

Exploring How Level of Training, Inclusion, and Problem Behaviour Affect Student-Teacher  
Relationships for Students with Autism Spectrum Disorders

by

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## **ABSTRACT**

This study examined the quality of relationships between students with Autism Spectrum Disorders (ASD) and their classroom teachers and Special Educational Assistants (SEAs). Specifically, it examined how level of inclusion, problem behaviour, adaptive behaviour, and amount of training in ASD affects the student-teacher and student-SEA relationship. Participants were 15 students with ASD receiving inclusive education in grades K through three, their classroom teachers, and SEAs. Teachers and SEAs completed rating scales assessing problem behaviour, adaptive behaviour, and the quality of student-teacher relationships. Analyses consisted of Pearson correlations and multiple regressions to identify which alterable variables can be targeted to improve the relationships between students with ASD and their teachers. Results showed that the level of problem behaviour and percent of student inclusion were significantly related to the student-teacher relationship, but not the student-SEA relationship. These results are discussed with regard to previous and future research, limitations, and implications for supporting students with ASD.

## **PREFACE**

This thesis consists of original research conceived by the graduate student, with advisement from her research supervisor. The graduate student was primarily responsible for data collection, recruitment, analysis, and writing, and thus, this thesis represents her work as lead researcher and author. Ethics Approval was required by the UBC Behavioural Research Ethics Board (BREB) to conduct this research. The UBC BREB certificate number is H09-00192. A copy of this certificate is included in Appendix H.

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## **CHAPTER 1: INTRODUCTION**

Autism spectrum disorders (ASD) are lifelong developmental disabilities, with their core difficulties being apparent early in a child's life. According to the American Psychiatric Association (DSM-IV-TR; 2000), the primary impairments in ASD consist of deficits in reciprocal social interaction, social communication, and the presence of stereotyped behaviour, interests, and activities. Children with ASD tend not to explore their environments and have difficulty recognizing cues for social interactions with other individuals. Within the school setting, students with ASD have been shown to withdraw from their teacher or peers for an extended period of time without being noticed (Ochs, Kremer-Sadlik, Soloman, & Sirota, 2001).

This lack of social engagement with other individuals can affect the level of inclusion of students with ASD within the classroom (Goodman & Williams, 2007). When placed in inclusive environments, children tend to interact more with their teachers than with their peers (Donnellan, Mesaros, & Anderson, 1984). As a result, interactions between students and teachers are important targets for social growth. Hence, outcomes may be enhanced if teachers have knowledge and skills in instructional strategies for increasing social inclusion (Goodman & Williams; Harrower & Dunlap, 2001).

The quality and quantity of interactions between students and teachers can affect short term student outcomes, such as the likelihood of problem behaviour, as well as long term outcomes, such as academic achievement and the degree of independent functioning (Hamre & Pianta, 2001; Hughes & Kwok, 2007). Although there has been a substantial research focus on the effect of student-teacher interactions on outcomes for students in general, there is limited research that examines the relationships between classroom teachers and students with ASD (Robertson, Chamberlain, & Kasari, 2003). Because the student-teacher relationship affects both



the level of inclusion within the classroom and students' long term outcomes (Cook, 2004), it is important to understand what variables affect these relationships and how research in this area may relate to students with ASD.

### **Student-Teacher Relationships**

Student-teacher relationships are the connections formed between the student and teacher, influenced by the quality and quantity of their interactions. They have been described as one of the dyadic systems that plays a key role in the regulation of child behaviour within small social groups, and in shaping behaviours of the involved individuals (Pianta, 1999). Pianta emphasizes that the student-teacher relationship is defined by a student and teacher's ongoing responses to one another, as well as the quality of these responses, and not by single occurrences of behaviour (e.g., child defiance or adult rejection).

Researchers have found that positive student-teacher relationships are important contributors to students' social behaviour and emotional self-regulation. Students with higher quality student-teacher relationships, as measured on the Teacher-Child Rating Scale (Hightower et al., 1986), tend to have lower scores of negative school adjustment and higher scores of social and emotional adjustment at school (Murray & Greenberg, 2000). Furthermore, lower ratings on the Student-Teacher Relationship Scale (STRS; Pianta, 2001), a measure of the student-teacher relationship on the dimensions of closeness, conflict, and dependency, have been associated with higher levels of externalizing, internalizing, and attention problems (McIntyre, Blacher, & Baker, 2006). These researchers found that quality relationships between teachers and students are also related to the teacher's ability to read the student's social cues, offer emotional support and assistance, and model appropriate behaviour.

Studies investigating student-teacher relationships have also shown that positive student-teacher interactions lead to better school adjustment. Birch and Ladd (1997) found that student

dependency on teachers was negatively correlated with their academic performance, school attitude, and school involvement. Furthermore, their findings indicated that high ratings of student-teacher conflict on the STRS (Pianta, 2001) were associated with negative student attitudes towards the school environment. These researchers speculated that students may avoid school to escape from an aversive, conflictual environment and may be less likely to cooperate with their teachers and engage in classroom activities. In addition, they hypothesized that relationships may become more conflictual when teachers react negatively to student attempts to escape from the classroom environment.

Researchers have also examined the effect of student-teacher relationships on school adjustment from kindergarten to first grade. School adjustment and student promotion from kindergarten to first grade has been found to be related to reports of teacher warmth and open communication and reports of low conflict and dependency (Pianta & Steinberg, 1992). Furthermore, Hamre and Pianta (2005) examined classroom environment factors that predicted whether kindergarten students at risk for school failure were still at risk at the end of first grade. Results showed that students who displayed early behavioural, social, and academic problems in kindergarten had significantly increased academic achievement when they received high emotional support in their classroom. High emotional support included situations in which teachers were responsive to student needs and created positive classroom environments that encouraged interactions with peers and their teachers.

These research findings suggest that student-teacher relationships are related to academic failure and social challenges. These relationships affect both immediate and long-term student outcomes (e.g., school adjustment, involvement, and grade promotion). These outcomes can be enhanced and risk decreased through supportive classroom environments. However, there is less clarity on the direction of these effects. Some research findings have shown that student-teacher

relationships predict future levels of behavioural, academic, and social problems (Hamre & Pianta, 2005), whereas other studies focused on the association between present ratings of student-teacher relationships and student attitudes toward school (Birch & Ladd, 1997). Consequently, it is important to consider that the student's behavioural, academic, and social problems may also affect the student-teacher relationship.

### **Adaptive Behaviour and Student-Teacher Relationships**

Student-teacher relationships also affect the student's level of adaptive behaviour within the classroom and school. According to the *DSM-IV-TR* (2000), adaptive functioning refers to how effectively individuals cope with every day life demands and how well they meet the standards of personal independence expected of someone in their particular age group, sociocultural background, and community setting. Specific skills that can be used to indicate adaptive functioning include social skills, leadership, study skills, and functional communication (Reynolds & Kamphaus, 2004).

Researchers have found that when students are provided with supportive interpersonal relationships within the school, they experience increased social competence with peers and a greater satisfaction with school. Howes (2000) examined the effect of student-teacher relationships and the social emotional climate in preschool on students' adaptive and maladaptive behaviours in grade two. Students who had early positive relationships with their teachers and peers were more likely to display prosocial behaviour in grade two and less likely to display maladaptive behaviours, such as aggression, disruption, and social withdrawal. Howes also found that factors such as social competence may affect students' sense of belonging within the classroom and their relationships with others.

Similarly, research has shown that positive student-teacher relationships are related to social and academic success. Baker (2006) found that positive student-teacher relationships, and

higher ratings of closeness in particular, were related to more positive work habits and social skills. Levels of positive work habits and social development were measured by student report cards, focusing on the student's ability to adjust to classroom norms, routines, and expectations (e.g., using class time appropriately and following classroom and school rules). Baker emphasized that the direction of effects between these relationships and school adjustment could not be determined, as it may also be easier for teachers to develop appropriate relationships with students with higher levels of school competence.

Students with ASD often have more difficulty remaining focused during classroom activities, as they may be distracted by movement and other visual stimuli in their periphery (Goodman & Williams, 2007; Sigman & Capps, 1997). Consequently, they may have more difficulty acquiring key adaptive behaviours, such as social skills and positive work habits. Students with ASD can also have trouble functioning independently and engage in repetitive behaviours, which has a significant effect on the ability to focus during classroom instruction (Goodman & Williams; Schreibman, 2005). As students with ASD often have trouble maintaining focus during instructional periods and participating in social interactions (Goodman & Williams, 2007), it may be beneficial to identify whether positive student-teacher relationships are associated with increased levels of adaptive behaviour.

### **Problem Behaviour and Student-Teacher Relationships**

Problem, or maladaptive, behaviour has also been shown to have a negative effect on student-teacher relationships. Problem behaviour can include both externalizing problems, such as verbal or physical aggression, and internalizing problems, such as anxiety and depression.

