich, 2006). With the absence of these physical and nonverbal elements from the participants, I may have missed the deeper meaning between what the participants were trying to say compared to what actual words they were saying (Ibid). Lastly, I acknowledge that there is an underlying inequity in the power relationship between the participants and myself, given the nature of the roles of the interviewer and the interviewee (Ibid).

Although there are some limitations to this research methodology there are also strengths, which include first count experiences from participants, reflexivity, and flexibility of the data. By interviewing participants, it gives the opportunity for the participant to go in-depth with their first hand experiences and allows them to construct a story from their experiences to find out
what matters to them (Ibid). Interviews can also validate the participants’ voices and provide them the opportunity to make meaning out of their lived experiences (Creswell, 2013). Moreover, this methodology allows participants an opportunity to reflect on their own practices and to be reflexive of their experiences (Creswell, 2013). Therefore, participants have an opportunity to gain additional insights into strategies of including students with ASD into mainstream classrooms through the results of this study. Also, as a method of data collection, an interview allows the answers to be flexible; since I used a semi-structured interview, it allowed me to ask follow up questions based on my participants' lead (Denscombe, 1998). The use of surveys would not be beneficial in this research study because it would not allow me to probe additional questions and to get the deeper meaning from the answers the participants provided (Ibid). Although this methodology has limitations, the overall strengths of this methodology are suitable for the scope of this research given the parameters from the Master of Teaching program.

3.7 Conclusion

This chapter focused on the methodology used in this research study. The use of a qualitative study was implemented given the scope of the research study. However, the use of a qualitative study was appropriate because it allowed me to make deeper meaning into the first-hand accounts of my participants. In order to accomplish this, I conducted semi-structured interviews with three participants who had one-six years of full-time teaching experience and experience working with students with ASD in mainstream classrooms or experience supporting mainstream classroom teachers in integrating students with ASD into their classrooms. These teachers taught in the primary and junior elementary grades and demonstrated leadership in the
area of including students with ASD into mainstream classrooms. Next in Chapter 4, I report the research findings.
Chapter 4: FINDINGS

4.0 Introduction

In this chapter, I report and discuss my findings that were derived from the three interviews conducted with two Toronto District School Board teachers and one teacher from the Peel District School Board. The data gathered from these interviews respond to my research questions focused on how beginning teachers are supporting the inclusion of students with ASD in mainstream classrooms. I have organized my research findings into seven different overarching themes, as well as several sub themes. The overarching themes include: 1) beginning teachers implemented a wide variety of pedagogical strategies that they believed were effective for successfully including students with ASD in the classroom, 2) participants believed that it was important that new teachers be prepared to understand the range of barriers to fostering inclusion for students with ASD that they will confront in schools, 3) when asked about supporting factors, teachers tended to defer to identifying challenges rather than naming specific supports, 4) Participating teachers came into the profession with a wealth of experience working with students with ASD and as well as knowledge about supporting these students 5) teachers identified resources such as having books, support from school administrators, staff, and other paraprofessionals as measures for aiding teachers in their effort to be more successful at including students with ASD into mainstream classrooms, 6) participants believed that students with ASD can benefit from having a separate classroom outside of the mainstream classroom that acts as a home base for learning skills while integrating them into mainstream classrooms and 7) Participants believed that new teachers need to carry the attitude and belief that they can make a difference at including students with ASD. I report each theme in turn.
4.1 Beginning teachers implemented a wide variety of pedagogical strategies that they believed were effective for successfully including students with ASD in the classroom.

All three participants implemented a wide variety of pedagogical strategies that they believed were effective for successfully including students with ASD into their mainstream classrooms. Specifically, seven strategies stood out.

4.1.1 Teachers implemented discussion through one-on-one conferencing and as a whole class as a means of setting clear and concise expectations of students with ASD in mainstream classrooms.

The participants identified the need to implement and set clear expectations for students with ASD in mainstream classrooms through discussions, one-on-one conferencing, and as a whole class. It was important for teachers to teach their whole class how to address challenging behaviours that they did not like from the student with ASD. As Megan described, “I think one huge thing that worked for everybody is the clarity and being super clear about what you like and why, and what you don't like and why.” By empowering the peer to provide feedback to students with ASD, Megan felt this allowed the students with ASD to understand what the expectations are and what social actions are appropriate in school. Similarly, Carol found that she needed to explain to the class how students with ASD do not understand facial cues and for this reason she stressed that the class needed to be more patient with them. In her words Carol stated:

I would say explicitly teaching the other students the expectations. So maybe we might send [student with ASD] outside of the room and we would say, ‘Today we will be doing group work, how would you deal with a student who is not co-operating with you?’ and we would talk about it and that would [be] an instructional strategy. We are trying to explain to the students while [the student with ASD] is out of the room that it is hard for him, he doesn't understand facial cues so we are going to have to be a little bit more patient.
As a result of explaining the expectations to the class as a whole, Carol felt that students are better prepared to understand how they can help support students with ASD in the classroom. These findings are consistent with research conducted by Harrower & Dunlap (2001) who found that utilizing peers to provide feedback in turn helps the student with ASD better self-manage their behaviours. They also found that it tended to alleviate the pressure for the teacher who may constantly need to remind students with ASD of the expectations. Participating teachers in my study also noted the importance of conferencing with students with ASD one-on-one from time to time, in addition to this whole class work. However, they felt that if teachers can empower the whole class to help make the expectations clearer for students with ASD, then there is less pressure for that responsibility to be solely on the teacher, thereby freeing up some of the teachers’ focus to use elsewhere in the class.

4.1.2 Teachers created a community that was comfortable and safe for students with ASD by integrating subjects that were easier for them.

Teachers recognized that at the beginning it could be difficult for students with ASD to integrate into a mainstream classroom. Therefore, teachers have found it easier to make students with ASD feel comfortable by starting the integration process through integrating students into subjects that were easier and more comfortable for them. As Kelly explained:

So just kind of starting off with some of the easier subjects is what we usually do when we start integration, so those subjects usually are gym and music. And for some students, gym can be an anxiety provoking subject, so we won't do it for a while, but for others it's something that they are really good at. Something that is easy for them that they enjoy, so that would be the first subject usually one of those two.

By easing students with ASD into mainstream classrooms, teachers found they were able to create a classroom community where students began to feel included. They also thought that it was important that teachers begin the integration process they can also deemphasize the
academic components of the class in order to allow the student with ASD time to process being in a classroom with other students. Carol, for example, explained:

A lot of times I am faced with students with ASD being integrated into my class and they have some degree of low self-esteem, either the kids know they don't belong here [or] they know ‘I am just visiting,’ ‘I don't want to participate,’ ‘I don't want to raise my hands.’ So those kids benefited with me coming to them with a relaxed approach. ‘Hey I know you're not technically a part of this classroom and the kids know that you're not technically here in this class but they get that you're here for this math period. They get that you're a part of the class right now. So just take it easy for a week, for a month, until you feel comfortable I am not going to push you into it and also for my academic perspective. Listen you missed the first unit of the year, that's fine, I will give your contained teacher the work we did and when you're back there you can catch up if you want. I am not going to grade you on the stuff you missed.’ Trying to help them feel comfortable with ‘Listen you're here now’ and ‘We are going to deal with that now, we don't have to worry about the past or the future.’ I think that helps with not being overwhelmed with being in a new setting, having to deal with mainstream kids all of sudden. So I think the relaxed, lowering the expectations temporarily was a good strategy to use with most students with ASD.

Carol believed that using this relaxed approach created a more conducive environment for students with ASD to feel safe and comfortable about integrating into a mainstream classroom. Indeed, research supports the view that the teacher has an important role in building a positive classroom and school climate where the students with ASD feel accepted (Jordan et al., 2009; Lindsay et al., 2014). Therefore, it is important when beginning the integration process to find out what subjects students with ASD are more comfortable with and beginning with those in order to build a climate where students feel comfortable learning in. In addition, teachers may want to consider minimizing an initial emphasis on academics so that students with ASD don’t get anxious or overly focused on academics while trying to process their experience integrating into a mainstream classroom.
4.1.3 All teachers commonly used various visuals and graphic organizers as resources for fostering the inclusion of students with ASD.

