Responsive pedagogy for students with Autism spectrum disorder in general education classrooms

By

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Abstract

This study explored teachers’ inclusive practices and support sources when teaching students with Autism spectrum disorder (ASD) in the general education classroom. Qualitative methods of data gathering were employed in the form of participant interviews. Each participant was interviewed once for forty minutes. The findings are presented in two individual case studies and a cross-case analysis that is situated within the literature on ASD. The predominant themes that arose were support for teachers in the professional community; responsive pedagogy of teachers in general education classrooms; building an inclusive learning environment and teachers’ views on professional development. The findings reveal the common practices the participants’ used in planning and supporting students with ASD in their general education classrooms such as individualized supports and services for students, structured learning environments, and a functional approach to problematic behaviour. They also reveal teachers’ perceptions of the benefits of inclusion for students with ASD, their classmates and the teacher.

Keywords: Autism spectrum disorder; Applied behaviour analysis; pivotal response training; responsive pedagogy; inclusion; general education
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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>2</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>3</td>
</tr>
<tr>
<td><strong>CHAPTER 1 INTRODUCTION</strong></td>
<td>3</td>
</tr>
<tr>
<td>Introduction to the Research Study</td>
<td>6</td>
</tr>
<tr>
<td>Purpose of the Study</td>
<td>7</td>
</tr>
<tr>
<td>Research Question</td>
<td>7</td>
</tr>
<tr>
<td>Background of the Researcher</td>
<td>8</td>
</tr>
<tr>
<td>Overview</td>
<td>9</td>
</tr>
<tr>
<td><strong>CHAPTER 2 LITERATURE REVIEW</strong></td>
<td>10</td>
</tr>
<tr>
<td>What is Autism spectrum disorder?</td>
<td>10</td>
</tr>
<tr>
<td>Assessment of ASD</td>
<td>12</td>
</tr>
<tr>
<td>Benefits of Inclusion</td>
<td>12</td>
</tr>
<tr>
<td>Typical challenges for students with ASD in General Education Settings</td>
<td>14</td>
</tr>
<tr>
<td>Effective Strategies for Students with ASD</td>
<td>15</td>
</tr>
<tr>
<td>Individualized Supports and Services for Students and Families</td>
<td>16</td>
</tr>
<tr>
<td>Comprehensible/Structured Learning Environments</td>
<td>17</td>
</tr>
<tr>
<td>Specific Curriculum Content</td>
<td>18</td>
</tr>
<tr>
<td>A Functional Approach to Problem Behaviour using ABA</td>
<td>19</td>
</tr>
<tr>
<td>Importance of Training for Teachers Working with Students with ASD</td>
<td>21</td>
</tr>
<tr>
<td>Benefits of ABA Training for Teachers and Students with ASD</td>
<td>22</td>
</tr>
<tr>
<td><strong>CHAPTER 3 METHOD</strong></td>
<td>24</td>
</tr>
<tr>
<td>Procedure</td>
<td>24</td>
</tr>
<tr>
<td>Instruments of Data Collection</td>
<td>24</td>
</tr>
<tr>
<td>Participants</td>
<td>25</td>
</tr>
<tr>
<td>Data Collection and Analysis</td>
<td>26</td>
</tr>
<tr>
<td>Ethical Review Procedures</td>
<td>26</td>
</tr>
<tr>
<td>Limitations</td>
<td>27</td>
</tr>
</tbody>
</table>
CHAPTER 4 FINDINGS

Introduction ...................................................................................................................... 29
Case study 1: Kareema .................................................................................................. 29
  Participant Background .............................................................................................. 29
  Support from Professional Community ...................................................................... 30
  Responsive Pedagogy ................................................................................................. 31
  Building an Inclusive Learning Community ............................................................ 34
  Professional Development ......................................................................................... 34
Case study 2: Tara ......................................................................................................... 35
  Participant background .............................................................................................. 35
  Support from Professional Community ...................................................................... 36
  Responsive Pedagogy ................................................................................................. 36
  Professional Development ......................................................................................... 36
Cross-Case Analysis ..................................................................................................... 38

CHAPTER 5 DISCUSSION

Introduction ...................................................................................................................... 43
Implications and Recommendations of Data Collection .............................................. 43
Implication for the Researcher ...................................................................................... 43
Implications and Recommendations for the Educational Community ..................... 45
Further Study ................................................................................................................ 47
Conclusion ..................................................................................................................... 48

REFERENCES ............................................................................................................... 49

APPENDICES................................................................................................................ 56

  Appendix A: Letter of Consent for Interview ............................................................. 56
  Appendix B: Interview Questions .............................................................................. 58
Chapter 1: INTRODUCTION

Introduction to the Research Study

In Ontario, there are more than 7,000 students with Autism spectrum disorder (ASD) being educated in the school system (Ministers’ Autism spectrum disorders Reference Group, 2007). According to an overview by the department of Special Education in the Toronto District School Board (2013), there has been a rise in the population of students with autism. In 2008-2009, the population of students with autism in the Toronto District School Board was 1,150 students (Toronto District School Board, 2013). This number rose to 1,826 students in 2012-2013 (Toronto District School Board, 2013). This 676-population increase in the past five years highlights that in the present day, having a student with ASD may be typical for Ontario teachers (Toronto District School Board, 2013). In addition, Ontario teachers are becoming progressively more responsible for the education, care and management of students with autism who typically have cognitive, social, and behavioural impairments in the general education classroom (Toronto District School Board, 2013).

Due to the typical challenges faced by students with ASD, these students require appropriate accommodations and modifications to meet their specific needs (Lambe, 2007; Rosenweig, 2009). Although educators are becoming more responsible for these students, they have consistently expressed uncertainties about teaching children with autism due to feelings of inadequate preparation to accommodate their needs (Lambe, 2007; Rosenweig, 2009). While there is an increase in the likelihood that teachers will have students with ASD in their classrooms, teacher training to provide students with
ASD with the appropriate accommodations and modifications to meet their specific needs does not seem to be keeping pace (Lambe, 2007; Rosenweig, 2009).

**Purpose of the Study**

In view of this problem, I interviewed two elementary school teachers who have had students with ASD integrated into their general education classrooms. The goal of my research was to learn how these teachers plan for and support students with ASD in their classroom. In addition, I wanted to find out what other support services or resources they believed would better prepare them to support the specific needs of students with ASD. I analyzed the similarities and discrepancies between the pedagogical responses of these teachers and what the literature on teaching students with ASD suggests are core considerations and practices. My intention of this research was to inform the education community of effective strategies that teachers at the present time are using to best support their students, while also highlighting where further attention and resources are required so that we can work toward providing students with ASD with the support resources they need.

**Research Question**

How do teachers plan for and support students with Autism spectrum disorder within the general education classroom?

**Sub questions**

1) What strategies do teachers use to help support their students with ASD in their general education classrooms?

2) What supports teachers in their work with students with ASD in their general education classrooms?
3) What are some benefits and/or challenges that may arise as a result of including students with ASD within the general education classroom for the teacher, the student with ASD and their classmates?

**Background of the Researcher**

I am interested in this research topic because for the past four years I have had the opportunity to work with children with autism at a private institute. During this time, I have been able to accommodate and support these students’ individual needs using the method of Applied behaviour analysis. One of our goals at the institute is to help student’s transition from a specialized education setting to a general education classroom. We are responsive to each students’ individual needs and help to improve core skills required for successful transition. These core skills include: receptive and expressive language, functional academics, activities of daily living, motor skills and social skills. Unfortunately, I have observed a decline in the improvement of these students’ core skills once they fully transition into a general education classroom. Some classroom teachers struggle with the transition and management of the student’s behaviours and typical challenges due to a lack of adequate preparation or limited knowledge of the needs of the students.