Repeated problem behaviour serves a particular function for students, such as escaping from an academic task or obtaining peer or adult attention (Carr, 1977). As such, students may engage in problem behaviour to access positive student-teacher interactions or escape negative

ones. Carr, Taylor, and Robinson (1991) investigated the relationship between problem behaviour and student opportunities to respond in class. Teachers were less likely to call on students who engaged in problem behaviour, reinforcing students with escape from task demands, while being reinforced by avoiding further student problem behaviour. The researchers also speculated whether students may have also engaged in problem behaviour to obtain teacher attention, as teachers may already be providing these students with fewer opportunities to respond.

Research has also shown that negative student-teacher relationships can lead to future increases in disruptive behaviour. Ladd and Burgess (2001) found a significant positive correlation between conflictual student-teacher relationships in the fall of kindergarten and student aggression in the spring of first grade. Furthermore, higher scores of teacher-student conflict predicted increases in student misconduct and attention problems.

Conflictual student-teacher relationships may also influence teachers to attempt to control student behaviour, which may impede attempts to foster a positive school climate (Hamre & Pianta, 2001). These researchers found that student-teacher relationships predicted behavioural outcomes through late elementary school and early middle school, especially for students at risk for developing problem behaviour. Although positive student-teacher relationships were also significantly correlated with academic outcomes, negative relationships with teachers were found to have a stronger effect on future disruptive behaviour. On a more positive note, these researchers suggested that students who engage in problem behaviour early in school but then develop a positive relationship with their teachers may be at less risk for future problem behaviour than those who do not form positive student-teacher relationships.

Because students with ASD often lack the skills to engage in appropriate social interactions, they may engage in problem behaviour as a means to achieve student-teacher interactions (Macintosh & Dissanayake, 2006). The findings of their study indicated that

according to parent and teacher ratings on the Social Skills Rating System, students with high-functioning autism and Asperger's Syndrome displayed deficits in cooperation, assertion, and self-control, and had higher levels of internalizing and hyperactive behaviours when compared to typically developing students. As students who engage in disruptive behaviour face an increased risk of isolation from educational settings (Horner, Carr, Strain, Todd, & Reed, 2002), problem behaviours can negatively affect outcomes for students who are already at greater risk for social exclusion. Macintosh and Dissanayake suggested that because students with ASD have social impairments, empirically validated interventions that target social skills through modeling, prompting, and reinforcement, may be useful techniques to teach them appropriate social skills.

Overall, research in this area emphasizes how student-teacher relationships may evoke and maintain student problem behaviour. Both the function of the student's behaviour and the role that the teacher plays in maintaining this behaviour may be important to their relationship. Consequently, because the direction of this effect is not clear, targeting both the student and teacher's behaviour may enhance student-teacher relationships and decrease problem behaviour. Although research has shown that associations exist between student-teacher relationships and problem behaviour, and that students with ASD engage in higher levels of problem behaviour than their typically developing peers, fewer studies have examined how problem behaviour may affect relationships between teachers and students with ASD.

### **Presence of an SEA and Student-Teacher Relationships**

Another area that has been shown to have important implications for student-teacher relationships is the presence of an SEA within the classroom. When an SEA is present, classroom teachers rate students with special needs more positively than when the SEA is absent (Cook, 2004). Cook suggested that these favourable ratings may be due to the role that SEAs play in reducing levels of problem behaviour, an important predictor of teacher rejection. Furthermore,

teachers have reported being more likely to oppose the inclusion of a student with ASD in their classrooms without the additional support of an SEA, perhaps due to limited teacher education in ASD (Simpson, de Boer-Ott, & Smith-Myles, 2003). At the same time, Simpson and colleagues emphasize the importance of monitoring the amount of support provided to the student. Although students may need assistance for some tasks, SEAs can promote independence by not assisting with tasks which the student is able to complete.

The presence of an SEA may also have a positive effect on student engagement, with one study showing that academic engagement and positive verbal interactions are sometimes higher when SEAs are nearby (Werts, Zigmond, & Leeper, 2001). Consequently, these researchers emphasized the importance of using student proximity to both SEAs and teachers as a means of increasing student engagement.

Research has also shown that the presence of an SEA can also lead to a decrease in student-teacher interactions. One study found that teachers were less engaged with their students when an SEA was present, with interactions limited to greetings, farewells, and occasional praise (Giangreco, Edelman, Luiselli, & MacFarland, 1997). Results of this study also showed that SEAs took the primary role in making instructional decisions for these students. Another study (Giangreco, Broer, & Edelman, 2001) found that teachers were less engaged when the SEA was responsible for the student, but that more engaged teachers were more knowledgeable about the student's academic functioning, learning outcomes, and curricular activities. Two methods to avoid the possibility that classroom teachers will lose responsibility for the education of students with disabilities is for the SEA to reduce proximity to the student when possible and emphasize that the teacher is responsible for the instruction of all students in her classroom (Cook, 2004).

SEAs are often expected to take control of student instruction, yet they rarely have the same level of training as classroom teachers. Marks, Schrader, and Levine (1999) provided

evidence that SEAs may have training and experience to address problem behaviour, but that this expertise may decrease the level of responsibility that the teacher has for the student. Research has shown that the behaviour and academic performance of students with ASD is affected by the presence of SEAs (Young & Simpson, 1997). These researchers found that SEAs initiated limited interactions with their students with ASD, and that these interactions were primarily verbal, despite the fact that students with ASD often struggle with verbal directions. As a result of their findings, they highlighted the importance of providing SEAs with the training to support the academic and behavioural needs of students with ASD and work collaboratively with classroom teachers.

The findings of these studies suggest that the presence of an SEA can have both a positive and negative effect on the student-teacher relationship. This research also indicates that when an SEA is present, the student may be more likely to be included in the classroom and may also display lower levels of problem behaviour and higher levels of academic engagement. At the same time, their presence may lead to a decrease in student-teacher interactions, which may be particularly problematic if the SEA assumes responsibility for the student without proper training in classroom instruction. On the other hand, there has been less focus on the amount of SEA support provided to the student and how this level of support may affect the student-teacher relationship. Furthermore, although research has examined the effect that the presence of an SEA has on the student-teacher relationship, variables that affect the student-SEA relationship have not been examined.

### **Training in ASD and Effect on Teacher Perceptions**

Researchers have reported that many general education teachers feel a lack of experience and preparedness in teaching students with ASD and other disabilities. This lack of experience may affect their attitudes both toward students with special needs and their inclusion in general



education classrooms (Cook, Tankersley, Cook, & Landrum, 2000; McGregor & Campbell, 2001). Teachers with more training in special education or experience teaching students with ASD and collaborating with special education personnel are more likely to have a positive perception of these students and report beliefs that students with ASD should be integrated into mainstream classrooms (McGregor & Campbell).

Researchers have also examined the quality and quantity of training on teachers' perceptions of students with ASD. Some researchers emphasize that it is the *quality* of training that is important (Cook et al., 2000), whereas other researchers feel that attending a one or two day workshop on ASD and ASD is not sufficient, as it may be limited to particular topics and may focus specifically on one area of functioning (Scheuermann, Webber, & Boutot, 2003). These researchers suggested that teachers be well instructed in behavioural management techniques and have mastered skills to teach students with ASD.

Although classroom teachers should have the skills to use evidence-based practices, they are rarely required to complete any formal training in ASD. When examining the amount of knowledge that teachers have on students with ASD, Helps and colleagues (1999) found that many teachers lacked a theoretical understanding and held outdated beliefs about ASD.

These findings indicate that lack of training in ASD may affect the perceptions of general education teachers toward students with ASD and their opinions on inclusion. On the other hand, there is an ongoing debate in research on whether the quality or quantity of training in ASD is important, with findings yielding mixed results. Furthermore, previous research has shown that training in ASD may affect a teacher's perception of the disorder (McGregor & Campbell, 2001), research examining the effect that training in ASD has on student-teacher relationships is scarce (Robertson et al., 2003).

### **ASD and Student-Teacher Relationships**

Although a plethora of research has examined the effects of student-teacher relationships on general education student outcomes, little research has examined student-teacher relationships for students with ASD. Robertson and colleagues (2003) examined the effect that problem behaviour, the presence of an SEA, and level of social inclusion had on student-teacher relationships. The participants were 12 students with ASD and their classmates. Teachers provided information about their teaching experience, including number of years and grade levels taught, special education training, and access to SEAs and in-services. Teachers completed the STRS, a measure of teacher perceptions of relationships with students, as well as the SNAP-IV Rating Scale (Swanson, 1995) to measure student levels of problem behaviour. Teachers also provided information about their relationship with the SEA. Students with ASD and their classmates completed a social inclusion measure as an indicator of their perceptions of the classroom social environment.

Results of this study showed that none of the classroom teachers had formal training in special education, 83% had never taught a student with ASD, and 50% had never taught a student with special needs. No differences were found between student-teacher relationships when an SEA was present. Furthermore, problem behaviours (e.g., inattention and hyperactivity/impulsivity) were associated with a conflictual student-teacher relationship, with inattention negatively correlated with ratings of closeness. Finally, the quality of the student-teacher relationship was associated with student level of peer acceptance within the classroom.