All research participants found that using various visuals and graphic organizers were important resources for helping students with ASD to integrate into mainstream classrooms. One of the visuals commonly used in classrooms was a visual schedule. Teachers recognized that using a visual schedule in the classroom allowed students with ASD to follow the classroom routines and to anticipate what would be coming up in the schedule. According to Kelly:

And then of course having a visual schedule, my students go to a lot of classes and usually have the main schedule on the board. But I will have an individual schedule - schedule with a mix of subjects that they are doing in my class and what - when their integration subjects are. Some days it might say, ‘Writer's workshop,’ ‘Working with words,’ which is scaffolded into my class, then gym or music. They know that they are going to a different class. So it was not like they come to school and think ‘Well so you're going to music with so and so's class today,’ they always know and they usually know their schedule on a day 1 to 5 rotation. So that usually helps.

Kelly’s experience is consistent with research conducted by de Boer (2009) who found that students are better able to keep track of where they are in the schedule. As well, this is consistent with the research of Harrower & Dunlap (2001), who found that students who use visual schedules are more independent and socially validated in the classroom. Carol had observed similar outcomes:

So every single student in the class had their own schedule and we talked as a class, because it's grade 6 and it's the first time it's middle school that they are moving around a bit more. So period 3 they have to go someplace so it's the first time that they are doing that so we would talk about maintaining - keeping your stuff organized, colouring in your schedule, colour coding things so you know what to take out of your locker. That's all stuff that's helpful for a student with ASD, but also useful for every kid.
Visual schedules are a useful tool that is beneficial for all students, because it allows students to keep track of where they are in the day as well as preparing them for junior high school where there will be more physical transitions in the day.

Teachers and support workers can create their own visuals that are tailored to meet the needs of the students with ASD in their class. For example, Megan’s student with ASD was having difficulty with social skills, which led to challenging behaviours. Megan created a behaviour rehearsal card that allowed her student with ASD to practice different scenarios of social skills and what the consequences would be before going to recess. Megan explains:

[The] behaviour rehearsal card [shows that the] behaviour [is] either positive or negative whatever it is, and a negative and positive outcome and that one was awesome [strategy]. He loved it and I would give it to him at the beginning of the day. He would sometimes pursue specific students that he was interested in hanging out with by taking things away from them and by running around. And so ‘I don't take my friends things.’ in the behaviour box and underneath it would say, ‘When my friend is happy with me, I am happy, maybe we play at recess.’ And then up at the top would be like ‘My friend is frustrated and I am upset and maybe we don’t get to play at recess.’

By creating visuals that were tailored specifically to the needs of students with ASD, Megan felt it was easier for teachers and students to predict some consequences that could arise for that student and help the student navigate the best outcome for different situations. This idea is supported by Lindsay et al. (2014) who argue that when you have practiced the various outcomes it can potentially reduce problem behaviours that arise from situations that the student needs help with. Furthermore, if research has shown that students with ASD have difficulty with auditory processing (Ashcroft et al., 2010), then having a visual may help reinforce the concept for the student with ASD. Megan also used a graphic organizer that helped her student with retelling stories. She explained, "For example, retelling a story he had a card that said like who, what, where, why, and how. So there were the same pictures and the same questions asked in the same
way each time so he knew what to do." She found that using a graphic organizer visually laid out the expectations for students and when used consistently, students commonly became more independent using it. These findings are significant because teachers that implement a variety of different visuals that are tailored to the students’ specific needs can help foster inclusion in their classrooms for students with ASD.

4.1.4 Teachers implemented reward systems and coupled these with verbal social praise in ways that aligned with students’ interests in their effort to motivate them.

Participating teachers often implemented reward systems and coupled these with verbal social praise that aligned with students’ interests in an effort to motivate them. Teachers often rewarded students with either points or stickers, and when they received a certain amount they could get access to a reinforcer such as playing on the iPad, movie period, or playing with certain toys. Often times, teachers rewarded students with ASD points for demonstrating appropriate on-task behaviour. Kelly explained that her students “usually will get some type of reinforcement or points for their day if they have a good integration class.” Here, she gives a specific example of how she uses the application “Classroom Dojo” this way:

Usually, each kid gets [a] monster icon beside their name and so instead of giving out a token, they get to have a point on the board as their token. So they can actually give it to themselves and there's a number of specific praise that goes with it: on task, following instructions, sharing. There's ones that it comes with or I can make up praise sentences for them to give themselves. I have seen other teachers using that in their classrooms. They don't use it as intensely as I do. I have a high level of reinforcement for my students. That board is pretty much going all day, it makes a sound and you'll hear that quite often throughout the day. Whereas other teachers might use it and students maybe get a reward once a week or the student with the most points gets rewarded so they use it differently but it's the same app. I just use it more throughout the day than the regular classroom teachers.

Through the use of this application, students get rewards for on-task behaviour throughout the day. Kelly then couples it with praise sentences so that students are aware of the good behaviour
they are demonstrating. Similarly, Carol uses a sticker reward system to reward on-task behaviours and when students have collected enough stickers she rewards them with a movie period:

It is a group based rewards program. So I always have [sic] - almost always have the students in a group, usually a group of 4 and they usually stay in that group all the time. If they are doing something good, if they are all getting along, they all have their homework done, they will get a point - a sticker that they then put up on the board. When everyone has reached a certain number, then they get a reward; a movie period or something like that. The grade 6’s really buys into it. So much so to the point if they - if a student causes them to not get a point or to lose a point, it does become a point of contention. It's motivating usually - most kids want the approval of their group and it works out for me, the kids monitor their own behaviour.

One of the outcomes that Carol observed was that students were then able to monitor their own behaviours and others in order to access the reward. Kelly and Carol’s examples reinforce existing research demonstrating that students with ASD learn best with external motivators such as tokens and rewards that lead to an increase in desired behaviours (Ashcroft et al., 2010, Lindsay et al., 2014). By coupling the verbal social praise with the token/point for the reward, teachers can clearly point out to students what they liked and will likely result in an increase in desired behaviors in the future. It is important to note that the participants recognized the need to use rewards that were motivating for the students. In particular, teachers might offer students a choice of rewards that appeal to the students’ interests and is motivating for them. For example, Megan explains, “I think kids respond a lot when you give them a lot of control over their choices, a greater sense of ownership over their choices when they understand why they are doing something or not doing something.” Indeed, tokens and reward systems only work when the student is interested in the rewards (Lindsay et al., 2014). Only then will students become motivated to learn. This finding is significant because it echoes the findings in the literature
review that implementing a reward system can be useful for teachers in helping students with ASD integrate into mainstream classrooms; it outlines desired behaviours and helps to reinforce the likelihood that the desired behaviours will increase. However, teachers also need to keep in mind that the rewards need to be based off of individual students’ interests and motivation.

4.1.5 Teachers provided students with feedback and created opportunities for peer-feedback as a tool for enhancing self-management of behaviours for students with ASD.

Teachers found that providing students with ASD feedback as well as having peers provide feedback helped to enhance their self-management of behaviours. Teachers also found it important to teach peers to give feedback to the students with ASD in ways that emphasized the consequences that can result when they are doing something undesirable. In Megan’s words:

So peer feedback was really important like I said before, the kinda naturalistic consequences…We got to a place where the kids would be like ‘I don't like it when you do x, it makes me feel y, please stop.’ So they were able to explain clearly what it was that needed to stop and why that needed to stop and how it made them feel.

By utilizing peer feedback, Harrower & Dunlap (2001) argue that the peers can keep the student with ASD on track by consistently providing them with feedback. Furthermore, the teacher can provide ongoing feedback as well and check on the students’ integration process. Kelly described checking in on her student’s progress:

When they come back we can either tell that they had a good experience there, because they are all verbal so they can tell me things went well, or this didn't go well so they are able to tell me if something went wrong and then we can kind of work from there. I will usually sit down with them and we'll ask, ‘What can we do to help you?’ ‘How can we make this go better next time?’ ‘What can you do to make it go better?’ And we will also talk to the teacher about what happened in the classroom. If there was a problem then we would kind of look at from [sic] there and see if we can figure it out for the next time.
Teachers who provide ongoing feedback can also help keep the students with ASD on track. Participating teachers believed that teachers who enable students to give feedback to the peers also provide the opportunity for the students with ASD to see proper peer modeling. In addition to developing meaningful relationships with their peers, ongoing feedback is significant when trying to foster inclusion because it can provide ongoing feedback of what is working for the student with ASD and what is not working (Ferraioli & Harris, 2011).

4.1.6 Teachers differentiated instruction by allowing students to draw or write for their assignments and they provided accommodations for the students with ASD in the form of breaks and additional time.