I believe that in order for every child to reach their full potential, we as teachers need to provide them with the resources and support to meet their individual needs. Through my observation, I realized that many of the teachers working with students with ASD did not know where to find the resources to support these students; this has motivated me to find out what resources and strategies are available for general education teachers to be better prepared for the needs of this growing population.
Overview

In Chapter 1 I introduce the research problem, the goal of my research and my research questions that focus on the instructional strategies teachers use to successfully include students with ASD in their general education classrooms. I also included the reason for my motivated interest in this topic. In chapter 2, I review the DSM-V and its focus on the definition and typical symptoms of ASD. In addition, I include literature focusing on typical challenges that students with ASD may face in a classroom. Furthermore, I focus on research citing the benefits of inclusion for students with ASD and what core strategies the literature states would be effective in a classroom setting. Finally, I review literature focusing on the benefits of training for teachers and specifically how being trained in Applied behaviour analysis may be beneficial. In chapter 3, I elaborate on my methods and procedures of interviewing my two participants. Moreover, I include a description of my participants, ethical review procedures as well as limitations of my research study. Chapter 4 consists of my research findings, which are presented as two case studies and a cross-case analysis where the findings are situated within the literature. Chapter 5 is composed of a discussion of my findings, implications and recommendations as well as suggestions for further study with this topic. Finally, references and a list of appendices are found at the end.
Chapter 2: LITERATURE REVIEW

This study investigates the ways in which teachers planned for and taught students with ASD within the general education classrooms. The purpose of this chapter is to provide an overview of the DSM-V and scholarly literature as it relates to the research questions. I begin this chapter by using the DSM-V to define Autism spectrum disorder and highlight the typical challenges that children with Autism spectrum disorder face. I then review literature on the benefits of inclusion of students with ASD in a general education classroom. According to Harrower & Dunlap (2001), “inclusion can only work well if teachers have the knowledge and access to empirically validated strategies that will assist them” in successful inclusion strategies (p.764). I contribute to this debate by reviewing literature focusing on effective inclusive strategies for students with ASD in general education classrooms as well as the importance of training in the area of ASD using methods such as Applied behaviour analysis.

What is Autism spectrum disorder?

Autism spectrum disorder (ASD) is the most common neurodevelopmental disorder that has lifelong effects on the development of various abilities and skills (Ministry of Education, 2007). According to the The Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM-5; American Psychiatric Association, 2013), ASD is “characterized by persistent impairments in social communication and social interaction across multiple contexts, including impairments in social reciprocity, nonverbal communicative behaviours used for social interaction, and skills in developing, maintaining, and understanding relationships” (p. 31). The first symptoms of ASD usually occur before two years of age; including delayed language development, as well
as a lack of social interest or unusual social interactions and communication patterns (American Psychiatric Association, 2013). Children may present these symptoms by “pulling individuals by the hand without any attempt to look at them, displaying odd play patterns like carrying toys around but never playing with them, and demonstrating unusual communication patterns like knowing the alphabet but not responding to their own name” (American Psychiatric Association, 2013, p. 56).

ASD is also characterized by “the presence of restricted, repetitive patterns of behaviour, interests or activities” that cause clinically significant impairment (American Psychiatric Association, 2013, p. 54). Examples of these patterns of behaviour include stereotyped or repetitive motor movements and use of objects or speech, insistence on sameness, highly restricted, fixated interests that are abnormal in intensity or focus and an unusual interest in sensory aspects like excessive smelling or touching of objects (American Psychiatric Association, 2013). Since many typically developing young children have strong preferences and enjoy repetition, it may be difficult to distinguish restricted and repetitive behaviours that are diagnostic of ASD (American Psychiatric Association, 2013). There must be a clinical distinction based on “type, frequency, and intensity of behaviour” (American Psychiatric Association, 2013, p.56). For example, a typically developing child may show strong preference and repetition by eating the same food everyday (American Psychiatric Association, 2013). A child presenting symptoms of ASD however, may present a clinical distinction of their behaviour by “lining up objects for hours and becoming distressed if any item is moved” (American Psychiatric Association, 2013, p.56).
Assessment of Autism spectrum disorder

A comprehensive diagnostic assessment is usually completed for children who show early symptoms of ASD (Levy, 2009). These assessments are usually completed with a multidisciplinary team including clinicians skilled in speech and language therapy, occupational therapy, education, psychology and social work (Levy, 2009). The assessments include the use of the DSM criteria and address causes and associated diagnoses, core symptoms, and cognitive, language, adaptive, sensory, and motor skills (Levy, 2009). The results of these assessments usually inform families about “related genetic, neurological or medical problems” (Levy, 2009, p. 1630). ASD is diagnosed only when “the impairments of social communication are accompanied by excessively repetitive behaviours, restricted interests, and insistence on sameness” (American Psychiatric Association, 2013, p.56).

Benefits of Inclusion

The concept of full inclusion in classrooms has traditionally been seen as “students with special needs being educated in the same setting as their typically developing peers” and being given “appropriate support services in their classrooms rather than being placed in special education classrooms or schools” (Mesibov & Shea, 1996, p. 337). Several studies have indicated that children with autism may benefit both socially and academically from being in a class with typically developing children (Hoyson et al.1984).

The social benefits for students with autism who are educated in the same setting as their typical developing peers include behavioural modeling of typically developing peers, increased self esteem, higher levels of engagement and social interaction, larger
friendship networks and less isolation and stigma (Mesibov & Shea, 1996; Fryxell & Kennedy, 1995; Hunt, Farron-Davis, Beckstead, Curtis, & Goetz, 1994). Since ASD is characterized by impairments in social interaction and communication, there is a positive impact on the social development of students with ASD when they are given the opportunities to learn alongside their typically developing peers who display well-developed social skills (Leach & Duffy, 2009).

The academic benefits for students with autism who are educated in the same setting as their typical developing peers include increased expectations by teachers of their learning potential, and developmentally more advanced individualized educational plan goals compared to their counterparts in segregated placements (Mesibov & Shea, 1996; Fryxell & Kennedy, 1995; Hunt, Farron-Davis, Beckstead, Curtis, & Goetz, 1994).

While research demonstrates many benefits to integrating students with ASD in mainstream classrooms, not all research supports this as the most appropriate response (Hunt and Goetz, 1997). Some have argued against inclusion, stating that having a student with a disability in the classroom decreases learning opportunities for typically developing peers because it shifts the teacher’s attention and priority towards the student with a disability (Hunt and Goetz, 1997). Hunt and Goetz (1997) addressed this argument through their study; they tracked typical peers in 19 inclusive education programs on social and academic measures. The peers in these programs reported feeling comfortable with the target children and demonstrated positive social-emotional growth (Hunt and Goetz, 1997). The authors compared this group of students with typically developing
children in non-inclusive classrooms and found participation in an inclusive environment did not interfere with academic gains (Hunt and Goetz, 1997).

**Typical Challenges for Students with Autism spectrum disorder in General Education Settings**

ASD is characterized by impairments in communication and social interaction as well as unusual patterns of behaviours, interests and activities (National Research Council, 2001). The Ministry of Education has developed a resource guide for effective educational practices for students with autism spectrum disorders, which provides information regarding these impairments in a classroom. For the context of this literature review, it is important to note that the information in this Ministry of Education resource guide has not been updated to reflect the diagnostic criteria changes of ASD in the DSM-V.