Similar to previous research (Hamre & Pianta, 2001), Robertson and colleagues found that high ratings of problem behaviour had a negative effect on the student-teacher relationship. Unlike previous research (Giangreco et al., 1997; Marks et al., 1999), the presence of an SEA did not affect the student-teacher relationship. Robertson and colleagues highlighted three key

differences between their results and results from previous studies. First, teachers and SEAs collaborated when educating students with ASD. Second, the SEAs were trained in working with students with ASD. Finally, in-service trainings on ASD and educating students with special needs were provided to both SEAs and teachers.

Although a few limitations to the study were identified by the authors, one main limitation was that only teacher perceptions were obtained to evaluate student-teacher relationships. Consequently, teacher ratings may be biased by student disruptive behaviour. Pianta (1999) highlighted this problem, suggesting that associations between a teacher's perception of relationships and the child's behaviour may be influenced by characteristics of the child (e.g., problem behaviour). Student relationships with other school professionals, such as SEAs, have not been assessed. Furthermore, although many researchers have examined the effect of problem behaviour on the student-teacher relationship in for general education students (e.g., Hamre & Pianta, 2001), limited studies have examined the effect of such behaviours of students with ASD on this relationship. Further studies that examine not only the effect of problem behaviour, but also the effect of training in ASD on the student-teacher relationship are needed, to identify the type of training that would most benefit school staff who work with students with ASD.

### **The Present Study**

The present study built upon the results of Robertson and colleagues (2003). The effect that problem behaviour, training in ASD, and the percent of time the student is included in the classroom was examined. Unlike the study conducted by Robertson and colleagues, the present study assessed both the student-teacher and the student-SEA relationship. Furthermore, the present study examined the effect of adaptive behaviour on student-teacher relationships. This type of research is important, as student-teacher relationships have rarely been studied in this population. As students with ASD have core impairments in social communication and social

interaction (*DSM-IV-TR*; 2000), it is important to consider their relationships with others when seeking to improve life outcomes.

The main objective was to identify key variables that are associated with student-teacher relationships to determine which factors can be targeted to improve these relationships. Previous research has linked adaptive behaviour to student-teacher relationships and problem behaviour (Baker, 2006; Ladd & Burgess, 2001), and studies have also shown that students with ASD are more likely to engage in problem behaviour and have difficulty remaining engaged within the classroom (Goodman & Williams, 2007; Macintosh & Dissanayake, 2006). Because researchers agree that training in ASD may affect teacher perceptions of the student, the present study also evaluated the effect of training in ASD on the student-teacher relationship.

A second objective was to determine to the extent to which the percent of student inclusion affects the student-teacher relationship and the student-SEA relationship. Research has examined the effect that an SEA has on student-teacher relationships, with some findings indicating that the presence of an SEA increases positive ratings by teachers (Cook, 2004), and other studies showing that the presence of an SEA negatively affects the student-teacher relationship (Giangreco et al., 1997; Marks et al., 1999). Fewer studies have examined the effect of inclusion on the student-teacher relationship. Although Robertson and colleagues (2003) found a moderate association between social inclusion as rated by the student's peers and the student-teacher relationship, research has not examined the effect of the percent of inclusion (i.e., participation in the same curriculum) on the student-teacher relationship.

The present study addressed the following research questions:

1. What are the relations among student-teacher relationships, student-SEA relationships, student adaptive behaviour, and student problem behaviour?

Specific Hypotheses:

For both Teachers and SEAS:

- a. Ratings of student-teacher relationships will be positively correlated with ratings of adaptive behaviour.
  - b. Ratings of student-teacher relationships will be negatively correlated with ratings of problem behaviour.
2. Which variables are statistically significant predictors of student-teacher and student-SEA relationships?

Specific Hypotheses:

- a. Ratings of problem behaviour will negatively predict student-teacher and student-SEA relationships.
- b. The amount of training in ASD will positively predict student-teacher and student-SEA relationships.
- c. The percent of time that the student is included in the classroom will positively predict student-teacher relationships but not student-SEA relationships.

## **CHAPTER 2: METHOD**

Approval for this study was obtained in February, 2009 from the Behavioural Research Ethics Board of the Office of Research Services and Administration at the University of British Columbia (Appendix H). Approval was also first obtained from each school district from which participants were recruited.

### **Participants**

The sample consisted of 15 boys with ASD in general education classrooms in kindergarten through Grade 3, their classroom teachers, and their SEAs in four school districts in British Columbia. Student demographic data were reported by teachers and SEAs. The mean student age was 7 years 6 months, with students ranging from 6 years 1 month to 9 years 6 months. English was a second language for 5 of the 15 students. Ten students participated in the same curriculum as their classmates 50% or less of the school day and five participated 51% or more of the day. Students participated in the study if: (a) their parents did not object to data collection through passive consent, (b) their teachers and SEAs consented to completing three questionnaires each, (c) they were placed in a general education classroom full time, and (d) they met educational criteria for ASD. These criteria include a qualified specialist's diagnosis of one of the ASDs and evidence that the disorder adversely affected students' educational performance.

Descriptive statistics were generated to describe the number of years teachers and SEAs had been in their position and worked with students with ASD, the amount and total hours of in-service training they received within the past five years, and the pre-service training received in ASD. These statistics are displayed in table 2.1 and 2.2. In both tables, N= 14 for all of the variables except when indicated.

### Table 2.1 Descriptive Statistics for Teacher Training Questionnaire

[illegible]

Teacher Descriptive Statistics	M	SD	Range	Percent of Responses				
				<u>Percent of Day</u>		<u>Amount of Training</u>		<u>Percent with Training</u>
				50% or Less	51% or More	≤2 Full Days	≥3 Full Days	
ASD covered extensively in one course?	--	--	--	--	--	--	--	21.43
ASD sole focus of one course?	--	--	--	--	--	--	--	14.29
Years of Teaching Experience (N = 15)	14.87	8.32	3-30	--	--	--	--	--
Years Teaching Students with ASD (N =15)	5.97	5.41	1-17	--	--	--	--	--
Percent of the Day the SEA works with the student (N = 15)	--	--	--	--	100	--	--	--
Percent of the Day the student participates in the class curriculum	--	--	--	66.67	33.33	--	--	--



**Table 2.2 Descriptive Statistics for SEA Training Questionnaire**

SEA Descriptive Statistics	M	SD	Range	Percent of Responses		
				<u>Amount of Training</u>		<u>Percent with training</u>
				$\leq 2$ Full Days	$\geq 3$ Full Days	
In-service Training? (N = 15)	--	--	--	--	--	93.33
Amount of In-service Training (Past Year)	2.5	2.38	0-6	--	--	--
Hours of In-service Training (Past Year)	--	--	--	50	50	--
Amount of In-service Training (Past Five years)	7.36	6.22	2-20	--	--	--
Hours of In-service Training (Past Five years)	--	--	--	14.29	85.71	--
Training in ASD within recent Degree?	--	--	--	--	--	64.29
ASD covered in one course?	--	--	--	--	--	85.71
ASD covered extensively in one course?	--	--	--	--	--	85.71

SEA Descriptive Statistics	M	SD	Range	Percent of Responses		
				<u>Amount of Training</u>		<u>Percent with training</u>
				$\leq 2$ Full Days	$\geq 3$ Full Days	
ASD sole focus of one course?	--	--	--	--	--	71.43
Years of SEA Experience (N = 15)	14.87	8.32	3-30	--	--	--
Years Working with Students with ASD (N = 15)	5.97	5.41	1-17	--	--	--

## **Measures**

### **Student-Teacher Relationships**

Student-teacher relationships were measured using the Student-Teacher Relationship Scale (STRS; Pianta, 2001). The STRS is a 28-item self report questionnaire that assesses teacher perceptions of their relationship with an individual student. Three dimensions of the relationship, conflict, closeness, and dependency, are measured. The Conflict subscale measures the degree to which a teacher perceives his or her relationship with a student as being negative and conflictual. For example, a teacher will report higher ratings of conflict if s/he perceives the student as becoming easily angry and as being sneaky or manipulative. The Closeness subscale measures the degree to which a teacher experiences warmth, affection, and open communication with a student. For example, a teacher will report herself as having a close relationship with a student if s/he perceives the student as being able to openly share his feelings and experiences with him or herself. The Dependency subscale measures the degree to which a teacher perceives a student as being overly dependent. A teacher who reports higher ratings of dependency believes that student reacts strongly to separation from the teacher. Finally, the Total scale measures the degree to which a teacher perceives his or her overall relationship with a student as being positive and effective. Higher scores on this scale correspond to lower levels of conflict and dependency and higher levels of closeness. These dimensions are measured through a 5-point Likert scale format (1 = Definitely does not apply, 2 = Does not really apply, 3 = Neutral, not sure, 4 = Applies somewhat, and 5 = Definitely applies). In the STRS, raw scores are converted to percentiles. A raw score of 102 is at the 25<sup>th</sup> percentile, a score of 116 is at the 50<sup>th</sup> percentile, and a score of 125 is at the 75<sup>th</sup> percentile. The raw score of the Total STRS scale was used to measure these relationships in this study.