Participating teachers reported that they often differentiated their instruction to allow students to draw on their areas of strengths in order for them to participate meaningfully in the classroom. Megan, for example, described one particular student:

He loved to write and draw. Writing and drawing were some of his favourite strongest points, because he had done the English program the year before. So I would have him write or draw the science material. [He would] write and draw about the new math we were learning, that was something he was comfortable doing.

Participants believed that when teachers differentiate their instructions for their students, it can create a positive environment that includes students with ASD. Similarly, teachers found other ways of accommodating their students by providing them with frequent functional breaks or by giving them extra time to get places. Carol gave this example of one of her students:

We started giving him a ten minute heads up before the end of the school day because he [sic] - he explained to us that it was extremely stressful for him to get his stuff out of his locker and make the bus on time. No matter how much we explained the bus isn't going to leave without him, it was stressful for him so we gave him a 10-minute head start at the end of the way, which helped a lot.
Megan also described the significance of providing opportunities for breaks, even if it meant just taking a walk with a friend to the office to deliver something or just to say hi. By differentiating instruction and by providing the students the accommodations that they need, their students were given the opportunity to participate in the class, which research has found can lead to the increased development of social skills (Lindsay et al., 2014). This finding is significant, because it shows that when teachers can accommodate their students, they can remove the layer of anxiety and stress that the students with ASD hold so that they can focus their attention on learning the academic skills in class.

4.1.7 Teachers used priming strategies to allow students with ASD to preview and practice skills before the teacher taught the lesson to the rest of the class.

The research participants found that using priming strategies allowed their students to preview and practice skills they taught them to the whole class. As a result, in their view students with ASD were better-prepared and participated more meaningfully in class discussions when the lesson was taught to the whole class. In Megan’s class, her student with ASD was fortunate enough to have a private therapist that would practice, ahead of time, the learning skills that he needed in order to participate in the lesson. Megan explained:

So I would send home notes on what we were about to study, including vocabulary books they might try and activities they might use to prep him. His parents, and also a private therapist, would work with him before the unit started to give him some content knowledge and we found that really helped.

By allowing the student with ASD to preview materials ahead of time, it allowed the student to develop content knowledge that they may not have had prior to the unit beginning. As a result, Megan found that:

…pre-teaching was really effective in terms of introducing new areas of study. I found he was more able to speak more meaningfully in classroom discussions and
activities, and was more engaged. He loved to participate in discussions, but the number of times he participated [that] was on topic went up a lot after the pre-teaching started.

Given that predictability is difficult for students with ASD, allowing students to preview information ahead of time can minimize the student’s chance of being left out of the learning process (Harrower & Dunlap, 2001). These findings are significant because if teachers want to include students in the academic work, it is important that they create opportunities for students with ASD to preview the information ahead of time in order to gain some background knowledge to participate meaningfully in the classroom.

4.2 Participants emphasized the significance of enhancing teachers’ content knowledge of known barriers to inclusion for students with ASD.

Participants identified several barriers when trying to include students with ASD into mainstream classrooms. These barriers included the limited amount of resources and accessibility to these resources, the need for in-depth training, and professional development. Research participants believed that it was important to share these concerns with new teachers, so that they are better prepared when encountering these barriers when they are trying to include students with ASD into mainstream classrooms.

4.2.1 Limited amount of resources and accessibility hinders a teachers’ ability to include students with ASD.

Teachers believed that there were a limited amount of resources they could access for help when including students into mainstream classrooms. Specifically they identified a few, the limitations of books, limited access to Behaviour Consultants, and access to software for creating visual aids such as board maker. As a new teacher, Megan wanted to find other resources aside from books. She wanted to find knowledgeable professionals that could give her advice. In Megan’s words, “I had really limited resources and just knowing that there are clear resources
out there and finding avenues for people with information is really important. Because I think you can learn a lot from books, but you can learn even more from people.” Likewise, Kelly shared an experience she had with the ASD team, explaining “…there is an ASD team but they take forever to come in and then usually when they come in, if they come in, they don't really have a lot more advice than that kind of basic stuff we would have already tried.” The limited access to resources does not help the teachers because they want to find a specific type of help or they find that the limited resources that they do have to be not helpful at all. Megan described her experience not knowing where to even begin to access resources. She explained that, “The first year I had a student with ASD, I had no idea how to get in touch with people who had ideas and resources for people.” This finding is significant because it emphasizes the importance of school boards and professionals working closely together on making resources readily available for new teachers. Furthermore de Boer (2009) claims that although investing in resources can be costly up front, in the long run it is worth it for the students. Therefore, school boards can potentially consider allocating funds to invest in new resources that could be easily accessible for new teachers. Another example of the difficulties in accessing resources for the students with ASD is echoed in Carol’s experience. Carol described her experience working with an Educational Assistant: “She was also supporting a student with down syndrome in the class. So we kind of felt that his behaviours were taking away from that other student, which didn't seem fair because they were supposed to be sharing that support.” By not being able to access resources, new teachers miss the opportunity to have support readily available for them to aid in their efforts for inclusion. These barriers that the teachers identified are consistent with findings of others who have underscored the challenges teachers face accessing the kinds of resources that necessary for supporting the meaningful inclusion of students with ASD (Lindsay et al., 2014; de Boer’s,
Nevertheless, when teachers do use the limited resources at their disposal, they can work really well. For example, in Megan’s case when she worked with the ASD team she felt:

> It was so great to have people who I could reach out to and say or write an email to say ‘This is the problem in my class right now. I have tried this, this and this. What do you recommend?’ And they turn around and offer me concrete strategies knowing me, knowing my classroom, and knowing him. They were an amazing resource.

Although there are limited resources out there and accessibility to the resources can be challenging, these teachers stressed the importance of teachers becoming familiar with the resources that are available in order to find out what would be useful for them. Similar to Kelly’s case, when Megan was also able to access the ASD team she thought it was an amazing resource that aided her in fostering inclusion in her classroom.

### 4.2.2 Teachers identified the need for school boards to provide in-depth teacher training and professional development that could help teachers become successful with inclusion.

When participants were asked about their training and professional development experience for working with students with ASD, they responded by saying they lacked the training and professional development experience surrounding how to include students with ASD into mainstream classrooms. The participants identified the need for school boards to provide in-depth teacher training and professional development workshops that could aid them in including students with ASD into mainstream classrooms. Kelly, who has extensive experience working with students with ASD, gained her knowledge foremost through her work experience at the Geneva Centre for Autism. Here, Kelly describes her experience with professional development and training from the TDSB:

> I don't know exactly what it's called but it would basically be like an Intro to Autism class and as far as I know, I don't know of any other really any [pause] more in-depth courses from the TDSB that they would have for teachers. I mean I
have taken things like the Promethean board course training with teachers that teach in autism classrooms. Things that you can do with it but it's not really [sic] - nothing that's giving you an in-depth understanding of ABA how to really really [sic] use it and help your students benefit from it.

Aside from her past experience at the Geneva Centre, Kelly reported that there was no other training or development that gave an in-depth understanding of what ABA is and how it could be used in the classroom to help students with ASD be included into the classroom. Participating teachers commonly identified a clear need for teacher training opportunities to assist them in feeling more prepared and knowledgeable with including students with ASD. Kelly commented on this point:

I would say get as much training as possible and I might be bias, I would say to get that training from Geneva or Surrey Place so they can attend as many workshops as possible, going to visit Geneva and then, I don't know, maybe the board having more of a better - giving teachers a better understanding of the theory behind ABA. I feel like a lot of people know, ‘Ok let's give them a reward, let's reinforce them,’ but they don't understand what it really means. They will just be like ‘Oh well here's the computer why doesn't he like it? I am giving it to him, I am reinforcing him,’ but like that student doesn't like the computer then that's not reinforcing that. I feel like they don't really have a full understanding of that theory, how to reinforce, when to reinforce, what to reinforce with, then it kind of doesn't really work. And so I feel like a lot of teachers are lacking that theory and background [of the principles ABA], that way so any sort of courses, book, or material that kind of explain that stuff to teachers would be a lot [sic] really helpful to teachers who don't come from an ABA background.

Kelly’s comment reinforces the need to have additional teacher training courses that provide specific knowledge and training in using ABA in the classroom. According to Jordan et al. (2009), a gap exists for teacher candidates who feel that there is not enough teacher training courses to prepare them to teach students with ASD. Therefore, it points to the significant need for additional teacher training to fill these gaps in order to better prepare them for implementing inclusion. Similarly, Megan found that although her EA had the qualifications for her job, she did not have additional training or specialty knowledge in working with students with ASD: “She
has the qualifications for the job. I am not sure if she does [any] kind of training post.” As others have called for, these teachers believed that additional in-depth courses, coupled with field experience for educators and paraeducators is necessary for preparing new teachers for including students with ASD into their classrooms (Thompson et al., 2014; Jobling & Moni, 2004; and Simpson, de Boer-Ott and Smith-Myles, 2003). The results of this finding is significant because it could have potential for changes in teacher education programs, as well as school board training that need to design more in-depth courses in order to better prepare educators and paraeducators for fostering inclusion.