According to the Ministry of Education (2007), students with autism may demonstrate communicative impairments in a classroom by showing difficulty expressing thoughts and needs verbally and non-verbally. Students may have difficulty with non-verbal communication such as the use of gestures, pictures, eye contact and facial expressions (Ministry of Education, 2007). They may also use speech and language that is repetitive, echolalic or unusual (Ministry of Education, 2007). The social skill impairments students may demonstrate in a classroom include difficulty reading and understanding social cues or situations with adults or peers (Ministry of Education, 2007). Students may respond by withdrawing or providing unusual responses in these social situations (Ministry of Education, 2007). The lack of social and communication abilities of these students causes difficulty in “learning through social interaction or in a
setting with peers” (American Psychiatric Association, 2013, p. 57). Finally, the unusual patterns of behaviours, interests and activities in students with autism may include displaying obsession or preoccupations with specific themes or objects (Ministry of Education, 2007). They may engage in unusual behaviours such as rocking, spinning, or hand flapping (Ministry of Education, 2007). They also may get extremely upset with changes in routines or schedules and have an unusual response to loud noises or other sensory stimuli (Ministry of Education, 2007).

Due to these impairments, traditional educational techniques may be of limited value for students with autism in a general education classroom (Mesibov & Shea, 1996). Verbal explanations of expectations, modeled behaviours in a classroom and social rewards may not be a productive way of conveying information to students with autism due to their poor areas in language and imitation skills (Mesibov & Shea, 1996). In order to minimize these impairments and adjust to the needs of students with autism, they require specialized instructional techniques (Mesibov & Shea, 1996).

**Effective Strategies for Students with Autism spectrum disorder**

Due to the specific needs and typical challenges that children with ASD encounter, important responsibilities are placed on schools, teachers, related school professionals and parents to find “appropriate educational interventions and practices” that will aid in reaching their full learning potential (Iovannone, Dunlap, Huber & Kincaid, 2003, p.162).

Iovannone et al. (2003) focused their research on the effective educational practices for students with ASD and provided a description of core elements that have
empirical support for a comprehensive instructional program for students with ASD.

These core elements include individualized supports and services for students and families, comprehensible/structured learning environments, specialized curriculum content and a functional approach to problem behaviour (Iovannone et al., 2003).

1) Individualized Supports and Services for Students and Families

One of the typical challenges for students with ASD is their ability to engage with or respond to their environment (Iovannone et al., 2003). “Engagement is the amount of time that the student is attending to and actively interacting in his or her social and nonsocial environments” (Dunlap, 1999; Hurth et al., 1999; Iovannone et al., 2003, p. 157). Due to this challenge, students with ASD tend to lose out on fundamental learning opportunities in the classroom (Dunlap & Robbins, 1991; R. L. Koegel & Mentis, 1985; Olley & Reeve, 1997; Simpson & Myles, 1998). In order to successfully engage students, there must be changes to the physical environment through systematically incorporating preferred materials and activities that capitalize on student’s interests (Hurth et al., 1999).

Pivotal response training (PRT), a naturalistic teaching method has gained attention as a method to promote motivation and engagement in students with ASD by capitalizing on student’s interests (Iovannone et al., 2003). In order to increase student’s responsiveness to social and environmental stimuli, PRT uses methods such as using preferred items and activities to motivate the child, teaching within natural contexts, providing choices, and varying and interspersing easy and difficult tasks (Iovannone et al., 2003). When children with ASD constantly experience difficult tasks, they may
display problem behaviours (Iovannone et al., 2003). The PRT method helps to manage challenging behaviours and promote engagement in children because they are able to experience successes during tasks followed by a positive reinforcement (Iovannone et al., 2003).

Positive reinforcement techniques can be successful in increasing participation in response to instructional activities and helps to manage challenging behaviours (Leach & Duffy, 2009). For example, if a challenging behaviour of a student with ASD is shouting out irrelevant verbalizations, a goal may be for the student to not display the challenging behaviour for a given period of time (Leach & Duffy, 2009). If the student refrains from shouting out irrelevant verbalizations for that given period of time, the teacher provides a positive reinforcement to that student (Leach & Duffy, 2009). After a while, the student is more engaged to not display the challenging behaviour so they can gain access to the positive reinforcement (Leach & Duffy, 2009).

Another effective method to enhance engagement in activities for students is the incorporation of a child’s interest into instructional activities (Iovannone et al., 2003). Baker, Koegel, and Koegel (1999) presented this method by increasing a child’s willingness to socially interact with others in the environment during social study activities by incorporating the child’s interests in maps into socially appropriate games.

2) Comprehensible/Structured Learning Environments

“A comprehensible environment allows a student with ASD to predict what is currently happening within the learning process and what will happen next, anticipate requirements of specific settings, and learn and generalize a variety of skills” (Iovannone et al., 2003, p. 159). An example of a strategy that assists in creating this type of
environment is visual cues or supports that provide a schedule of activities (Iovannone et al., 2003). Visual cues or supports provide choice making opportunities for students, behavioural support, and aid in facilitating transitions (Iovannone et al., 2003).

When visual schedules become part of the classroom routine or for individual student use, it can be used as a priming strategy (Iovannone et al., 2003). Visual schedules can aid students in anticipating what will happen during an upcoming activity or transition (Iovannone et al., 2003). This may set up the environment in a positive way for students who struggle with engaging in less-preferred activities (Iovannone et al., 2003).

Students with ASD also face many sensory challenges, so anticipating their needs by accommodating the physical learning environment is important (Leach & Duffy, 2009). Some ways the general education classroom can accommodate these students is “by arranging the furniture and materials to clearly define work spaces, removing distracting stimuli, reducing noise levels, changing sounds, using a soft voice and allowing students to wear earplugs or headphones for some activities” (Leach & Duffy, 2009, p.33).

3) Specific Curriculum Content

Students with ASD face challenges in their language abilities and social interaction skills (American Psychiatric Association, 2013). These are two skills that are most likely to be used in the student’s life to “control their environment, increase their independence and quality of life and increase their competent performance” (Iovannone et al., 2003, p.159). It is important for educators to then build on these skills using specific strategies (Iovannone et al., 2003). One strategy to increase communication skills
for children with ASD who have limited verbal abilities or have difficulty comprehending language, is the picture exchange system (Frost & Bondy, 1994). Picture exchange systems are a way for students to learn common requests and their corresponding picture for use in the general education classroom and to increase communication skills (Leach & Duffy, 2009). The system uses small cards to visually represent items of interest to a child such as their favourite toys or food items (Leach & Duffy, 2009). The child is encouraged to take the card to the communication partner as a way of requesting the item (Leach & Duffy, 2009). The communication partner then gives the item to the child in exchange for the card (Leach & Duffy, 2009). For students who are able to express a variety of sounds, there is an expectation that the request card is paired with verbalizations (Leach & Duffy, 2009). Once the child understands how to access desired items, the system is used to teach concepts or other abstract ideas (Leach & Duffy, 2009).