Psychometric properties of the STRS indicate that the test-retest reliability over a 4-week interval is adequate to excellent for all three subscales: Closeness = .88; Conflict = .92; and Dependency = .76. Internal consistency using Cronbach's alpha was excellent for the Conflict (.92), Closeness (.86), and Total (.89) subscales but only adequate for the Dependency (.64) subscale. Furthermore, exploratory factor analysis was conducted to assess the structure of the construct measured by the STRS. Only items with factor loadings of .40 or greater were included on the STRS, ranging from .40 to .82. The Conflict factor accounted for the most variance (29.8%), the Closeness factor accounted for 12.9% of the variance, and the Dependency factor accounted for the least amount of variance (6.2%). Studies also indicate that the STRS correlates with concurrent and future behaviour problems and academic skills. An adequate degree of association (ranging from .29 to -.72) was found between kindergarten STRS scores and concurrent behavioural problem ratings on the Teacher-Child Rating Scale. An adequate degree of association (.30 to -.56) was also found between kindergarten STRS scores and behavioural problem ratings in grade one on the Teacher-Child Rating scale (Pianta, Steinberg, & Rollins, 1995). Significant relations have also been found between kindergarten STRS scores and teacher's ratings of work habits through the eighth grade (Hamre & Pianta, 2001). Finally, research has shown that the STRS measures different constructs than other problem behaviour and social competence measures, as correlations between the STRS and other measures do not exceed .58 (Hamre & Pianta).

### **Problem Behaviour**

Problem behaviour was measured using the Teacher Rating Scale of the Behavior Assessment System for Children, Second Edition (BASC-2; Child and Preschool versions). The BASC-2 (Reynolds & Kamphaus, 2004) is a multimethod, multidimensional system that is used to rate the behaviour of preschool children ages 2 through 5 and school-aged children ages 6

through 11. Problem behaviour is measured through internalizing, externalizing, and school problems composite scales. The BSI (BSI), an index of overall problem behaviour that includes these composite scales and the atypicality and withdrawal subscales, was used to measure problem behaviour in this study. The BASC-2 provides T-scores with a mean of 50 and a standard deviation of 10. BASC-2 BSI T-scores are classified according to the following ranges: Average: 41-59; At-Risk: 60-69; Clinically Significant:  $\geq 70$ . Psychometric properties indicate that the internal consistency of the BSI is excellent (.96 to .97), and the adjusted test-retest reliability is .90 (Reynolds & Kamphaus, 2004).

### **Adaptive Behaviour**

Adaptive behaviour was also measured using the Teacher Rating Scale of the BASC-2 (Reynolds & Kamphaus, 2004). Adaptive behaviour is measured through the adaptability, social skills, leadership, study skill, and functional communication subscales. The Adaptive Skills composite is a measure of overall adaptive behaviour, which includes these subscales, and was used to measure adaptive behaviour in the current study. The BASC-2 provides T-scores with a mean of 50 and a standard deviation of 10. The BASC-2 Adaptive Skills T-scores are classified according to the following ranges: High: 60-69; Average: 41-59; At-Risk: 31-40; Clinically Significant:  $\leq 30$ . Psychometric properties indicate that the internal consistency of the Adaptive Skills composite is excellent (.90 to .97), and the adjusted test-retest reliability is .94 (Reynolds & Kamphaus, 2004).

### **Training in ASD**

Training in ASD was measured using teacher and special educational assistant questionnaires created for the present study. Teachers and SEAs each completed a brief questionnaire to identify their recent and past professional development in ASD, as well as the percent of time that the educational assistant works with the student throughout the school day

(see Appendix A). Based on their responses to the items, teachers were labelled as having pre-service training if they indicated that they had learned about ASD in their most recent degree.

### **Percent of Inclusion**

The percent of inclusion was defined as the percent of the day that the student participates in the same curriculum as the rest of the class (i.e., the exact same curriculum and not simply the same subject), possibly with SEA support. Teachers and SEAs were asked to rate this percentage according to one of the following categories: 0-25%, 26-50%, 51-75%, or 76-100%. Teacher ratings were used, as two SEAs in the sample reported that the student was supported by more than one SEA. Because the responses were not normally distributed, they were dichotomized into two groups: a) 50 % or less; or b) 51% or more.

### **Procedures and Analyses**

After consent was obtained, each classroom teacher and SEA completed the measures independently. Pearson correlations were calculated to determine relations among the variables of interest. Multiple regression analyses were conducted to determine whether teacher and SEA ratings of problem behaviour, the percent of inclusion, and teacher and SEA training in ASD, significantly predicted the student-teacher or student-SEA relationship. Because previous research has shown that problem behaviour is strongly predictive of the student-teacher relationship (Robertson et al., 2003), hierarchical regression was used to test the relative influence of variables above and beyond problem behaviour. In the first model, teacher BSI ratings were entered. In the second model, student percent of inclusion and teacher pre-service training in ASD were added. These analyses were then repeated with the SEA variables, but because of the lack of variability in SEA pre-service training, this predictor was not used. Analyses were conducted using SPSS version 14. Assumptions were tested, with no violations of normality, linearity, or homoscedasticity of residuals being detected.

## **CHAPTER 3: RESULTS**

### **Relations among Ratings of Child Problem and Adaptive Behaviour and Student-Teacher or Student-SEA Relationships**

Descriptive statistics for teacher and SEA ratings of the overall relationship on the STRS, ratings of student BASC-2 BSI, and BASC-2 Adaptive Skills are provided in Table 3.1. The N for all analyses was 15. Pearson correlations were calculated to assess the degree of association between teacher and SEA ratings of the overall student-teacher or student-SEA relationship (STRS Total scale) and their ratings of a student's overall Adaptive Skills and BSI. Furthermore, Pearson correlations were calculated between teacher percent of inclusion, teacher pre-service training in ASD, and both SEA and Teacher ratings of Adaptive Skills and BSI, as well as the STRS Total scale. Finally, Pearson correlations were also calculated to assess the degree of association between the Teacher and SEA variables, to determine whether relationships exist between teacher and SEA ratings of a student's Adaptive Skills, BSI, and the overall relationship. Level of significance (alpha) was established at  $p < .05$ .

**Table 3.1 Descriptive Statistics for Teacher and SEA BASC-2 Composites and STRS Total Relationship**

Measure	Mean	Standard Deviation	Range
Teacher Variables			
STRS Total	107.07	8.56	90-124
BASC-2 BSI	53.67	6.38	45-67
BASC-2 Adaptive Skills	39.40	4.15	32-47
SEA Variables			
STRS Total	104.87	9.98	86-121
BASC-2 BSI	57.53	4.63	48-64
BASC-2 Adaptive Skills	40.87	5.01	35-54

For teacher ratings, a statistically significant negative correlation was found between teacher BSI ratings and the overall student-teacher relationship,  $r(15) = -.72, p < .01$ . A statistically significant positive correlation was found between teacher ratings of Adaptive Skills and the overall student-teacher relationship,  $r(15) = .71, p < .01$ . Furthermore, a statistically significant correlation was found between teacher percent of inclusion and the overall student-teacher relationship,  $r(15) = .56, p < .05$ . For SEA ratings, no statistically significant correlations were found between SEA BSI ratings or Adaptive Skills and the overall student-SEA relationship. Furthermore, when examining correlations among teacher and SEA ratings, a statistically significant positive correlation was found between teacher and SEA's ratings of adaptive behaviour,  $r(15) = .62, p < .05$ . A statistically significant correlation was also found between teacher ratings of the overall student-teacher relationship and SEA ratings of adaptive behaviour,  $r(15) = .64, p < .05$ . Results are reported in Table 3.2.



**Table 3.2 Correlations among Variables for Teachers and SEAs**

	Teacher STRS Total Relationship	Teacher BSI	Teacher Adaptive Skills	Teacher Pre- service ASD Training	Teacher Percent Inclusion	SEA STRS Total Relationship	SEA BSI	SEA Adaptive Skills
Teacher STRS Total Relationship	--							
Teacher BSI	-.72**	--						
Teacher Adaptive Skills	.71**	-.57*	--					
Teacher Pre-service ASD Training	.27	-.41	.37	--				
Teacher Percent Inclusion	.56*	-.12	.28	-.38	--			
SEA STRS Total Relationship	.39	-.48	.41	.16	.45	--		
SEA BSI	-.24	.27	-.33	.13	-.50	-.50	--	
SEA Adaptive Skills	.64*	-.32	.62*	.16	.45	.08	-.31	--

\* $p < .05$ ; \*\* $p < .01$

### Predictors of Student-Teacher and Student-SEA Relationships

#### Student-Teacher Relationship Analyses

Hierarchical regression analyses revealed that teacher BSI ratings significantly predicted the overall student-teacher relationship,  $F(1,13) = 14.15$ ,  $p < .01$ , and explained 52% of the variance in the student-teacher relationship scores. When added to the model, the percent of

inclusion was also a significant predictor of the student-teacher relationship ( $p < .01$ ), although teacher pre-service training in ASD was not a significant predictor. Adding the percent of inclusion and pre-service training in ASD to the model explained statistically significantly more variance in the total student-teacher relationship (80% of the variance), even when controlling for teacher's BSI ratings,  $F(2, 11) = 7.57, p < .01$ . The results are displayed in Table 3.3.