4.3 When asked about supporting factors, teachers tended to defer to identifying challenges rather than naming specifics supports.

When I asked research participants about the supporting factors that helped teachers in fostering inclusion, participants tended to defer to identifying the challenges rather than describing any specific supports. I think this finding speaks to the general idea of how challenging it can be for teachers to include students when dealing with disruptive behaviours and the professional relationships between the teacher and the educational assistant. Although the participants were identified as being leaders in demonstrating their commitment to including students with ASD in their classroom, what the participants do not directly say is that it is a daunting task to successfully include students into mainstream classrooms. Carol shared her experience including students with ASD in her classroom,

Yeah it's always tough in the beginning because the classroom teacher may be dealing with the student for a while before the team comes and sets in. So you would have tried a whole bunch of techniques and now someone is coming in saying, ‘Well why don't you try this?’ or ‘Why don't you try that?’ or ‘Try it in a different way,’ and it doesn't work so then it gets frustrating. I think that at the beginning it's frustrating and then as it goes on, they realize it's kind of a complicated thing so they try and be [sic]. As the communication builds, it gets better for the classroom teacher.
In this example, Carol shares her frustration right away, and emphasizes that even after receiving support she still finds it challenging to incorporate the ideas from the ASD team. Thus, while the literature to date is clear that proper support is necessary for including students with ASD (Hundert, 2009; Simpson et al., 2003), these findings stress the need for more meaningful and sustained support mechanisms that support not only individual scenarios but also the overall system-wide goal behind integrating students with ASD in mainstream classrooms. Without proper supports, it can add to the challenge of teachers being able to successfully include students with ASD into mainstream classrooms. Moreover, this finding is significant because it reveals that even the most successful teachers who have included students into their classrooms are frustrated and challenged with this process.

4.3.1 One challenge that teachers face is how to focus on teaching all students in the face of disruptive behaviours from their students with ASD.

When teachers are teaching a lesson, they can be challenged with having to deal with disruptive behaviours from students with ASD while trying to teach the whole class. With limited access to paraeducators, the classroom teacher is often the one left to deal with the disruptive behaviours. Teachers that have to deal with the disruptive behaviours can find it frustrating and challenging. Carol explains, “A challenge with having students with ASD in the classroom for those students is that they don't get the attention that they may need. And they may end up disrupting the lesson which is going to result in a stressed out classroom teacher.” Lindsay et al. (2014) argue that this is why time to collaborate with other professionals is critical for helping teachers develop inclusive strategies. Megan found this support through her collaborative work with the ASD:
So there were other strategies going on simultaneously. I tried to kind of stagger when they were coming into play. So like when I was observing [students with behavioural] versus interacting with the individual kids about the strategies we were using. So I had some kids whose strategies came to the end at the end of the period.

Once Megan had these strategies in place, it was only a matter of organizing the strategies so that they fit with her class teaching time. The findings from these experiences are significant because they point to the need to provide teachers with the time and access to developing collaborative relationships with each other to help minimize disruptive behaviours so that the teacher is better able to teach the lesson to the whole class. In addition, participants noted that this may also help minimize teacher burn out as a result of not having to deal with disruptive behaviours.

4.3.2 Teachers identified their professional relationship with educational assistants as a hindrance if the educational assistant did not have training working with students with ASD or did not follow the teachers’ recommendations for the student with ASD.

Teachers found that if the Educational Assistant lacked the proper training to work with students with ASD or if they wouldn’t follow the teachers’ recommendations, then it became a hindrance for the teachers as they tried to foster inclusion in the classroom. As previously noted, participants found that some Educational Assistants lacked the proper education and knowledge to support students with ASD in the classroom. As a result, the educational assistant’s role as a resource for supporting the student and the teacher can hinder the teacher’s efforts to include the student. Megan speaks directly to this:

We did have a support worker who had a really different approach that wasn't as effective and that was really frustrating sometimes. You work hard to build up that relationship that is trusting and that is real and healthy and positive with these kids, and it's kind of hard to come and see someone else come in and yell or be really aggressive with them when you know it doesn't work. And then it's really upsetting your kids. But, it's hard when you're not necessarily in a position to say,
‘Don't do that.’ It's their job to be the support worker and to be there and to interact with these kids. But yeah I would say that's the most challenging kind of person who was involved was the support worker in the school.

The role of supporting students with ASD is often left to paraeducators and the training paraeducators receive is consequently important (Hundert, 2009; Simpson et al., 2003; and Symes & Humphrey, 2012). Without this training, the paraeducator’s role can not only be unhelpful, but potentially a hindrance for teachers. Thus, having access to educational assistants alone is no guarantee of support. It is vital that the education system also look at how human resource supports are being trained and supported themselves.

4.4 Participating teachers came into the profession with a wealth of experience working with students with ASD and as well as knowledge about supporting these students.

Participants identified that having a variety of different experiences, such as educational knowledge and interacting with and observing students with ASD prior to teaching the students in the classroom contribute to the ability of the teacher to successfully include students with ASD into their classroom. Teachers recognized that starting to take courses in their teacher education program was the springboard in preparing teachers to support students with ASD. Furthermore, taking additional courses such as the one Megan took can further expand the teachers’ knowledge with respect to autism. Megan relayed her experience:

I took a fantastic course when I was doing my Bachelors of Education called ‘Understanding, Managing Social Emotional Behaviour Problems in the Classroom.’ It was really really practical; it approached social and emotional learning and behavioural difficulties, understanding the kids in your classroom.
Furthermore, participants recognized that additional educational knowledge was not enough. They found that there was a need for teachers to have interacted with or observed students with ASD before teaching them in a classroom. Kelly’s comment spoke to this point:

To be honest really everything I know is - has been from Geneva and yeah... I feel like if you haven't been there or maybe haven't had the experience there, it's really hard to get that experience that we have - the things we learn there because I mean that's what they do there, that's their thing. So...I feel like all my strategies really came from there [Geneva Centre for Autism], more than anything I learned doing my Masters about autism and yeah within the TDSB. I find the TDSB just has that ‘Intro to Autism’ thing, which is just very basic course, it doesn't really give you an in-depth understanding of the strategies and why you do them and how you apply them.

Kelly’s experience is consistent with Peebles & Mendaglio’s (2014) argument that pre-service teachers need to couple learning about inclusive strategies with experience implementing them through fieldwork. Without this experience, new teachers are at a disadvantage for being able to successfully include students into their classroom.

### 4.5 Teachers identified resources such as having books, support from school administrators, staff, and other paraprofessionals as measures for aiding teachers in their effort to be more successful at including students with ASD into mainstream classrooms.

Teachers identified several resources such as the need for more books, support from school administrators, staff, and other paraprofessionals as important measures for aiding teachers in their effort to be more successful at including students in their class. A resource that participants identified as being particularly important was the need for additional reading materials that could enhance the teachers’ knowledge on strategies to help foster inclusion. As previously mentioned, participating teachers felt that the reading materials that were available were limited, yet it was helpful for providing participating teachers with additional information. Megan described her positive experience after receiving additional reading materials from her ASD team. Megan said, “[The ASD team] gave me some articles to read. [The ASD consultant]
gifted me the book “You're Going To Love This Kid” which is fantastic.” In contrast, Carol felt that additional reading materials would not help her, because she already felt overwhelmed with the amount of regular work. Carol described her feelings, “It's hard to say give teachers more stuff to read. It's hard to say give teachers more workshops because teachers feel overwhelmed already.” Instead, Carol believed that having additional paraeducators and support from the school administrators would be the most ideal resources to have that would aid her endeavors for inclusion. Carol commented on this point:

As behaviour kind of became less ‘good’ the team grew to include behaviour teachers and the Vice Principal and Principal. It was to help him control his behaviour and help him have some resources in the school to help him deal with the way he was feeling.

By using a team approach, teachers can now utilize the team as a resource that they could access which could aid them in their efforts to foster inclusion in the classroom. Furthermore, Horrocks et al. (2008) also claims that when the Principal has a positive attitude towards inclusion, it can in turn lead the teacher to develop positive attitudes towards inclusion as well. As a result of this additional support, teachers may feel more positive and confident in fostering inclusion.