4) A Functional Approach to Problem Behaviour using Applied behaviour analysis

Some educators are presented with unique challenges and problem behaviours when having a student with autism in their classroom (Iovannone et al., 2003). One approach to tackle problem behaviours is using the principles of Applied behaviour analysis (Eikeseth et al., 2002; Howard et al., in press; Lovaas, 1987; Maurice et al., 1996; Smith, 1999). Applied behaviour analysis has a long history in the effective treatment of autism; it is the only method of instruction that has shown empirically supported improvements in the core impairments of the disorder (Eikeseth et al., 2002; Howard et al., in press; Lovaas, 1987; Maurice et al., 1996; Smith, 1999). Its systematic application has shown to improve areas of communication, social interaction and academic skills (Smith, 1999). A key feature of ABA is its focus on the function of
behaviours and devising a behaviour support plan using “antecedent approaches that require careful assessment of a students’ environment in order to specify features or variables that set the occasion for either desirable or undesirable behaviour” (Dunlap, Kern & Worcester, 2001, p. 130).

It is important for teachers to understand the function of the behaviour of students with ASD because a traditional classroom method of punishing a child may actually reinforce that behaviour (Watson et al., 1989). For example, if a student with ASD was aggressing physically during a math lesson, a teacher may use a time out method, which may in fact reinforce that aggressive behaviour if its function is task avoidance (Watson et al., 1989). It is the concentration on issues of functions of behaviour combined with the methodological rigor and experimental design of ABA interventions that makes them more effective than traditional classroom methods (Gresham et al., 2004).

Grey, Honan, McClean & Daly (2005) conducted a study looking at general teachers being trained in the language and strategies of ABA including functional assessment and the development of behaviour support plans. Teachers designed support plans for students in their classroom with autism to target problematic behaviours such as shouting or striking others. The results found an average change of 80% in the expected direction across the target behaviours with the support plans in place. This reduction in behaviours has a positive implication in terms of increased educational opportunities and improving the quality of life for the teacher, student, parents and peers. Teachers views on the quality of the training was also greater than expected as they felt they had been successfully educated in the language and strategies of ABA and had acquired a variety of new skills which would have a beneficial influence on their future teaching practices.
with students with autism. This study demonstrated that teachers can effectively develop and implement behavioural interventions, and may move beyond the common perception of teachers that such interventions are too time-consuming, comprehensive and complicated for their implementation in a special needs classroom. This study supports the literature concerning both the effectiveness of ABA in reducing challenging behaviour and the efficacy of ABA in teaching new skills in improving communication, compliance and daily living skills (Campbell, 2001; Matson et al., 1996).

**Importance of Training for Teachers Working with Students with Autism spectrum disorder**

Burack et al. (1997) stress that teachers play a crucial role in the success of inclusion. Although this is the case, many researchers have found that teachers do not seem to have a positive view of working with special education students in their inclusive classrooms (Burack et al., 1997). The social, communication, behavioural, and cognitive challenges that may affect the performance of students with ASD can be barriers to successful inclusion if general education teachers are not provided with the appropriate resources to support the needs of their students (Leach & Duffy, 2009). Many schools and educators are often not adequately prepared to meet the complex needs of these students (Mccolow, Davis & Copland, 2013). General educators have consistently expressed misgivings about teaching children with autism due to feelings of inadequate preparation (Lambe, 2007). Podell, Sookdak & Lehman (1998) found that teachers are unreceptive to the inclusion of students with mental retardation, behaviour disorders, and learning disabilities. They found that teachers struggle to address the learning problems of difficult children and as their efforts to help these students do not yield their desired
effects, they become less receptive to these students or respond with frustration and anger (Podell et al., 1998). Some efforts have also been made to assess the knowledge base of teachers and other education professionals about ASD (Segall, 2007). Studies suggest that education professionals, such as administrators, special education teachers, and general education teachers, demonstrate a significant lack of knowledge about ASD (Segall, 2007).

This lack of knowledge could connect to the effectance motivation theory, which suggests that there is a link between motivation to engage in a difficult task and perceived confidence in one’s ability to perform that task (White, 1959). White (1959) posits that people have an inborn motivation to feel competent and succeed with tasks but when people do not feel they can succeed at what they attempt to do, they are less likely to try. This lack of motivation and self-efficacy in teachers may lead to ineffective teaching of children with autism (Avramidis et al., 2000). In order to help increase teachers’ sense of self-efficacy, teachers need to be provided with adequate training that will allow them to feel competent in their abilities to teach children with autism. This will help teachers feel more motivated to address the challenges and be more willing to accept their responsibilities for teaching these children (Busby, Ingram, Bowron, Oliver & Lyons, 2012).

**Benefits of Applied behaviour analysis Training for Teachers and Students**

Due to the successes of ABA, a policy/program memorandum No.140 (PPM 140) provided by the Ministry of Education establishes a policy framework to support incorporation of ABA methods into school boards’ practices for students with ASD (Ontario Ministry of Education, 2007). The purpose of this memorandum is to provide
direction to school boards to support their use of ABA as an effective instructional approach in the education of many students with autism spectrum disorders (Ontario Ministry of Education, 2007). The requirements are that school boards must offer students with ASD special education programs and services including where appropriate, special education programs using ABA methods (Ontario Ministry of Education, 2007). ABA requires programs be individualized, that positive reinforcement must be utilized, data must be collected and analyzed, transitions between various activities and settings should be planned and transfer or generalization of skills should be emphasized (Ontario Ministry of Education, 2007).

Although teachers are given specific strategies to use with students with ASD such as Applied behaviour analysis, it is important that they be trained to use these strategies to a high criterion and are given the knowledge of how to use them (Koegel, Russo & Rincove, 1977).

A study by Koegel et al. (1977) assessed the necessity and feasibility to train teachers in Applied behaviour analysis in order to teach children with autism effectively. Teacher training included modeling, feedback and training manuals. The researchers compared the improvement of children’s target behaviours before and after training. The authors found if the teachers were not given thorough feedback during training, they would not be able to use the techniques to this high criterion. This study supported the benefit of sufficient training for teachers as the teachers in this study benefitted from constant feedback and practice taught in training.
Chapter 3: METHODOLOGY

Procedure

This investigation is a qualitative research study that explores the ways in which two teachers plan for and teach students with ASD within the general education classroom. To inform my data analysis, I reviewed literature that consists of qualitative studies, the DSM-V and Ministry documents. I conducted face-to-face interviews with two full-time teachers with different experience and training with students with autism in order to gain a stronger understanding of their pedagogy with students with ASD in their classroom. I conclude my study with a discussion of my research findings and their implications for myself as an educator, students with autism, their classmates and the rest of the educational community. Finally, I provide implications and recommendations for the research community and suggested areas for further study.

Instruments of Data Collection

My qualitative interview design was conducted using a standardized open-ended interview approach (Turner, 2003). The wording of the questions in a standardized open-ended interview is extremely structured, but the way the questions are worded allow for responses to be open ended (Turner, 2003). Open ended-interviews provide rich qualitative data because participants are able to “fully express their responses in as much detail as desired.” (Turner, 2003, p.756)

The interviews were no more than 45 minutes in length. They were centered on pre-determined questions that addressed the following areas: professional background, strategies and inclusive practices in the classroom and support sources in the classroom.
(See Appendix A for Interview Questions).

**Participants**

I used criterion-based sampling “in order to obtain qualified candidates that will provide the most credible information to my study” (Turner, 2003, p. 757). My specific criteria included finding teachers with experience teaching a student formally identified with autism in their general education classrooms. My criteria also included that the students with ASD in their classrooms had to spend a significant amount of time in the general education classroom so that the teachers were in charge of instructional interventions, modifications, accommodations, assessments and evaluations of these students.