**Table 3.3 Hierarchical Regressions Predicting the Total Student-Teacher Relationship**

	<i>b</i>	<i>SE b</i>	$\beta$	$R^2$	$\Delta R^2$
<i>Model 1</i>				.52	.52**
Constant	156.87	13.92			
BSI	-.97	.26	-.72**		
<i>Model 2</i>				.80	.28**
Constant	131.23	18.16			
BSI	-.72	.21	-.53**		
Percent of inclusion	10.55	2.71	.60**		
Pre-Service Training	4.73	2.78	.29		

\* $p < .05$ ; \*\* $p < .01$

### **Student-SEA Relationship Analyses**

Hierarchical regression analyses were then repeated with SEA ratings. Because all but two SEA had pre-service training in ASD, this variable was excluded from the analyses. Results revealed that neither SEA BSI ratings nor the percent of inclusion significantly predicted the overall student-SEA relationship. Results are displayed in Table 3.4.

**Table 3.4 Hierarchical Regressions Predicting the Total Student-SEA Relationship**

	<i>b</i>	<i>SE b</i>	$\beta$	$R^2$	$\Delta R^2$
<i>Model 1</i>				.25	.25
Constant	168.98	29.90			
BSI	-1.08	.52	-.50		
<i>Model 2</i>				.30	.05
Constant	145.14	38.78			
BSI	-.79	.60	-.37		
Percent of Inclusion	5.49	5.67	.27		

## CHAPTER 4: DISCUSSION

The goal of the present study was to examine how problem behaviour, adaptive behaviour, level of inclusion, and training in ASD affect the student-teacher and student-SEA relationship. Relations among problem behaviour, adaptive behaviour, teacher percent inclusion, teacher pre-service training in ASD, and the overall relationship were examined among and between teacher and SEA ratings. A multiple regression design was used to determine which combination of these variables significantly predicted the quality of student-teacher and student-SEA relationships.

Results indicated that significant relations among teacher ratings of the overall quality of the student-teacher relationship and ratings of student problem and adaptive behaviour, but not amongst SEA ratings of these variables. Significant relations were also found between teacher percent of inclusion and the overall student-teacher relationship. Significant negative correlations existed between the student-teacher relationship and student problem behaviour, whereas significant positive correlations existed between the student-teacher relationship and student adaptive behaviour. Furthermore, significant relations were found between teacher and SEA ratings of behaviour and the overall relationship. Significant positive correlations existed among a teacher's ratings of the overall student-teacher relationship and the SEA's ratings of a student's adaptive behaviour, as well as among teacher and SEA ratings of student adaptive behaviour. Finally, both the teacher's ratings of the student's problem behaviour and the percent of inclusion within the classroom significantly predicted the student-teacher but not the student-SEA relationship.

## **Variables Affecting Student-Teacher Relationships**

### **Problem Behaviour**

In the current study, problem behaviour was found to be the strongest predictor of the student-teacher relationship. These findings are consistent with past research that has indicated that problem behaviour has a negative effect on the student-teacher relationship for students with and without ASD (Hamre & Pianta, 2001; Robertson et al., 2003). Although much research has examined the effect of problem behaviour on overall student-teacher relationships, fewer studies have focused on these relationships in a sample of students with ASD. Consequently, the current study confirms the results of Robertson and colleagues, as it indicates that problem behaviour also affects relationships between teachers and students with ASD.

Although behaviour has been shown to affect student-teacher relationships, these relationships also shape student behaviour (Pianta, 1999). Ladd and Burgess (2001) found that higher scores of student-teacher conflict predicted increases in student misconduct and attention problems. Findings have also indicated that when teachers were responsive to student needs and created positive classroom environment, students were less likely to be at risk for school failure (Hamre & Pianta, 2005). Consequently, student problem behaviour may predict the overall quality of the student-teacher relationship; however, this relationship may also contribute to future behavioural and academic outcomes.

When considering these findings, the role of the classroom environment and characteristics of students with ASD that may contribute to their problem behaviour must also be considered. Previous research has emphasized that teachers may unknowingly contribute to problem behaviour by reinforcing it by, for example, enabling students to escape from a task or providing them with attention (Carr et al., 1991). Research findings have also indicated that negative teacher reactions to student attempts to escape from the classroom environment may

contribute to the formation of conflictual student-teacher relationships (Birch & Ladd, 1997). Furthermore, studies have also shown that because of social deficits and stereotyped behaviour, students with ASD may engage in problem behaviour to achieve social responses and to escape from demands that may interrupt repetitive behaviours (Macintosh & Dissanayake, 2006; Reese, Richman, Belmont, & Morse, 2005). It is therefore important that teachers receive support in their approaches to dealing with students who engage in problem behaviour and also those diagnosed with ASD, thereby potentially improving student-teacher relationships.

### **Adaptive Behaviour**

Significant relations were also found between student level of adaptive behaviour and overall relationships with their teachers. Previous findings have also shown the effect of adaptive behaviour on student-teacher relationships (Hughes & Kwok, 2007), as well as how positive student-teacher relationships can predict increases in adaptive behaviour (Howes, 2000). Relations between positive student-teacher relationships and more positive work habits and social skills have also been found (Baker, 2006). Baker emphasized the difficulty in determining the direction of these effects, as it may be easier for teachers to form positive relationships with students who have higher levels of adaptive behaviour. Because students with ASD have been shown to have difficulty acquiring key adaptive behaviours due to their repetitive behaviours and difficulty with independent functioning (Goodman & Williams, 2007), supports can be put in place to target these behaviours, which may in turn help improve overall student-teacher relationships.

### **Training in ASD**

Although both problem behaviour and the percent of inclusion were predictors of the student-teacher relationship, the teacher's pre-service training in ASD did not explain statistically significant unique variance in student-teacher relationships. Previous research has emphasized

that training in ASD may affect teacher perceptions of students with ASD and the percent of time they feel that those students should be included in the classroom (McGregor & Campbell, 2001), yet a limited amount of research has examined the effect of training in ASD on the student-teacher relationship. Robertson and colleagues (2003) did not specifically examine the effect that teacher training in ASD had on the student-teacher relationship, but they noted that the teachers in their study frequently attended trainings in ASD with paraprofessionals. In the present study, about half of the teachers received training in ASD.

Because previous research has shown that training in ASD affects teacher perceptions and student inclusion within the classroom, the role that training in ASD may play with respect to student problem behaviour and percent of inclusion should be considered. Although training in ASD did not predict the overall student-teacher relationship in the current study, it may have an indirect effect on this relationship. Both student problem behaviour and percent of inclusion predicted the overall student-teacher relationship. These variables may have been affected by the teacher's training in ASD.

Along these same lines, the current study examined only whether the presence of training affected the student-teacher relationship. Neither the specific type, nor the quality or quantity of this training was examined. Previous research has shown that both the quality and quantity of training may affect teacher perceptions of students with ASD (Cook et al., 2000; Scheuermann et al., 2003), although research has not specifically examined the effect of this training on the student-teacher relationship. Consequently, although the results of the current study indicate that the mere presence of pre-service training in ASD did not predict the student-teacher relationship, it is possible that a more in-depth focus on the specific type and amount of training would have yielded significant results.

The findings of the current study suggest that the presence of training in ASD in of itself is not the most important predictor of the student-teacher relationship. Other factors, such as perceived student problem behaviour, seem to play a more direct role. Because of the dearth of research in this area, additional studies should be conducted to examine the effect of quality and quantity of training on these relationships with greater precision of measurement.

### **Percent of Inclusion**

This study also examined the effect of the percent of inclusion on the overall student-teacher relationship. Findings showed that, even when accounting for the effects of problem behaviour, the percent of the day that the student was included in the classroom significantly predicted the student-teacher relationship. Consequently, higher degrees of inclusion predicted higher levels of the overall student-teacher relationship.

However, it is also likely that higher degrees of inclusion are related to other variables. For example, percent of inclusion was moderately related to problem behaviour. Despite the fact that the majority of students (67%) in the current study participated in the same curriculum as the rest of the class fifty percent or less of the school day, one inclusion criterion was that they be placed in their classroom full time. Consequently, students in this sample may have had less impairment and higher levels of functioning than the general population of students with ASD.