Similarly, Kelly who worked in an autism specific classroom, described the importance of this team approach:

Really it's just kind of meeting with the integration teacher and talking about what is realistic in their classroom and how much they are able to handle, how much they are able to support the student. Sometimes it means getting one of their students who is responsible or who has kind of, you know, personality that might work well with what my student. Kind of having them kind of sit with that student and monitor that student and help them, rather than having the teacher do it. There really isn't a lot of resources. I mean I have my CYW where they can go to observe that student at integration class or go with them to a couple of classes just to see what they would need and provide anything that might help them but usually after 2 or 3 integration classes, the goal is for them to be in that classroom by themselves.
Kelly’s experience is significant because it points to the fact that other teachers and paraeducators now become valuable resources to use. This finding aligns with Hundert’s, (2009) claims that paraeducators play a vital role in helping the classroom teacher. Therefore, having paraeducator support in the classroom is important in supporting the classroom teacher’s role in fostering inclusion. Overall, by having a team approach it is significant because those members now become additional resources for teachers to access support from. paraeducators would be the most ideal resources to have that would aid her endeavors for inclusion. The findings in this section are significant, because the teachers have identified resources that can provide additional aid in helping them foster inclusion. In an ideal world, teachers would get access to all the resources they needed. According to de Boer (2009), the upfront costs of getting additional resources could be costly for school boards; however it can aid teachers in the long run. If school boards decided to consider reallocating funds from transporting students with ASD into segregated classrooms, then they could use those funds to spend on new resources.

4.6 Participants believed that students with ASD can benefit from having a separate classroom outside from the mainstream classroom that acts as a home base for learning skills, while integrating them into mainstream classrooms.

Across the TDSB and PDSB there are classrooms that are specific to students with ASD. These specialized classrooms act like a home base for them to learn academic skills, while beginning to integrate into mainstream classrooms. In the TDSB these classrooms are known as “Autism” classrooms. Meanwhile, in PDSB these classrooms are known as “contained” classrooms. Although these classrooms are geared towards supporting students with ASD in mainstream classrooms, they are not meant to segregate students and are different from other segregated classrooms. Participants that had experience with these specialized autism classrooms felt that they were needed because they were beneficial for supporting those students with ASD
that needed them. Kelly, who teaches in an autism classroom, described the benefits of being in her class:

Well the benefit of my classroom is that it is small. I only have 6-8 children and we have - there's 3 of us [CYW and EA]. So students can get more one-to-one time with us and it's just a quieter environment and we have the ability to – like [sic] if the student needs to be taken out we have a quiet space for them to go or they can go for a walk with another staff. Me [sic] or one of my staff can sit one-on-one or if they are struggling with something and then there's also the other thing of being in an ABA classroom and having a lot of visual schedules that they all can see in an autism program.

Kelly’s experience highlights the use of ABA in these specialized classrooms. According to Hundert (2009), using a variety of ABA strategies is an important tool for helping students with ASD learn. What is significant is the use of ABA in this specialized classroom and the positive effects it has in aiding students with learning academic skills. Another reason that participants found the autism classroom useful to have is that it helped alleviate and support the mainstream classroom teacher if the student with ASD was having challenging behaviours. Carol commented on this:

We kind of thought that was ideal situation to have a contained class for the ASD students. Not that they stayed there all the time, but to have them on an integration plan. [So that] they always had the home base to go to. Often I found when seeing that contained class work, it was just a good place for them to go if they are having a melt down or that class worked on social skills didn't necessarily do a lot of phys ed. it's not a priority for them.

Another significant finding is that these autism classrooms can better support the students if they are having challenging behaviours because there would be a team of people there in that classroom who could support them, as opposed to just the mainstream classroom teacher. Autism classrooms could act as a safe place for students to return to if they are having some challenges during the integration process.
4.7 Participants believed that new teachers need to believe that they can make a difference through their efforts to include students with ASD.

In order to be successful at fostering inclusion for students with ASD into mainstream classrooms, new teachers need to believe that their role is important in making a difference to including students into the classroom. In particular, new teachers identified three beliefs that they believe contribute to the attitude that they can make a difference in fostering inclusion for the students with ASD. These three beliefs include 1) teachers recognizing that their own beliefs about the inclusive classroom model can impact their capacity to be successful fostering inclusion, 2) teachers recognizing the ability to be flexible when working with students with ASD, and 3) the idea that the process for including students with ASD in their class can be frustrating, isolating, but also rewarding. These three beliefs impact the teachers’ overall attitude when fostering inclusion.

4.7.1 Teachers recognized that their own beliefs about the inclusive classroom model have an important impact on their capacity to be successful in this endeavor.

All the participants in this study recognized that their own beliefs about inclusion have an impact on their capacity to be successful in this endeavor. Moreover, participants believed that students with ASD should be included into mainstream classrooms because it represents a more realistic idea of society where students with ASD need to learn to be a part of society, and peers need to learn how to interact with students with ASD in society. Megan commented on her beliefs about inclusion, “I think too that it's good for kids who are on the spectrum to interact with kids who are not, because they are going to be in a world where people are different from them. And it doesn't make sense for the classroom to be any different from what's in the real world.” Similarly, Carol believed that inclusion is important for the students with ASD to practice and learn social skills more so than academics. In her words:
Yeah inclusion should be happening. Absolutely. ASD is like a huge thing so it's difficult to say - I have only worked with high functioning ASD students who are able to be in the classroom, who are fully verbal and things like that. More on the Asperger’s type of the spectrum than on the nonverbal ASD. So, absolutely those students should be integrated as much as possible, even if they are not at grade level. In large part to get used to being in society. Right? So getting used to, well these are the kids and this is what they are doing. So you need to deal with more so than the academics. I think the academics can be learned in the contained class but being around other kids is the most important part.

These positive teacher attitudes affirm Simpson et al.’s, (2003) findings on the importance of the relationship between a teacher’s positive attitude and the creation of a positive environment and how this can lead to the successful inclusion of students with ASD. The teachers’ recognition that their beliefs can impact their capacity to foster inclusion is significant because the task of inclusion can be frustrating and difficult for teachers. Therefore, if they carry a positive attitude that they can make a difference, it will in turn affect their actions and how they go about fostering inclusion in their classroom. Another area that helped participating teachers develop feelings of efficacy was their wealth of experience they had previously working with students with ASD. Peebles & Mendaglio (2014) found that when pre-service teachers received additional training and field experience teachers felt more comfortable and confident with including students with ASD into their mainstream classroom.

4.7.2 Teachers believed that it was important to be flexible when including students with ASD.

A key finding that teachers identified was the importance of being flexible when including students with ASD in a variety of different situations that can occur in the classroom. Participants wanted other teachers to know that it was okay to let go of certain ways and ideas in order to be flexible to change so that they can aid the students with ASD in the classroom. For
example, Megan commented on her experience of how letting go of her own ideas of the classroom being “quiet” by being open to the idea that it’s okay to have a loud classroom. Megan said:

[Let] go of the idea that your classroom should be quiet and that your classroom should be still, especially in grades one and two. Not just for kids with ASD but for kids who are active and louder. I think you can have a really fun time being around kids who don't fit so easily into that by and still structure [sic] when you let go of being in it. So being flexible with whatever things we are going to be staunch on and what the things we are going to bend on can make your life a whole lot easier and more pleasant.

Although the literature review does not directly focus on the need for teachers to be flexible, Lindsay et al. (2014) do touch upon the need for teachers to be allotted more time in the schedule to plan for flexibility in their lesson plans. This point is significant because it reveals that teachers need to not only be flexible in their lesson planning, but they need to be flexible overall with managing situations that can occur daily. New teachers can better prepare themselves for being flexible with situations, by organizing the class schedule to allow for flexibility during transition times and lessons. This will help give new teachers room to be flexible throughout the day.

4.7.3 Teachers felt that the process of including students with ASD can be frustrating, isolating, and rewarding.

Although participants felt that it was rewarding for them when students were successfully integrated into the class, they still recognized that the process can be frustrating and isolating. When faced with challenging and disruptive behaviours, teachers can get frustrated and start to feel negative about inclusion working in the classroom. Megan shared a part of her experience where, “There was a point in the year where his behaviours were getting pretty frustrating. I was getting pretty frustrated and I was feeling kind of negative. And I wasn't enjoying my time with
him as much.” Megan’s experience reflects Robertson et.al.’s (2003) findings that if the student with ASD has challenging and impulsive behaviour, then it can negatively affect the quality of the teacher-student relationship. In Megan’s case, when her student’s behaviour became challenging, it affected their relationship and how she was feeling. Linked to this idea is the frustration teachers can feel when they have tried strategies that do not work. In Carol’s example she said:

The biggest advice I would give is to maintain a sense of humour [laugh] because there is going to be days when you either laugh or you cry, because you are so frustrated, and you feel like you have tried everything, and you are just getting it thrown back at you.