I interviewed two elementary school teachers in the primary/junior division who have had experience teaching a student formally identified with autism in a general education classroom. The first teacher I interviewed taught in a large urban school district and successfully completed the additional qualification course: Special Education, Part 1. The second teacher I interviewed successfully completed the additional qualification course: Special Education, Specialist after completing the courses Special Education Part 1 and Part 2. She was also the mother of a child with autism.

I wanted to compare the instructional strategies of teachers with two levels of experience with ASD and analyze the similarities and differences of how they chose to include students with ASD in their classrooms. In addition, I wanted to analyze what these teachers are doing with what literature states are core considerations and practices.
Data Collection and Analysis

For the purpose of data analysis, both interviews were digitally recorded and transcribed. During the transcription phase, I compiled words, quotes and ideas that related to my research question or seemed significant from each interview. I then compiled the words, quotes and ideas that were common among research participants and put them into sections so that I could create specific themes or codes (Creswell, 2007). My research question focused on how teachers plan and support students with ASD in their classrooms so I focused on emerging themes that related to the strategies and resources teachers use. After I unfolded my specific themes and codes, I read over the sections in my literature review to analyze which themes would best support my research question.

Ethical Review Procedures

I followed the ethical review approval procedures for the Master of Teaching program at OISE. Participants were recruited through the method of criterion-based sampling and when agreed to participate, were sent a letter of consent prior to the interview date (See Appendix B for consent form). The letter of consent provided a description of the objective of the study; a confidentiality agreement stating that pseudonyms would be used throughout the paper and an option to withdraw from the study at any time. Participants were also sent the interview questions prior to the interview to increase their comfort on what type of questions would be asked. During the interview process, participants were able to skip questions if they did not feel comfortable with answering the questions and had the option of reviewing or revising their answers to questions. In addition, I have taken the appropriate measures to store all raw data safely on my
personal laptop.

**Limitations**

Due to the structure of the Master of Teaching program and the resulting time constraints, there are limitations associated with this study. Some limitations include a small sample size, lack of generalizability and researcher bias.

Since I chose to use criterion-based sampling, the two participants in my study expressed a positive response to teaching students with ASD. Unfortunately, there is not always a positive response to teaching students with ASD as stated previously in my literature review. This study also does not include voices of educators who do not agree with a vision of inclusive classrooms or have not taken any additional qualifications of special education courses. Additionally, there are only two participants in my study. Therefore, the findings in my study cannot generalize to all teachers.

I have experienced a lot of successes with students with ASD using the method of Applied behaviour analysis which may present as a bias in my study. Throughout my research paper, I have cited the strengths in using Applied behaviour analysis with students with ASD. Also, since I chose to use a qualitative interview design, I extracted themes or codes from the interview transcripts that were based on my interpretations and assumptions. This may have caused a bias while coding the data (Creswell, 2007).

As the principal investigator of this study, it is my interpretation of the strategies two teachers have used to support students with ASD in their general education classroom that are presented. These interpretations reflect my own personal experiences, biases and
assumptions. As a result of these limitations, my purpose is not to promote my findings but simply to share strategies that have been successful for two teachers supporting students with autism in their general education classrooms.
Chapter 4: FINDINGS

Introduction:

The following research findings were gathered and analyzed from two interviews that were conducted in October 2014. Both participants are full time teachers who taught students with ASD in their classrooms. Two individual case studies are presented in this chapter. Each case study presents the participants’ background, and the overarching themes that emerged from the one-on-one interviews. The overarching themes that emerged through data analysis will be presented in this chapter. These themes are: (a) support from professional community; (b) responsive pedagogy; and (c) professional development. This chapter provides insights into how teachers plan for and support students with ASD within their general education classrooms.

Case study 1: Kareema

Participant Background

Kareema is a junior/intermediate teacher who is in her fourth year of teaching. She spent her first year and a half teaching as a long-term occasional teacher and at the time of the study she had been teaching for a year and a half as a permanent teacher. She has taught in a school with a multiple exceptionality program, which she described as a small-populated school with about 150 students and tremendous support of seven educational assistants (EA). Her permanent position at the time of study is in the Catholic district school board. Throughout her four years of teaching, she has taught two students with Autism spectrum disorder (ASD) in her general education classroom. Kareema has stated that she does not have knowledge of Applied behaviour analysis (ABA) but has completed the preliminary additional training in the area of special education.
Support from Professional Community

Kareema spoke very positively about her experiences with students with ASD in her classroom due to the strong support she received from fellow teachers, principals, autism specialists, educational assistants and child youth workers. Each member in her professional community helped her to plan for and support the student with ASD in her classroom. For example, she described an experience of collaborating with previous teachers who had taught specific students with ASD in her class. She found this helpful because she was able to get a sense of what the students’ “strengths were, what their needs were and what strategies were successful in the past.” They would discuss how to implement these strategies in the present teaching year so that there would be a smooth transition for the student.

The student with ASD in her class presented a few challenging behaviours such as refusal and aggressive behaviours. The vice principal and principal in her school had experience supporting students with ASD in the past and working closely with autism so they provided Kareema with practical strategies to overcome these challenging behaviours such as visual cues and first-then strategies. Kareema was very grateful for the vice principal and principal’s support as she states, “I would not have known some of these strategies if my principal and vice principal didn’t help me out.”

Kareema also describes the significance of having access to educational assistants (EA) and child youth workers (CYW) in her school. When speaking about the EA and CYW in her classroom, she explained that they really helped to “regulate” the behaviour of the student. For example, when commenting on the student with ASD in her classroom was presenting aggressive behaviours, she said, “the E.A in that room would have to
control the situation and calm him down.” The EA and CYW supported Kareema in regulating challenging behaviours and also provided extra support and assistance when she needed to attend to the needs of the other twenty-five students in her classroom.

Responsive Pedagogy

One of the pedagogical challenges that Kareema witnessed with the student with ASD in her grade six class was refusal behaviours. She described her experience with one student who refused to wear his coat outside at recess when the weather was -1 degrees Celsius. In order to overcome his refusal behaviours, she decided to implement a strategy that her vice principal had seen in the past that was successful. She used a first-then strategy using appropriate visual cues. She explained how she used this first then strategy:

So we would have a little card, and have first-then on the card and we would print out a whole bunch of different pictures and so whatever we wanted him to do, so first put on a jacket we’d put that there and then basketball and then he would be able to do it. So he would be able to see what the result would be if he kind of completed what we asked him to do.

She discussed how this first-then strategy was helpful for him because he was able to visually see what positive reinforcement he would get next and that motivated him to wear a jacket and overcome the refusal behaviour. She used this strategy during lessons, where she would have him complete a specific amount of math homework and then receive a positive reinforcement of computer time. In addition to using visual cues and first-then strategies, she also used verbal cues, which supported the students’
transitions from high-preferred activities to low preferred activities. For example, one of the high-preferred activities for the student with ASD was using the computer and headphones to watch videos during free time. A low preferred activity for the student with ASD was completing math work. When Kareema had to transition the student with ASD from watching a video with his headphones during free time to working on math, she said she, “counted down a lot and that really helped him as opposed to pulling off his headphones.” She found that in the past when she would pull off his headphones he would present refusal behaviours such as yelling and screaming so she brought in a timer and would set a one minute transition warning. The student with ASD essentially understood the established routine of getting off the computer when the timer beeped. Kareema found that these strategies helped to regulate his behaviours in the classroom and to support his inclusion in the general education classroom.