Previous research also found associations between student-teacher relationships and other forms of inclusion within the classroom. Findings from Robertson and colleagues (2003) indicated that lower levels of social inclusion within the classroom were associated with higher levels of conflict and dependency in student-teacher relationships. Although inclusion was defined differently in each study, the results emphasize the importance of including students in the classroom to increase their sense of belonging and to foster more positive relationships with others.



### **Variables Affecting Student-SEA Relationships**

Although previous research has focused upon student-teacher relationships between students with and without ASD, the student-SEA relationship has not been examined. Consequently, the results of the current study provide an important starting point for additional research on student-SEA relationships.

Although problem behaviour appears to affect the student-teacher relationship, a significant relationship was not found between student problem behaviour and the student-SEA relationship, nor did problem behaviour predict this relationship. Furthermore, significant relationships were not found for adaptive behaviour and percent of inclusion. These findings indicate that in the present study, student problem and adaptive behaviour, as well as the level of inclusion, are more related to the relationship with the teacher than to the relationship with the SEA.

Various factors may affect these findings; however, one possibility may be that an SEA works with these students more intensively, through one to one support. Because of their training in preventing problem behaviour and extended experiences with students (Marks et al., 1999), it is possible that the SEA may see a wider variety of behaviours and be less influenced by problem behaviours. Furthermore, in this study, the vast majority of SEAs received previous training in ASD. Consequently, it is possible that their familiarity with ASD helped increase their understanding that these students generally use problem behaviour to communicate needs and display lower levels of adaptive behaviour.

Finally, another possibility is that SEAs may be rating different samples of problem behaviour than teachers. In this sample, teacher and SEA ratings of adaptive behaviour were significantly correlated, but ratings of problem behaviour were not. Previous research findings have indicated the SEA plays an important role in reducing student levels of problem behaviour

(Cook, 2004). Consequently, it is possible that teachers may see more problem behaviour, as the student may be less likely to engage in such behaviours when the SEA is present.

Although this is the first study to examine the effect of problem and adaptive behaviour on the student-SEA relationship, some previous findings have shown that teachers rate students with special needs more positively when an SEA is present in the classroom (Cook, 2004), whereas other findings indicate that the presence of an SEA does not affect the student-teacher relationship (Robertson et al., 2003). However, it is important to note that the current study did not examine the specific amount or type of SEA support provided when the student was included in the classroom. Although inclusion in general may not affect the student-SEA relationship, it is possible that significant differences may be found if the type of SEA support was examined. An SEA who works more closely with a student within the classroom may have a different relationship with that student than one who is able to provide the student with more independence.

### **Limitations and Future Research**

There are a number of limitations that should be considered when interpreting the results of this study. Most importantly, the small sample size should be taken into account when making implications for practice. As a result, less variability existed within the sample, in both SEA training within and outside the degree, as well as levels of student problem behaviour. Future research with larger and more varied sample sizes should therefore be conducted to further examine the effect of problem behaviour, level of inclusion, and training in ASD on student-teacher relationships. Despite the small sample size, it is important to take into account that a limited amount of research has been conducted in this area. Consequently, the results of this study provide an important starting point when further examining these relationships in both research and practice.

Along these same lines, the current study only focused on student-teacher and student-SEA relationships from Kindergarten to Grade Three, due to the age range of the STRS. It is important to acknowledge that relationships may change as students progress through school, especially when there are increases in academic requirements. For example, expectations of what the student is required to do may change, along with the percent of time they are included within the classroom. It is therefore important that these results are not generalized to relationships between teachers and students of all ages. Although fostering early relationships may lead to continued positive relationships in the future, it is still important that future research examine relationships between teachers and older students with ASD. Examining these relationships in the high school years may be particularly important, especially for students who are more integrated into the regular curriculum and may have fewer opportunities to interact with their teachers. When conducting research with older students with ASD, it would also be beneficial to obtain students' perceptions of their relationships with their teachers and compare for consistency across ratings.

Another key limitation is that some unmeasured variable may account for the relation between percent of inclusion and the student-teacher relationship. For example, the current study did not examine the specific type or amount of SEA support that the student obtained in the classroom and its effect on the student-teacher relationship. Previous research has yielded mixed findings when examining the effect the SEA has on the student-teacher relationship (Cook, 2004; Giangreco et al., 1997). Future research should therefore continue to examine the effect that both the percent of inclusion and the effect that the SEA has on both the student-teacher and student-SEA relationships.

Furthermore, another limitation to the current study is that teacher and SEA perspectives were obtained to rate behaviour and the overall student-teacher relationship. Consequently, it is

possible that the findings were influenced by rater biases between ratings of overall relationships and ratings of student behaviour. At the same time, the current study obtained both teacher and SEA ratings of their relationships with the student, which builds upon previous research that only examined teacher perspectives (Robertson et al., 2003).

Although teachers and SEAs in the current study were asked if they had received training in ASD within and outside their degree, as well as the amount of hours they had received, the specific type of training was not specified. Consequently, differences between quality and quantity of training in ASD were not examined in this study. Because research has not examined the difference between quality and quantity of training on the student-teacher and student-SEA relationship, further research should investigate potential differences.

Finally, future research should also examine whether interventions implemented to target a student's problem behaviour affect the student-teacher relationship. Student-teacher and student-SEA relationships could be assessed pre- and post-intervention and then again after an extended period of time, to determine whether evidence-based interventions lead to improved relationships. Because the current study and past research has shown that problem behaviour effects the student-teacher relationship and that a problematic relationship can lead to further increases in a student's negative behaviour (Ladd & Burgess, 2001), it is important that factors that improve or degrade these relationships be targeted.

### **Implications for Practice**

The current study provides preliminary information to school-based staff on what types of interventions may lead to increases in student-teacher relationships. Results indicate that both problem behaviour and the percent of time the student is included in the classroom predict the student-teacher relationship. Consequently, interventions that decrease disruptive behaviours and increase adaptive behaviours may be implemented to help improve these relationships.

It is also important to include students with ASD in the classroom when possible while simultaneously being aware of routines or academic tasks that are more challenging for them. This may include providing these students with ways to facilitate their inclusion and increase their sense of belonging in the classroom. For example, teachers may provide students with high-interaction and high-success tasks and teach conversation and social skills to increase interactions with staff and peers.

Another important implication when considering student-teacher relationships is that teacher pre-service training in ASD may not be a mandatory pre-requisite for positive relationships. Unlike problem behaviour and percent of student inclusion, training in ASD did not explain statistically significant unique variance in the student-teacher relationship in this study. Although these results should be interpreted within the context of the small sample size of the current study and the limited data collected on teacher training, these findings indicate that professional development on preventing and addressing problem behaviour may be as or more effective in enhancing student-teacher relationships.

Because SEAs in the current study consistently received training in ASD both within and outside their degree, the potential effect of this training on the student-SEA relationship was not examined. Consequently, although results of this study indicate that training in ASD does not predict the student-teacher relationship, these conclusions cannot be drawn when examining student-SEA relationships. However, the fact that SEAs in this study received ongoing training in ASD is important information in itself, suggesting that training in ASD is a priority for supporting SEAs in the districts studied.

### **Conclusion**

This study further contributes to research on relationships between school personnel and students with ASD. Limited research has been conducted on student-teacher relationships and

student-SEA relationships with students with ASD. Only one other study investigated relations among teachers and students with ASD (Robertson et al., 2003). Both the current study and that of Robertson and colleagues found that student problem behaviour and level of inclusion were significantly related to the student-teacher relationship.

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APPENDIX A  
**Teacher Questionnaire**

Please answer the following questions by circling one of the choices provided for each question.

- 1) a) How many in-service trainings on Autism Spectrum Disorders (ASD) have you attended in the past year? \_\_\_\_\_  
 b) How many total hours were all of these trainings put together? Please check one of the options below.  
 Zero hours \_\_\_\_ A Half-day \_\_\_\_ A Full-day\_\_\_\_ Two Full days \_\_\_\_  
 Three Full days\_\_\_\_ Four Full Days \_\_\_\_ Five or more full days \_\_\_\_
- 2) Including the trainings above, how many in-service trainings on ASD have you attended in the past 5 years? \_\_\_\_\_
- 3) How many total hours were all of these trainings put together? Please check one of the options below.  
 Zero hours \_\_\_\_ A Half-day \_\_\_\_ A Full-day\_\_\_\_ Two Full days \_\_\_\_  
 Three Full days\_\_\_\_ Four Full Days \_\_\_\_ Five or more full days \_\_\_\_
- 4) Please check YES or NO to each of the four questions below.
  - a) Did you learn about ASD in your most recent degree program? YES\_\_NO\_\_
  - b) Was ASD covered in at least one course? YES\_\_ NO\_\_
  - c) Did at least one course have extensive content on ASD? YES\_\_ NO\_\_
  - d) Did you take a course focusing exclusively on ASD? YES\_\_ NO\_\_
- 5) What is the highest degree that you hold? \_\_\_\_\_
- 6) How many years of teaching experience do you have?  
 \_\_\_\_\_

7) How many years of experience do you have teaching students with ASD in inclusive classrooms?