The frustration that Carol felt reflects how difficult and isolating that process can be for teachers when they are the ones who are in charge of fostering successful inclusion of students with ASD in their classroom. Lindsay et al., (2014) call for the need to provide time for teachers to develop meaningful strategies with professionals who have experience and knowledge to develop these strategies. Although this work can seem frustrating, teachers did also note the rewarding feeling they received when they were able to successfully include the student despite the frustrating process. As Megan commented, “I found it very exciting to get a totally new challenge and really figure out what worked specifically for him and me.” Megan’s reaction echoes Robertson et.al.’s (2003) findings that when things are going well for the student, it can increase the quality of the teacher-student relationship. In this case, Megan ended up with a positive teacher-student relationship, which has reinforced her beliefs, confidence, and ability to include students with ASD into her classroom.
4.8 Conclusion

In this chapter, I reported my findings in the form of seven overarching themes that touched upon the different strategies that teachers used, and the barriers and challenges that teachers are confronted with. In addition, I reported a range of what participating teachers identified as needs for new teachers. The findings I reported on the different strategies participating teachers used, in addition to the barriers and beliefs of the teacher are all consistent with the existing research founded in chapter two. The findings are significant because they underscore the importance of the various strategies and resources new teachers need in order to foster inclusion. Moreover, I reported that participating teachers found that the need for having more autism classrooms in helping students with ASD to be integrated into mainstreams is an area of research that requires further examination. Another significant finding from the research is that despite the many challenges that participating teachers faced, they were still able to overcome these challenges in order to foster inclusion for students with ASD. In the next chapter, I will begin by providing a brief summary of chapter 4. I will also be discussing the broad and narrow implications of this research study. Furthermore, I will be making recommendations to a range of stakeholders based on the findings I reported. I will also be discussing areas of further research that arose from the research study. Lastly, I will speak to my concluding remarks and how this research study fits into the landscape of the research field.
Chapter 5: DISCUSSION

5.0 Introduction (Chapter Overview)

This chapter will discuss the overall implications of the research. I begin with a brief overview of the key findings and their significance in light of the existing literature in the area of supporting the inclusion of students with ASD in mainstream classrooms. Next, I discuss the broad implications on these findings for the educational community, as well as the implications for me as a teacher and as a researcher. Furthermore, I articulate a range of recommendations for pre-service teacher education programs, school boards, the Ministry of Education, administrators, and teachers based on what I have learned from this research study. Moreover, I identify some additional questions for further examination that were raised through this research study. Finally, I summarize this research study with final concluding remarks.

5.1 Overview of Key Findings and Their Significance

The overall key findings from this research study are organized into seven different overarching themes. The first significant finding is the various types of strategies that teachers used to effectively include students with ASD into their mainstream classroom. Such strategies include setting clear and concise expectations, integrating easier subjects, using a variety of visual aids, implementing reward systems coupled with social praise to motivate students, opportunities for feedback from teacher and peers, providing differentiated tasks and accommodations, and allowing students to preview information so that they could practice skills ahead of time. These strategies are significant because they speak to the broad range of tools available for classroom teachers to use to help support students with ASD in mainstream classrooms. Moreover, many of the strategies are founded on the principals of Applied
Behaviour Analysis and are strategies that research has found to be successful in supporting students with ASD in learning. However, what is most significant about these strategies is that the classroom teacher can also utilize them for all students and not just specifically for students with ASD in classrooms.

The next significant finding is that participants stressed the importance of preparing beginning teachers by providing them with a solid understanding of some of the known barriers facing teachers in their efforts to include students with ASD. These include barriers such as accessibility to limited resources and the need for additional professional development courses. Similarly, teachers noted the challenges they faced in the classroom including dealing with disruptive behaviour while trying to teach the rest of the classroom and they spoke to how the relationship with the EA could be a potential hindrance to fostering inclusion in the classroom. What is significant to note here is that despite the challenges teachers face in the form of barriers of inclusion, participating teachers believed that new teachers are still capable of being successful at including students with ASD into mainstream classrooms. Participants believed that prior experience working with students with ASD, content knowledge, and observations helped to contribute to their success at including students with ASD, in addition to the support received from other teachers, school administrators, and other paraprofessionals. Having prior experience or content knowledge working with students with ASD is significant because it creates a foundation for teachers to build upon when fostering inclusion. Having previous experience working with students with ASD is beneficial because it allows teachers to draw from strategies and tools that have worked previously. Moreover, being able to overcome the challenges of inclusion begins with support from school staff and other paraprofessionals. This finding is significant because teachers identified how stressful and challenging the job can be and, with
proper supports, they can feel mentally prepared to help support students with ASD in mainstream classrooms.

Another key finding was that participating teachers stressed the importance of preparing new teachers to be flexible with situations and to have a positive attitude and belief that they can make an impact on students. Participants highlighted the significance of being positive because it can impact the choices they make on instructional strategies, as well as the effort put into fostering inclusion in the classroom. In order to support students with inclusion, it is important for teachers to be flexible throughout the day and to be open to changes if strategies aren’t working. Lastly, participants emphasized the importance of having autism classrooms as a home base for students where they feel safe and comfortable while being integrated into various classes throughout the day. This is significant because having these specialized classrooms helps to support the mainstream classroom teacher who might be having difficulty with integrating students into the class. As well, these classrooms can provide a safe space for students with ASD where they can deescalate if they are feeling overwhelmed and can practice skills they have not yet mastered. These key findings and significances from this research study will contribute to the landscape of research in this field in that while existing research had learned that having students with ASD be integrated into mainstream classrooms is beneficial for peers and students with ASD’s social skills. The findings from this study learned that having an autism specific classroom as a home base is beneficial to supporting students with ASD as they are being integrated into the mainstream classrooms, in addition to supporting the mainstream classroom teacher with integration.
5.2 Implications

In the following section I discuss the broad implications that this research study has on educational communities, in particular for teacher education programs and school boards. In addition, I speak to the implications this research study has on my own teaching practice and as a researcher.

5.2.1 Implications for Educational Stakeholders

The key findings in this study have a range of implications for educational communities; in particular, how pre-service education can benefit from the findings of this research and the changes that can be implemented in schools that would help foster successful inclusion of students with ASD in mainstream classrooms. The first broad implication is the need for pre-service teacher education programs to include a component in their training that provides opportunities for pre-service teachers to have direct field experience and practical content knowledge of working with students with ASD. This finding supports the work of Peebles & Mendaglio’s (2014) who found that pre-service teachers commonly feel unprepared and lack the skills and experience in working with students with special needs. Furthermore, if pre-service education providers want to help pre-service teachers build confidence and prepare them for working with students with ASD, then it is important that they consider how they can mandate field experience working with students with special needs, generally speaking, and working with students with ASD more specifically.

Another implication from the findings is the need for school boards to examine the allocation of resources and the support of professional development. One of the findings in this research study was that there are limited resources in the school that teachers can access. School
boards need to consider not only broadening the scope of resources available to support teachers in this work, but also look carefully at the quality of resources that are currently available. My findings for example, point to the need to look more closely at training for educational assistants, and to create more opportunities for teachers to meaningfully collaborate in ways that are sustainable and built within the structure of the system, rather than reactive and responsive to individual scenarios that arise.

Furthermore, a common strategy that was used by teachers in the study was visual aids. If teachers are commonly using visual aids to support students with ASD in the classroom, then perhaps school boards should invest in software that can help teachers prepare visuals that they can save into a bank and any other materials they might require to make the visuals such as laminating sheets and paper. It is also worth noting that when school boards are examining which resources to allocate to schools, they should consider that these resources are not just for supporting students with ASD. For instance, visual aids can be used to support all variety of students who are strong visual learners. School boards should also consider the system in which teachers can access resources. The findings of this research study also indicated that it is not uncommon for new teachers to not know how to access resources or to know what resources are even available. By making the channels for accessing the resources more transparent, teachers can be better supported in their quest to foster inclusion in the classroom.