Building an Inclusive Learning Environment

When Kareema was asked about her strategies for including students with ASD in her classroom, she spoke of the ways she created and encouraged a safe, caring and inclusive learning environment. For example when she described the physical set up of her classroom she explained that the student with ASD,

didn’t sit on his own which is good. I think its important that he doesn’t just sit in the back or the front, he sat with the other grade 6 students and he was a part of their groups, however I had them.

One of the pedagogical challenges Kareema faced related to her students’ behaviours was his constant interrupting of her lesson. He would often shout out random
facts about his favorite show. Understanding that it was important to incorporate his interests, she did not reprimanded but, instead, said,

I gave him 10 minutes in the morning to talk to the whole class about whatever was happening in the show and about the characters. That was his time to talk about that and then at no point could he talk about that. Maybe at lunch or recess but not during my lesson.

The 10-minute discussion in the morning reduced his disruption during lessons and was a successful strategy because he knew his opportunity to discuss the show was allotted to a specific time. Kareema explained, “he just liked that he had the time to talk about it and it worked really well.” There was also support received from his classmates during these discussions and she said, “they asked him a lot of questions about the characters even though they knew nothing about it.” She recognized that including the student with ASD in her class brought a lot of benefits for that student with ASD and their classmates. For example she stated,

It was amazing to see the level of responsibility they took on to care for him, the awareness that they became aware of these students who have differences. I think It was such a good thing that he was in their class because their responsibility, they all took on a role to help him out in one way or another. Empathy was clearly evident. And I think it enhanced their character, and gave them some skills to deal with students they may encounter in the future.. in high school, in university, because I think personally they need to be exposed to that.
When describing how the experience of having a student with ASD in the class benefitted her, she stated:

I remember saying it would be so different if he wasn’t in my class in this past year in grade 6 because he made it so much more enjoyable. He helped the students so much more I think. It really informed my teaching practice and I think teachers see having an autistic student in their class as a huge challenge and it is 100% a huge challenge but it makes you such a stronger teacher.

Overall, Kareema felt that having a student with ASD in her classroom seemed to help classmates to build their character, helped make her a stronger teacher and allowed the student with ASD to be included in a learning environment that appreciated him.

**Professional Development**

Before teaching a student with ASD, Kareema had taken an inclusive education course in teachers college. When I asked her if she used any strategies from that course with the students with ASD, she said “by the time you get hired, and you have your own class, so many years have passed that unfortunately the information is not as relevant or accessible anymore so that was tough.”

Kareema had similar feelings about the benefits of having taken a preliminary additional qualification course on the topic of special education. She described the course as “touching very little upon dealing with students with ASD. I think a whole course could be designated to how to accommodate these students.” When asked what she would find helpful to support her professional development, she emphasized, “practical strategies.” She said, “books are good, there’s a lot of information; I just think how to
apply them into a classroom when there’s 25 other students.” She emphasized the benefits of having a specialist coming into the classroom to model these strategies so that she can actually see how to use them practically.

**Case study 2: Tara**

*Participant Background*

Tara is a primary/junior teacher who has been teaching for the past nineteen years. She describes herself as “not a typical teacher” supporting students with ASD because she has a son with ASD. As a parent and educator raising a child with autism, she has gone through extensive training to help support her son and his needs. As an educator, she has taught one student who has been officially identified with ASD in her general education classroom. While she was teaching this student, she was teaching in a dual track school which offered French immersion and English language classes.

*Support from professional community*

Unlike Kristen, Tara did not receive as much support from her professional community as she would have liked. She did receive some support from the occupational therapist at her school but she strongly believes that in order to fully support a student with ASD, teachers need the consultants to be present in the classroom. When talking about the absence of consultants supporting her, she states,

> I’ve seen the benefits of the approach of consultants with my son over the last few years. To not see them at all in schools when they’re supposed to be your guide through the process is really sad and really disheartening.
When asked how she planned for her students with ASD without the support of a consultant she explained, “well because we are given no direction in planning, I just used strategies that I learned from the consultant who works with my son.”

**Responsive Pedagogy**

Tara taught a junior kindergarten student with ASD whom she described as having a lot of “sensory issues.” For example, she described the child as being overwhelmed by touch. She said, “when the little boys and girls tried to grab and hold his hand, he couldn’t tolerate it and saw that as aggression so he aggressed back.” In order to help him with his touch sensitivity she said, “we did a lot of the squeezing and compression activities. We had him do a lot of hard tasks where he held heavy doors open or did heavy lifting.”

Tara implemented a *first-then strategy*, which she described as a "tokenism approach." Students are instructed that they must *first* complete a task and *then* they will receive a reward. When discussing this tokenism approach she explained, “he would sit with me and do work to get 2 or 3 tokens and then he would get a break or a reward that was motivating.” This process helped the student with ASD understand that he would get a motivating immediate result for completing a task.

**Professional Development**

Tara has received her specialist training in the area of special education. This required her to take three separate courses focused on the topic of special education. She did not believe these courses supported her knowledge of ASD as she stated that they “tend to not focus on the practical side of special education.” She believes that it would be helpful to have more practical strategies involved in the training because that is
essentially what teachers will be using when they are in a classroom with a student with ASD.

She also believes that in order to better support students with ASD, the ministry needs to put a stronger emphasis on the use of special education ministry documents much like they do with the curriculum guides. She describes that most ministry documents that teachers have are “probably in the recycle bins and they only hand out one copy and it’s your school copy instead of handing out to everybody.” She believes that once the ministry pushes to support these documents, principals will begin to push the use of the documents and then teachers will finally use them effectively and become “familiar” with the procedures outlined.

At the time of this study, Tara had not been formally trained in Applied behaviour analysis (ABA). However, she has seen the use of the technique with her son and the benefits that have arisen from implementing ABA strategies. She believes that the strategies she used in the classroom such as using first-then strategies, positive reinforcements and taking data are all strategies she learned from experience with ABA. She has recognized that the ministry is starting to acknowledge ABA and positive reinforcement. She explains that the ministry is “tackling ABA in the classroom” by promoting “self-regulation and positive reinforcement in classrooms.” She believes that if the push for ABA continues within the ministry “pretty soon we will be ABA consultants as well as teachers.”

Tara believes that appropriate training needs to be put in place for teachers. She recalls an experience with a specialist and her son. The specialist had put in a strategy to help reduce a challenging behaviour but that strategy ended up creating more challenging
behaviours for her son. She stated, “If she can make that mistake what mistake are the educators making when we are not trained?” She believes that educators need to be trained especially since supporting students with ASD is not a simple task. She also believes that teachers cannot assume that because they have experience with one student with autism, they will know how to treat all students with autism. She believes that “every child is another petal on somebody’s flower. Each petal is different and should be taught differently.” This belief is what motivates Tara to treat every student differently in her class and why she believes “educators need to open their minds, their bodies and their souls with students with ASD.”

**Cross-Case Analysis**

These findings reveal the participants’ common practices in planning and supporting students with ASD in their general education classrooms. Iovannone et al. (2003) found six core elements that have empirical support for a comprehensive instructional program for students with ASD. Both participants modeled some of these elements in their own classrooms such as individualized supports and services for students, structured learning environments, and a functional approach to problem behaviour. The participants described how they implemented individualized supports and services in their classroom by using pivotal response training (PRT). PRT is a naturalistic method where preferred items and activities are used to motivate a child and easy and difficult tasks are interspersed (Iovannone et al., 2003). This method is a way of capitalizing on students with ASD interests and promoting motivation and engagement within the classroom (Hurth et al., 1999).
Kareema and Tara both used PRT in their classrooms because they found that the students with ASD would get extremely upset with changes in routines or schedules (The Ministry of Education, 2007). Specifically, the students with ASD would get upset with transitioning from a high preferred task like going on the computer or playing with toys to a low preferred task such as doing curriculum work. They realized that using traditional education techniques such as verbal explanations or punitive strategies might be of limited value for students with ASD in a general education classroom and that they required specialized instructional techniques like pivotal response training (Mesibov & Shea, 1996).