---

8) What percentage of the school day does the special educational assistant work with the student?

0-25 %

26-50 %

51-75 %

76–100 %

9) What percentage of the day does the student participate in the same curriculum as the rest of the class (i.e., the exact same curriculum and not just the same subject)? For example, the student participates in cooperative learning activities with the other students (possibly with SEA support).

0-25 %

26-50 %

51-75 %

76–100 %

## APPENDIX B

### Special Educational Assistant Questionnaire

Please answer the following questions by circling one of the choices provided for each question.

- 1) How many in-service trainings on Autism Spectrum Disorders (ASD) have you attended in the past year? \_\_\_\_\_
- 2) How many total hours were all of these trainings put together? Please check one of the options below.  
 Zero hours \_\_\_\_ A Half-day \_\_\_\_ A Full-day \_\_\_\_ Two Full days \_\_\_\_  
 Three Full days \_\_\_\_ Four Full Days \_\_\_\_ Five or more full days \_\_\_\_
- 3) Including the trainings above, how many in-service trainings on ASD have you attended in the past 5 years? \_\_\_\_\_
  - i. How many total hours were all of these trainings put together?  
 Please check one of the options below.  
 Zero hours \_\_\_\_ A Half-day \_\_\_\_ A Full-day \_\_\_\_ Two Full days \_\_\_\_  
 Three Full days \_\_\_\_ Four Full Days \_\_\_\_ Five or more full days \_\_\_\_
- 4) Please check YES or NO to each of the four questions below.
  - a) Did you learn about ASD in your most recent degree program? YES\_\_NO\_\_
  - b) Was ASD covered in at least one course? YES\_\_ NO\_\_
  - c) Did at least one course have extensive content on ASD? YES\_\_ NO\_\_
  - d) Did you take a course focusing exclusively on ASD? YES\_\_ NO\_\_
- 5) What is the highest degree that you hold? \_\_\_\_\_
- 6) How many years of experience do you have as an educational assistant?  
 \_\_\_\_\_

7) How many years of experience do you have assisting students with ASD in inclusive classrooms?

---

8) What percentage of the school day do you work with the student?

0-25 %

26-50 %

51-75 %

76-100 %

9) What percentage of the day does the student participate in the same curriculum as the rest of the class (i.e., the exact same curriculum and not just the same subject)? For example, the student participates in cooperative learning activities with the other students (possibly with SEA support).

0-25 %

26-50 %

51-75 %

76-100 %

## APPENDIX C

## Behavior Assessment System for Children (Child Version)

**BASC-2**

**Teacher Rating Scales-  
Child**  
Computer-Entry Form

**TRS-C**  
Ages  
6-11

**Behavior Assessment System for Children, Second Edition**  
Cecil R. Reynolds and Randy W. Kamphaus

Child's Name \_\_\_\_\_  
Date \_\_\_\_\_ Birth Date \_\_\_\_\_ Age \_\_\_\_\_  
School \_\_\_\_\_ Grade \_\_\_\_\_

Sex: ☐ Female ☐ Male Other Data \_\_\_\_\_  
Ethnicity: \_\_\_\_\_ ESL: Yes ☐ No ☐

**Instructions:**

On both sides of this form are phrases that describe how children may act. Please read each phrase, and mark the response that describes how this child has behaved recently (in the last several months).

- Circle **N** if the behavior **never** occurs.  
Circle **S** if the behavior **sometimes** occurs.  
Circle **O** if the behavior **often** occurs.  
Circle **A** if the behavior **almost always** occurs.

**Please mark every item.** If you don't know or are unsure of your response to an item, give your best estimate. A "Never" response does not mean that the child "never" engages in a

Your Name \_\_\_\_\_  
Position \_\_\_\_\_  
What type of class do you teach? \_\_\_\_\_  
How long have you known this child? \_\_\_\_\_

behavior, only that you have not observed the child to behave that way.

**How to Mark Your Responses**

Be certain to **circle** completely the letter you choose, like this:

N S **O** A

If you wish to change a response, mark an X through it, and circle your new choice, like this:

N S **O** A

**Before starting, be sure to complete the information above these instructions.**

1. Adjusts well to new teachers. .... N S O A
2. Is creative. .... N S O A
3. Responds appropriately when asked a question. .... N S O A
4. Says, "please" and "thank you." .... N S O A
5. Has a short attention span. .... N S O A
6. Complains about health. .... N S O A
7. Refuses to join group activities. .... N S O A
8. Argues when denied own way. .... N S O A
9. Says, "I hate myself." .... N S O A
10. Has trouble staying seated. .... N S O A
11. Worries about things that cannot be changed. .... N S O A
12. Seems lonely. .... N S O A
13. Is easily soothed when angry. .... N S O A
14. Breaks the rules. .... N S O A
15. Encourages others to do their best. .... N S O A
16. Eats too much. .... N S O A
17. Analyzes the nature of a problem before starting to solve it. .... N S O A
18. Bothers other children when they are working. .... N S O A
19. Refuses to talk. .... N S O A
20. Does not complete tests. .... N S O A
21. Eats things that are not food. .... N S O A
22. Communicates clearly. .... N S O A
23. Sees things that are not there. .... N S O A

A 0 9 8 7 6 5 4 3 2 1

24. Threatens to hurt others. .... N S O A
25. Says, "I get nervous during tests" or "Tests make me nervous." .... N S O A
26. Is overly active. .... N S O A
27. Has headaches. .... N S O A
28. Disobeys. .... N S O A
29. Gets upset when plans are changed. .... N S O A
30. Works well under pressure. .... N S O A
31. Is able to describe feelings accurately. .... N S O A
32. Congratulates others when good things happen to them. .... N S O A
33. Pays attention. .... N S O A
34. Visits the school nurse. .... N S O A
35. Makes friends easily. .... N S O A
36. Loses temper too easily. .... N S O A
37. Says, "I want to die" or "I wish I were dead." ... N S O A
38. Disrupts other children's activities. .... N S O A
39. Is nervous. .... N S O A
40. Says, "Nobody likes me." .... N S O A
41. Is a "good sport." .... N S O A
42. Sneaks around. .... N S O A
43. Tries to bring out the best in other people. .. N S O A
44. Listens carefully. .... N S O A
45. Reads assigned chapters. .... N S O A
46. Acts without thinking. .... N S O A