The last implication for school boards to consider is the need for more professional development. Teachers need to have the opportunity to learn a variety of different strategies and tools that they can put into their repertoire of teaching strategies. For example, professional development workshops can focus on the various visual aids that teachers use in their classroom to help support students with ASD. Another area that professional development can focus on is
strategies for teachers when having to deal with disruptive behaviours. Lastly, an area that school boards may also consider developing professional workshops is on how to use ABA in the classroom, since research in the field has shown the effectiveness of ABA for teaching students with ASD. When teachers are armed with additional knowledge from professional development, they can feel empowered, confident, and prepared to include students with ASD into their classrooms, which research shows can have positive outcomes for teacher-student relationships and fostering inclusion.

5.2.2 Implications for my Professional Practice

Before I began this journey, I had seven years experience working directly with students with ASD, implementing IBI therapy. This teaching experience led me to focus my research on what strategies and factors support new teachers in being successful at including students with ASD into mainstream classrooms. On the one hand, the findings of my research study have highlighted for me the challenges and barriers that teachers encounter when attempting to foster inclusion. On the other hand, the study shows that, despite the challenging barriers that teachers face when fostering inclusion, with the proper support from other teachers, administrators, and paraprofessionals, along with a teachers’ positive attitude and belief, and knowing where to access resources, new teachers can thrive at fostering inclusion. This research has informed my own practice because knowing that new teachers are able to be successful gives me a positive perspective for when I am in the position of supporting the inclusion of with ASD into my own classroom. Also, the results of this study have highlighted the importance of sharing my content knowledge and expertise with other teacher colleagues in order to help provide professional
development and knowledge building for teachers on how to support students with ASD. In addition, the strategies that the participants found effective have now been added to my own repertoire of strategies that can be used in the classroom.

As a researcher, this study has opened my eyes to the landscape of existing research in this field. It also highlights the importance of research in the on-going development of being a teacher. Participants in the study expressed the need for additional professional development workshops on how to support students with ASD in the classroom. A solution that I have found to address this issue is to continue to learn content knowledge through reading journal articles or books in order to bring a critical lens to better inform my teaching practice. This research study has enhanced and informed my knowledge of strategies and factors that best support me in including students with ASD into mainstream classrooms. This study also highlights the importance of on-going development as a teacher through reading the current research in this field and actively participating in professional learning communities.

5.3 Recommendations

In this section, I make recommendations for teachers, administrators, school staff, school boards, the Ministry of Education, and teacher education programs based on the findings from this research study.

5.3.1 Teachers

- **Teachers need to have a work life balance:** As Megan states, “recognize that the process [of inclusion] can be frustrating and isolating.” Knowing that teachers already have a heavy workload and having the additional challenge of fostering successful inclusion of students with ASD into their classroom can be an isolating
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and frustrating process. Megan highlighted this in her experience with the highs and lows of utilizing various strategies to include students with ASD into her classroom. My recommendation to balance this frustration is for teachers to take time in their personal lives to decompress the stress that they may have or develop during the process of inclusion. By taking personal time, teachers can better manage their stress, as it can contribute to having more positive attitudes and beliefs about inclusion.

• **Teachers need to have a positive attitude and belief about inclusion:** I recommend that teachers try and keep a positive outlook on the process of inclusion, because they can deeply impact how successful the student will be during integration into the classroom. Teachers will experience the highs and lows of the strategies they implement with students with ASD. However, if teachers are able to maintain a positive attitude during this process, they will be able to persevere through the inclusion process.

• **Teachers need to be flexible in situations:** Teachers need to be flexible with implementing strategies in the classroom. Some strategies might be more effective for some children and less effective for others. It is recommended that teachers not dwell too much on a strategy if it is not working and be flexible with trying other strategies.

• **Teachers can use a variety of different strategies to support students with ASD:** Teachers can also use a variety of recommended strategies such as visual aids, giving clear and concise expectations, using reward systems, giving social praise, providing teacher and peer feedback to help students manage behaviours,
and providing opportunities for students to practice skills before the lesson is taught in order to have prior knowledge can all help support students with ASD in the classroom.

• **Teachers are the advocates for students with ASD and it is important that they work in collaboration:** Participants in the study stressed the importance of finding those limited resources in the school. As a teacher, they are the best advocates for the student with ASD; they need to remember that they have the power to advocate for the students with ASD and to best support them in the classroom. Therefore, teachers need to be actively collaborating with school staff in order to find access to resources.

• **Teachers need to participate in on-going professional development:** It is recommended that teachers participate in as many professional development courses that can help them gain greater knowledge in supporting students with ASD in the classroom. Teachers should focus their professional development on ABA based strategies such as understanding how to implement reward systems, using visual aids, and how to differentiate instruction for students with ASD. If professional development courses are not available, teachers can research resources online or look into research articles that can enhance their knowledge.

### 5.3.2 Administration and School Staff

• **School administrators need to help teachers access resources:** The research findings suggest that the role of an administrator is one of the key ingredients for supporting teachers’ work in fostering inclusion in the classroom. Administrators
can clearly and consistently inform teachers about the various resources that are available to support them, as well as the channels teachers need to go through in accessing paraprofessional support. Administrators can also support teachers by finding additional resources such as articles, books, or other professionals that can visit the school to provide additional training or information to teachers.

- **School administrators and staff need to develop a professional learning community:** Administrators and school staff can work together to create a professional learning community focused on sharing strategies that they have found successful for including students with ASD and sharing this information with each other. This can better enhance all school staffs’ knowledge on how best to support students with ASD. These professional learning communities can begin with examining the effects of utilizing some of the successful strategies from this research study or exploring research into ABA strategies and how they could be used in the classroom.

### 5.3.3 School Boards

- **School boards should invest in resources to make visual aids:** School boards should consider examining what resources they have and which resources would be effective to allocate funds for. They should consider how they might further invest in resources such as materials to make visual aids (e.g. laminators and software) that can be used generally to support all students.

- **School boards need to clearly map out channels for accessing resources:** School boards should consider reorganizing the structure for how teachers can get
access to additional support from paraprofessionals and informing teachers of how to access support. This way, teachers are more aware that such resources do exist to help them.

- **School boards can devise clear policy on having autism specific classrooms as a home base for students with ASD:** One of the key findings in this study indicated the importance of having autism specific classrooms in schools. Such specialized classrooms help mainstream teachers get support for integrating students with ASD into their class. It also provides a safe space for students with ASD to return to if they are feeling overwhelmed and need additional support. Therefore, school boards should consider the benefits to including more specialized autism classrooms to be included in various schools across the school board.

### 5.3.4 Ministry of Education

- **The Ministry of Education should focus on developing policies that mandates that all teachers need to attend professional development workshops on learning how best to support students with ASD:** The prevalence of students with ASD is on the rise, the Ministry of Education should focus on developing polices that mandate additional training for all teachers and school staff. This study has identified the importance of having professional development opportunities to enhance teachers’ knowledge on how to be successful at including students with ASD into mainstream classrooms. Existing research in this field also support the need for additional training for teachers, in order to
build their confidence and to provide them with practical strategies that they could use in the classroom.

- **The Ministry of Education needs to develop policies to guarantee that students receive EA and paraprofessional support immediately:** I recommend that the Ministry of Education consider supporting this policy by providing grants to school boards. With the additional funding to hire more paraprofessionals, teachers do not have to wait too long in order to receive support in the classroom. Similarly, if more EAs were hired to support students with ASD, it can allow teachers to focus on the needs of the whole class, while fostering inclusion for students with special needs.

### 5.3.5 Teacher Education Programs

- **It is important for teacher education programs to think about how to make field experience working with students with special needs a mandatory component of the program:** Participants in this study found that they were more confident and knowledgeable when they had prior experience working with students with ASD in various capacities. As a result of this finding, I recommend that teacher education programs make it mandatory that pre-service teachers have field experience working with students with ASD so that they can begin to learn strategies from the experts who work directly with these students. This field experience can provide pre-service teachers first-hand experience working with students with ASD while being supported by other staff members before pre-service teachers have to implement inclusion into their own class by themselves.
Teacher education programs can partner with larger organizations such as Surrey Place Centre or the Geneva Centre for Autism, to arrange for these field experience days for pre-service teachers. Having field experience working with students with ASD beforehand can supplement the theory pre-service teachers are learning and it will prepare them for supporting students in their own classrooms.