Kareema set up this pivotal response method by using a timer and a visual schedule. A high preferred task that a student with ASD in her class enjoyed was going on the computer and a less preferred task was doing math homework. She found that during this transition, he would present refusal behaviours. She decided to set up a timer to intersperse the less preferred tasks with the high-preferred tasks and a visual schedule to show him what he had to complete before he could get his positive reinforcement in order to reduce his refusal behaviours (Iovannone et al., 2003). For example, she would give him a positive reinforcement of ten minutes on the computer if he completed twenty minutes of math homework. She found that this strategy was successful in reducing his refusal behaviours during transition from the computer to work time.

The Ministry of Education (2007) found that some students with ASD may display a preoccupation with specific themes or objects. The student with ASD in Kareema’s class had a preoccupation with a show and would interrupt her lessons to talk about it. Kareema used the strategy of incorporating his interest into her lessons and gave him “10
minutes in the morning to talk about it to the whole class” which he understood was the only time he was able to talk about it so he would not disturb the rest of her lesson. She explained that it reduced his disturbance during her lessons because, “he just liked that he had that time to talk about it.”

Tara handled transitions with a student with ASD in her JK/SK class by using a token reward system (Leach & Duffy, 2009). She would set it up so that the student would have to work on one task and after completing five steps of that task, he would receive a reward or some type of preferred item. The goal of this reward system was to increase the motivation of the student to complete less preferred tasks so that he could gain access to a positive reinforcement. Overall, there seemed to be benefits for both Kareema and Tara in using pivotal response training because their students seemed to be more engaged by not displaying their challenging behaviours and working towards gaining access to their positive reinforcement (Leach & Duffy, 2009).

Although Kareema mentioned she had never heard of ABA and Tara is not specially trained in ABA, it was interesting to note that both participants were still using methods of ABA in their planning and support of students with ASD. A main component of ABA is “setting up a comprehensible environment that allows a student with ASD to anticipate requirements of a specific setting and learn and generalize a variety of skills” (Iovannone et al., 2003, p. 159). Both participants assessed the student’s environment and understood that the challenging behaviours of preoccupation with specific themes and unusual responses to sensory stimuli from the students were actually signs of task avoidance (Ministry of Education, 2007; Watson et al., 1989). They were able to implement antecedent approaches such as using their visual schedules to transition from
high-preferred activities to less preferred and to “set the occasion for desirable behaviour” (Dunlap, Kern & Worcester, 2001, p. 130) instead of responding with punitive methods. This was important because Watson et al (1989) found that sometimes responding to challenging behaviours with punitive methods can actually reinforce task avoidance.

Hoyson et al. (1984) have shown that children with ASD may benefit both socially and academically from being in a class with typically developing children. This finding was apparent in Kareema’s classroom where the student with ASD was given significant opportunities to be included into the classroom. She set up her classroom so that the student with ASD was physically included in the classroom and never sat on his own and was a part of the rest of the groups during class routines. She also observed that his classmates took a level of responsibility in caring for him which she described as “enhancing their character” and helping them grow in empathy and responsibility. She provided an example of his classmates helping him out during recess if other students were picking on him and taking on that level of responsibility.

This class experience of Kareema’s differs from findings in some research that suggest that having a student with a disability in the classroom decreases learning opportunities for typically developing peers (Hunt and Goetz, 1997). The benefits for the student with ASD in her classroom would be in line with findings from the literature showing that students with ASD included in general education classroom show signs of increased self esteem, higher levels of engagement and social interaction, larger friendship networks and less isolation and stigma (Mesibov & Shea, 1996; Fryxell & Kennedy, 1995; Hunt, Farron-Davis, Beckstead, Curtis, & Goetz, 1994).
Kareema and Tara were able to access empirically validated strategies through their professional community and personal experiences. Kareema explains that she owes much of the successful strategies in her class to her principals, vice principals, past teachers and autism specialists who provided her with these resources. Tara explained that a lot of the strategies she used in her classroom that were successful came from her personal experience with her son who is diagnosed with ASD. She has worked closely with the consultants who work with her son and has attended various workshops and training that has assisted in the creation of her strategies for students with ASD in her classroom. This is not surprising given that research has suggested, “inclusion can only work well if teachers have the knowledge and access to empirically validated strategies that will assist them” (Harrower and Dunlap, 2001, p.764).
Chapter 5: DISCUSSION

Introduction

The purpose of this study was to explore how two teachers demonstrate responsive pedagogy in their teaching of students with ASD within the general education classroom. The central research questions posed in this project were: a) How do teachers plan for and support students with ASD within the general education classroom? b) What support sources and strategies do teachers without any formal training in Applied behaviour analysis have in the preparation of having a student with ASD in their classroom? c) What are some benefits and/or challenges that may arise as a result of including students with ASD within the classroom for the teacher, the student with ASD and their classmates?

My interest in this topic stemmed from my own personal experience of transitioning students with ASD into general education classrooms as well as my growing awareness of the increasing numbers of students with ASD in the general education classroom. The findings that emerged from the two interviews reveal that much of the success of planning and supporting students with ASD come from the support of the professional community as well as incorporating ABA components in their teaching methods. The findings also revealed the positive aspects of including a student with ASD in the general education classroom for the student with ASD and their classmates.

Implications and Recommendations

Implications for the Researcher

The motivation for this topic came from my own personal experience transitioning students with ASD into general education classrooms. I have been trained in
Applied behaviour analysis which is the only method of instruction that has shown empirically supported improvements in the core impairments of autism spectrum disorder (Eikeseth et al., 2002; Howard et al., in press; Lovaas, 1987; Maurice et al., 1996; Smith, 1999). I witnessed some of the challenges teachers who were not specialized in ABA faced while transitioning students with ASD in their classrooms and I was interested in finding out what kind of strategies and resources are available for these teachers to best support students with ASD.

Although neither of the participants in this study were trained in ABA, their passion and their commitment towards supporting students with ASD in the general education classroom were two of the many reasons both the teachers and students had such a successful inclusion experience. Both teachers modeled the importance of getting to know your students. Both Kareema and Tara had to understand the function of the challenging behaviours in their students with ASD in order to implement appropriate strategies. This is important for all teachers to do so that teachers do not end up reinforcing negative behaviour. Both participants were always willing to learn from and receive help from the professional community, and use their own personal experiences to create supportive strategies to reduce challenging behaviours. The importance of having support from the professional community was apparent in both teachers’ experiences as it guided them in planning and supporting their students with ASD.

After listening to the positive experiences in Kareema’s classroom, where classmates gained a level of responsibility for the student with ASD in their classroom, I came to understand the significance of modeling inclusivity as a teacher so that your students can do so as well. Kareema’s motivation and ability to create a feeling of
inclusion for the student with ASD in her classroom helped her students realize the importance of doing the same thing. The experiences of my participants proved that the dedication to continually grow and learn in knowledge and skill as a teacher is essential for creating a successful and safe inclusive environment for all students.

*Implications and Recommendations for the Educational Community*

Both Kareema and Tara took preliminary additional training in the area of special education. When asked if this training supported them in their planning for a student with ASD, they described the lack of practical strategies given to them to work with students with ASD. They both believed it would have been more beneficial if the training had more practical strategies or if they could receive practical strategy training in the present time as teachers supporting students with ASD in their classrooms. Kareema pressed the point that, “by the time you get hired, and you have your own class, so many years have passed that unfortunately the information is not as relevant or accessible anymore so that was tough.” Tara emphasized the benefits of having a specialist or consultant coming into the classroom to model these practical strategies so that she can actually see how to use them. She also mentioned the importance of the Ministry to put a stronger emphasis for teachers to use the special education ministry documents. Their responses are in line with the study by Koegel et al. (1977) where they found the benefit of sufficient training for teachers in ABA because of the constant feedback and practice taught in training. If autism specialists and consultants were to come into the classrooms of teachers and provide them with the constant reinforcement and training, it could be very helpful outcome for the teachers and students. Some of the behaviours of students with ASD can be quite challenging for teachers. It is important for teachers to know the kinds of
responses that will elevate these challenging behaviours and those that will help to defuse them. Proper training may help to support this understanding.

Experiences presented in the findings of this study provide us with some insight into the kinds of strategies that can best support students with ASD in the general education classroom. These two particular teachers seem to have learned how to include and support their students well. The reason for this could stem from support Kareema has received from her professional community such as her principals and colleagues who have had experience with students with ASD. Tara has received support and knowledge from the specialists and consultants of her own son and has generalized it in her own classroom. It is important to note that not all teachers would have this kind of experience. Many schools and educators are often not adequately prepared to meet the complex needs of these students and express misgivings about teaching children with ASD (Mccolow, Davis & Copland, 2013; Lambe, 2007). With the lack of resources, strategies and knowledge of ASD, teachers efforts may not yield their desired effects and so these teachers may lack self-efficacy in supporting students with ASD and are less likely to try (White, 1959; Podell et al., 1998). This is why it is important for teachers to gain adequate training that will allow them to feel competent in their abilities to teach children with autism (Busby, Ingram, Bowron, Oliver & Lyons, 2012). This will help teachers feel more motivated to address any challenges with students with ASD and be more willing to accept their responsibilities for teaching these children (Busby, Ingram, Bowron, Oliver & Lyons, 2012).

Although both teachers were not specifically trained in ABA, they were using ABA strategies that helped their students with ASD to overcome some challenging
behaviours. If these teachers were actually trained in ABA they could acquire a variety of new skills which could have even more of a beneficial influence on their future teaching practices with students with autism. This would be helpful for all teachers especially those who have no experience with ASD. Also the results of training teachers in ABA could be similar to literature showing that training teachers in ABA can help to reduce challenging behaviours as well as teach new skills and improve communication, compliance and daily living skills of students with ASD (Campbell, 2001; Matson et al., 1996).

**Further Study**

In order for students with ASD to be fully supported in their learning, it is crucial to continue this exploration of what other practices can be successfully implemented. I would like to see if all students on the spectrum benefit from being in a general education classroom or just those students who are higher on the spectrum. I would be interested in learning if a student who is lower on the spectrum and non-verbal would receive the same benefits in a general education classroom versus in a specialized setting. Since both participants in this study emphasized the importance of being trained with practical strategies instead of just taking a preliminary course, I think it is important there is research in what type of training is the most beneficial for teachers. There can be a comparison study of teachers who have completed the preliminary training in special education with teachers who have been trained with consultants and in Applied behaviour analysis. Further research on this topic is important to provide educators with more resources to draw from and contribute to in supporting the growing population of students with ASD.
Conclusion

In order for teachers to best plan for and support students with ASD in a general education classroom there needs to be a combination of support from the professional community, autism specialists and consultants, appropriate training and an implementation of effective methods and strategies. With all of these elements in place, teachers can be prepared to anticipate challenging behaviours and implement positive reinforcement strategies to best support students with ASD. When students with ASD are included in the classroom, it appears that both teachers and students benefit. Not only does it help to inform a teachers’ teaching philosophy, but it can also help to educate students and help build their character – especially when they may have opportunities to come to know and better understand students with ASD. As researchers and teachers it is our role to find the best possible opportunities for students with ASD to be successful and it starts by seeking out what more we can do to make a difference.
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APPENDICES

Appendix A: Letter of Consent for Interview

Date: ________________

Dear ________________,

I am a graduate student at OISE, University of Toronto, and am currently enrolled as a Master of Teaching candidate. I am studying responsive pedagogy for students with autism in general education classrooms for the purpose of investigating an educational topic as a major assignment for our program. 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. Mary Lynn Tessaro. My research supervisor is Dr. Shelley Murphy. 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 40 minute interview that will be tape-recorded. I would be grateful if you would allow me to interview you at a place and time convenient to you. I can conduct the interview at your office or workplace, in a public place, or anywhere else that you might prefer.

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. It may also result in a 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, my research group members, 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 tape 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.

Yours sincerely,
Melanie Chang (647) 229-9503
melanie.chang@mail.utoronto.ca

Dr. Mary Lynn Tessaro 416 978 0065
marylynn.tessaro@utoronto.ca

Dr. Shelley Murphy
647 985 0164
shelley.murphy@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 Melanie Chang and agree to participate in an interview for the purposes described.

Signature: ______________________________________ Name (printed):
_________________________________ Date: ______________________
Appendix B: Interview Questions

Thank you for participating in this interview. My research topic explores teachers’ pedagogy with students with autism spectrum disorder. This interview will be no more than 40 minutes long. I will be asking you 12 questions. Please feel free to ask for clarification or skip a question and come back to it at a later time in the interview. If it is comfortable for you, I will be referring to autism spectrum disorder in its abbreviated form of ASD during this interview. Do you have any comments, questions or concerns before we begin?

Professional Background

1) How long have you been teaching?
2) How many students with ASD have you experienced in your classroom in the past or present?
3) What kind of school were you teaching in when you had a student with ASD (public, private, alternative) and what grade?

Strategies and Inclusive practices in the classroom:

4) How do you plan for and teach your students with ASD?
5) Can you tell me about a specific student (using a pseudonym) and his/her needs, and an example of how you specifically responded to his/her needs? For example, can you touch specifically on communication, behaviour and social interactions?
   a) Why did you choose that particular strategy/strategies?
   b) Were these strategies effective? What indicators reflected the effectiveness?
6) Can you provide specific examples of the ways you set up your classroom so that students with autism spectrum disorders feel/felt included?
7) Can you talk about any benefits and/or challenges that may have arisen as a result of including students with ASD within the classroom? (Thinking about you as a teacher, your students with ASD, and their classmates)
8) Can you talk about what has contributed to your understanding about how to support and teach students with autism within the classroom?
   a) If you received any training, what type of training have you received and how did it
influence how you work with students with autism? (ie. within your teacher education program, AQ, workshops etc.)

**Support sources in the classroom:**

9) Did you have any educational assistants when you taught students with ASD? How often were they in your class?

10) After teaching a student with autism in your classroom, what other resources do you think would have been helpful for you to fully prepare/support/respond to students with autism in your classroom and why? (Specialized training, support staff)

11) Have you heard specifically about Applied behaviour analysis (ABA)?

a) If you have heard of ABA, did you use this in your classroom? Why or why not? 12) Is there anything else you would like to share with me about teaching students with ASD?

**Thank you again for taking the time to answer all my questions. I truly appreciate it.**