5.4 Areas for Further Research

Throughout this research process, participants identified effective strategies that they used to foster inclusion in their classrooms, in addition to identifying the factors that also supported them in this work. When participants were asked about their experiences, they tended to defer to speaking about the challenges they encountered. This finding highlights the need for further research into the factors and conditions creating and sustaining these barriers at the system level. Moreover, another significant area that can be further explored is the benefits or limitations to having an autism specific classroom. I wonder what outcomes would result for inclusion if more of these classrooms were implemented across school boards. It is also important that educational research scholars direct their attention to teacher education programs that make it mandatory for pre-service teachers to gain valuable field experience working with students with ASD prior to becoming a full-time teacher. The findings from my study indicate that this can greatly impact how teachers successfully include students with ASD into their classrooms.
5.5 Concluding Comments

In this section I provide a comprehensive summary of my findings, discussion, implications, and recommendations based on this research study. This research study highlighted several key areas, which support teachers in being successful at including students with ASD into mainstream classrooms. The effective strategies used by teachers included the use of visual aids, setting clear and concise expectations, integrating easier subjects, implementing reward systems coupled with social praise to motivate students, opportunities for feedback from teachers and peers, and providing differentiated tasks and accommodations for students. Key factors that supported teachers’ work in fostering inclusion included positive attitude and beliefs, activating prior knowledge from previous experiences, and support from EAs, colleagues, administrators, and other paraprofessionals. In addition, teachers found structural resources such as books and other materials to be helpful in supporting them with inclusion. Another significant finding was the importance of having specialized autism classrooms to support students with ASD, as well as supporting the classroom teacher with integrating students. Although positive factors were identified that help teachers foster inclusion, participants also noted barriers and challenges to fostering inclusion.

These findings are significant because they represent the range of strategies and factors that support beginning teachers with being successful at including students with ASD into mainstream classrooms. Despite the success of these strategies and factors that best support teachers with inclusion, the study did identify several barriers and challenges that teachers should be aware of when fostering inclusion in the classroom. For example, accessibility to limited resources, the relationship of EAs as potential hindrances, disruptive behaviours, and the need for professional development in this field are all examples of the barriers and challenges teachers
can anticipate when fostering inclusion. Although there were barriers and challenges identified, my research participants were able to overcome these challenges by exploring a wide range of resources that they found in their schools that helped support them in being successful at including students with ASD into their classrooms.

Throughout this journey, I set out to find out what strategies were effective for supporting students with ASD in mainstream classrooms and the factors that contribute to aiding teachers in fostering inclusion. While there are many conclusions that I draw from this study, I want to make final remarks about the two big ideas that fall in line with the literature in this field as well as the findings from this research study. The first big idea is that any teacher can be successful at including students with ASD into mainstream classrooms. The results of my study have shown even new teachers can be successful at fostering inclusion, so why not any teacher? Ultimately, it is the teacher who has the power to make the change and to be an advocate for getting the support they need in order to foster inclusion for students. Teachers need to hold the belief that they can be successful at including students with ASD in the classroom and that their work has a direct impact on the experiences for students’ with ASD while being included in the classroom. In addition teacher education programs and school board professional development also have a role in preparing and supporting teachers in order to enhance the teachers’ knowledge and to foster teachers’ positive attitude towards inclusion, particularly given the range of barriers they report facing.

My second big idea from this research study is that the effective strategies that my participants used in their classrooms do not just have to be used with students with ASD specifically; it is worth highlighting that these strategies can be used to support all students with or without exceptionalities. At the end of the day, it is important as a teacher to have a critical
lens on our own teaching practice and to allow for self-reflection in order to enhance our knowledge to better support students in our classroom. Given the move toward the inclusive classroom model, and given the increasing prevalence of diagnoses, it is vital that beginning and in-service teachers feel prepared and supported in fostering inclusion for students with ASD. If equity and inclusion are true priorities – so must this work be.
References


APPENDICES

Appendix A: Letter of Consent for Interview

Date: July 13, 2015

Dear ___________________,

I am a graduate student at OISE, University of Toronto currently enrolled as a Master of Teaching candidate. Investigating an educational topic is a major assignment for our program. The purpose of this research project is to learn how new teachers are implementing effective strategies for including students with ASD into the classroom, explore the factors that affect inclusion, and to research what kind of support new teachers need to be successful with inclusion. I will be recruiting teachers that fit the following criteria for this study:

1. They have 1 to 6 years teaching experience in a full time position.
2. They have experience working with students with ASD in mainstream classrooms or they have experience working with mainstream classroom teachers to integrate students from other classroom settings.
3. They are teachers in the primary/junior elementary grade.
4. They have demonstrated leadership at including students with ASD into the mainstream classroom.

I think that your knowledge and experience will provide insights into this topic.

I am writing a report on this study as a requirement of the Master of Teaching program. My course instructor who is providing support for the process this year is Dr. Angela MacDonald-Vemic. The purpose of this requirement is to allow us to become familiar with a variety of ways to do research. My data collection consists of a 45-60 minute interview that will be audio-recorded. I would be grateful if you would allow me to interview you at a place and time convenient to you.

The contents of this interview will be used for my assignment, which will include a final paper, as well as informal presentations to my classmates and/or potentially at a conference or publication. I will not use your name or anything else that might identify you in my written work, oral presentations, or publications. This information remains confidential. The only people
who will have access to my assignment work will be my research supervisor and my course instructor. You are free to change your mind at any time, and to withdraw even after you have consented to participate. You may decline to answer any specific questions. I will destroy the audio recording after the paper has been presented and/or published which may take up to five years after the data has been collected. There are no known risks or benefits to you for assisting in the project, and I will share with you a copy of my notes to ensure accuracy.

Please sign the attached form, if you agree to be interviewed. The second copy is for your records. Thank you very much for your help.

Sincerely,

Researcher name: Lulu Chong

Phone number, email: 416 662-3668, lulu.mark@mail.utoronto.ca

Instructor’s Name: Dr. Angela MacDonald-Vemic
Email: angela.macdonald@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 at any time without penalty.

I have read the letter provided to me by Lulu Chong 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

I want to thank you for agreeing to participate in this research study. The interview should last approximately 45 to 60 minutes and will be audio recorded to be transcribed afterwards. I will be asking you questions concerning your practices for including students with ASD into mainstream classrooms. I also want to remind you that you can choose not to respond to any questions that you do not wish to respond to. Do you have any questions before we begin?

Section A: Background

1. To begin, can I ask you to please state your name for the recording?

2. What grades and subjects do you currently teach, and which have your previously taught over the course of your teaching career?

3. How many years have you worked as a teacher?

4. Have you always worked in your current school, or have you worked in a variety of schools?

5. Can you tell me about your current school and students (demographics, size, program priorities).

6. Describe the different types of classrooms you have worked in.

7. As you know, I am interested in speaking with you specifically about your experience supporting students with ASD in mainstream classrooms. Can you tell me a bit about how you came to develop an interest and/or experience supporting students with ASD? (Listen first and then potential prompts re: educational experiences, professional experiences, personal experiences).

8. For how long have you been working with students with ASD?

Section B: Beliefs/Values

11. In your view, what are some of the most significant needs of students with ASD? (Listen first and then may want to probe re: social-emotional needs, academic needs).

12. Generally, in your experience, how (if at all) do schools typically respond to these needs?
13. How might schools (including administrators, teachers, and support workers) better support these needs?

12. As you know, I am specifically interested in how teachers can support students with ASD in mainstream classrooms. Can you tell me what you think about the inclusion of students with ASD in mainstream classrooms?

13. In your view, what are some of the benefits and challenges of integrating students with ASD into mainstream classrooms?

**Section C: Teacher Practices (What/How?)**

14. What specific challenges or obstacles have you been confronted by when working with students with ASD in your classroom? How do you respond to these challenges?

15. Can you please describe any specific instructional strategies or approaches that you have found to be beneficial to including the student with ASD into your mainstream classroom.

16. How did you come to learn these strategies?

17. What resources exist to help you implement these strategies and what factors support you in this work?

18. Can you tell me how the students with ASD generally respond to these strategies? What indicators of positive response have you observed?

19. How do other students respond to/contribute to these strategies and approaches? Are these strategies that you enact with students with ASD only, or all students more broadly? Why?

20. And are there any strategies or approaches that you can identify that you have implemented that have not had positive outcomes for students with ASD? Which ones? Why do you think these approaches were not effective?

**Section D: Next Steps**

21. What advice would you give teachers who are committed to supporting students with ASD in their mainstream classrooms?

22. What recommendations do you have for the school system more broadly in terms of how we might all better support students with ASD in schools?

Thank you for your time and thoughtful contributions.