**Continue on the back ►**

Product Number: 30031

**TRS-C Ages 6-11**



**- SAMPLE -**  
**DO NOT USE**

Remember: N – Never		S – Sometimes	O – Often	A – Almost always
47. Plays alone.	N	S	O	A
48. Has poor handwriting or printing.	N	S	O	A
49. Is easily upset.	N	S	O	A
50. Has trouble getting information when needed.	N	S	O	A
51. Seems out of touch with reality.	N	S	O	A
52. Defies teachers.	N	S	O	A
53. Says, "I'm afraid I will make a mistake."	N	S	O	A
54. Interrupts others when they are speaking.	N	S	O	A
55. Has stomach problems.	N	S	O	A
56. Steals at school.	N	S	O	A
57. Adjusts well to changes in routine.	N	S	O	A
58. Makes decisions easily.	N	S	O	A
59. Is unclear when presenting ideas.	N	S	O	A
60. Compliments others.	N	S	O	A
61. Is easily distracted.	N	S	O	A
62. Has fevers.	N	S	O	A
63. Quickly joins group activities.	N	S	O	A
64. Bullies others.	N	S	O	A
65. Does strange things.	N	S	O	A
66. Has poor self-control.	N	S	O	A
67. Babbles to self.	N	S	O	A
68. Is sad.	N	S	O	A
69. Shares toys or possessions with other children.	N	S	O	A
70. Cheats in school.	N	S	O	A
71. Offers help to other children.	N	S	O	A
72. Listens attentively.	N	S	O	A
73. Has good study habits.	N	S	O	A
74. Cannot wait to take turn.	N	S	O	A
75. Avoids other children.	N	S	O	A
76. Has reading problems.	N	S	O	A
77. Is negative about things.	N	S	O	A
78. Tracks down information when needed.	N	S	O	A
79. Acts confused.	N	S	O	A
80. Seeks revenge on others.	N	S	O	A
81. Worries about what other children think.	N	S	O	A
82. Has trouble keeping up in class.	N	S	O	A
83. Complains of shortness of breath.	N	S	O	A
84. Uses others' things without permission.	N	S	O	A
85. Recovers quickly after a setback.	N	S	O	A
86. Is good at getting people to work together.	N	S	O	A
87. Has difficulty explaining rules of games to others.	N	S	O	A
88. Makes suggestions without offending others.	N	S	O	A
89. Is usually chosen as a leader.	N	S	O	A
90. Complains of pain.	N	S	O	A
91. Is well organized.	N	S	O	A
92. Calls other children names.	N	S	O	A
93. Picks at things like own hair, nails, or clothing.	N	S	O	A
94. Acts out of control.	N	S	O	A
95. Seems unaware of others.	N	S	O	A
96. Cries easily.	N	S	O	A
97. Falls down.	N	S	O	A
98. Deceives others.	N	S	O	A
99. Throws up after eating.	N	S	O	A
100. Is easily distracted from class work.	N	S	O	A
101. Reads.	N	S	O	A
102. Disrupts the schoolwork of other children.	N	S	O	A
103. Is chosen last by other children for games.	N	S	O	A
104. Has spelling problems.	N	S	O	A
105. Is pessimistic.	N	S	O	A
106. Is clear when telling about personal experiences.	N	S	O	A
107. Hears sounds that are not there.	N	S	O	A
108. Annoys others on purpose.	N	S	O	A
109. Is fearful.	N	S	O	A
110. Gets failing school grades.	N	S	O	A
111. Is afraid of getting sick.	N	S	O	A
112. Lies.	N	S	O	A
113. Seems to take setbacks in stride.	N	S	O	A
114. Is easily annoyed by others.	N	S	O	A
115. Provides own telephone number when asked.	N	S	O	A
116. Shows interest in others' ideas.	N	S	O	A
117. Gives good suggestions for solving problems.	N	S	O	A
118. Has seizures.	N	S	O	A
119. Completes homework.	N	S	O	A
120. Hits other children.	N	S	O	A
121. Acts strangely.	N	S	O	A
122. Seeks attention while doing schoolwork.	N	S	O	A
123. Says things that make no sense.	N	S	O	A
124. Complains about being teased.	N	S	O	A
125. Has eye problems.	N	S	O	A
126. Gets into trouble.	N	S	O	A
127. Has toileting accidents.	N	S	O	A
128. Listens to directions.	N	S	O	A
129. Asks to make up missed assignments.	N	S	O	A
130. Eats too little.	N	S	O	A
131. Has trouble making new friends.	N	S	O	A
132. Complains that lessons go too fast.	N	S	O	A
133. Says, "I don't have any friends."	N	S	O	A
134. Provides home address when asked.	N	S	O	A
135. Has a hearing problem.	N	S	O	A
136. Teases others.	N	S	O	A
137. Worries.	N	S	O	A
138. Has problems with mathematics.	N	S	O	A
139. Gets sick.	N	S	O	A



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## APPENDIX D

## Behavior Assessment System for Children- Second Edition (Preschool Version)

# BASC-2

DO NOT USE  
Teacher Rating Scales—  
Preschool  
Computer Entry Form

TRS-P  
Ages  
2-5

Behavior Assessment System for Children, Second Edition  
Cecil R. Reynolds and Randy W. Kamphaus

Child's Name \_\_\_\_\_

Date \_\_\_\_\_ Birth Date \_\_\_\_\_ Age \_\_\_\_\_

School/Center \_\_\_\_\_ Grade/Class \_\_\_\_\_

Sex: ☐ Female ☐ Male Other Data \_\_\_\_\_

EBL: Yes ☐ No ☐

Your Name \_\_\_\_\_

Position \_\_\_\_\_

What type of class do you teach? \_\_\_\_\_

How long have you known this child? \_\_\_\_\_

## Instructions:

On both sides of this form are phrases that describe how children may act. Please read each phrase, and mark the response that describes how this child has behaved recently (in the last several months).

Circle **N** if the behavior **never** occurs.

Circle **S** if the behavior **sometimes** occurs.

Circle **O** if the behavior **often** occurs.

Circle **A** if the behavior **almost always** occurs.

Please mark every item. If you don't know or are unsure of your response to an item, give your best estimate. A "Never" response does not mean that the child "never" engages in a

behavior, only that you have not observed the child to behave that way.

## How to Mark Your Responses

Be certain to circle completely the letter you choose, like this:

N S **O** A

If you wish to change a response, mark an X through it, and circle your new choice, like this:

N S **X** A

Before starting, be sure to complete the information above these instructions.

1. Tries new things. .... N S O A
2. Says all letters of the alphabet when asked. .... N S O A
3. Has a short attention span. .... N S O A
4. Teases others. .... N S O A
5. Has eye problems. .... N S O A
6. Is sad. .... N S O A
7. Gets colds. .... N S O A
8. Worries. .... N S O A
9. Disrupts the play of other children. .... N S O A
10. Does strange things. .... N S O A
11. Has trouble staying seated. .... N S O A
12. Refuses to join group activities. .... N S O A
13. Says, "please" and "thank you." .... N S O A
14. Misses school or daycare because of sickness. .... N S O A
15. Acts out of control. .... N S O A
16. Is easily upset. .... N S O A
17. Provides full name when asked. .... N S O A
18. Screams. .... N S O A
19. Complains of being cold. .... N S O A
20. Has trouble making new friends. .... N S O A
21. Seems to take setbacks in stride. .... N S O A
22. Is too serious. .... N S O A

23. Bullies others. .... N S O A
24. Has a hearing problem. .... N S O A
25. Is negative about things. .... N S O A
26. Is easily soothed when angry. .... N S O A
27. Communicates clearly. .... N S O A
28. Listens carefully. .... N S O A
29. Argues when denied own way. .... N S O A
30. Gets very upset when things are lost. .... N S O A
31. Pouts. .... N S O A
32. Complains of pain. .... N S O A
33. Is nervous. .... N S O A
34. Hits other children. .... N S O A
35. Seems unaware of others. .... N S O A
36. Has poor self-control. .... N S O A
37. Refuses to talk. .... N S O A
38. Offers help to other children. .... N S O A
39. Complains about health. .... N S O A
40. Bothers other children when they are working. .... N S O A
41. Says, "Nobody likes me." .... N S O A
42. Provides own telephone number when asked. .... N S O A
43. Throws tantrums. .... N S O A

A 0 9 8 7 6 5 4 3 2 1

Continue on the back ►  
Product Number: 30030

TRS-P Ages 2-5

Remember: N – Never		S – Sometimes	O – Often	A – Almost always
44. Has fevers. ....	N	S	O	A
45. Is shy with adults. ....	N	S	O	A
46. Shares toys or possessions with other children. ....	N	S	O	A
47. Worries about things that cannot be changed. ....	N	S	O	A
48. Threatens to hurt others. ....	N	S	O	A
49. Babbles to self. ....	N	S	O	A
50. Complains about being teased. ....	N	S	O	A
51. Adjusts well to new teachers or caregivers. ....	N	S	O	A
52. Is unclear when presenting ideas. ....	N	S	O	A
53. Listens attentively. ....	N	S	O	A
54. Breaks other children's things. ....	N	S	O	A
55. Worries about parents. ....	N	S	O	A
56. Is pessimistic. ....	N	S	O	A
57. Gets sick. ....	N	S	O	A
58. Congratulates others when good things happen to them. ....	N	S	O	A
59. Seeks revenge on others. ....	N	S	O	A
60. Seems out of touch with reality. ....	N	S	O	A
61. Interrupts others when they are speaking. ....	N	S	O	A
62. Avoids other children. ....	N	S	O	A
63. Politely asks for help. ....	N	S	O	A
64. Is able to describe feelings accurately. ....	N	S	O	A
65. Acts confused. ....	N	S	O	A
66. Cries easily. ....	N	S	O	A
67. Responds appropriately when asked a question. ....	N	S	O	A
68. Cannot wait to take turn. ....	N	S	O	A
69. Has sore throats. ....	N	S	O	A
70. Plays alone. ....	N	S	O	A
71. Recovers quickly after a setback. ....	N	S	O	A
72. Is fearful. ....	N	S	O	A
73. Defies teachers or caregivers. ....	N	S	O	A
74. Acts as if other children are not there. ....	N	S	O	A
75. Listens to directions. ....	N	S	O	A
76. Has toileting accidents. ....	N	S	O	A
77. Is clear when telling about personal experiences. ....	N	S	O	A
78. Is easily distracted. ....	N	S	O	A
79. Loses temper too easily. ....	N	S	O	A
80. Says, "I'm afraid I will make a mistake." ....	N	S	O	A
81. Falls down. ....	N	S	O	A
82. Has headaches. ....	N	S	O	A
83. Compliments others. ....	N	S	O	A
84. Annoys others on purpose. ....	N	S	O	A
85. Shows feelings that do not fit the situation. ....	N	S	O	A
86. Has seizures. ....	N	S	O	A
87. Quickly joins group activities. ....	N	S	O	A
88. Encourages others to do their best. ....	N	S	O	A
89. Provides home address when asked. ....	N	S	O	A
90. Says things that make no sense. ....	N	S	O	A
91. Is easily frustrated. ....	N	S	O	A
92. Eats things that are not food. ....	N	S	O	A
93. Is overly active. ....	N	S	O	A
94. Has stomach problems. ....	N	S	O	A
95. Is chosen last by other children for games. ....	N	S	O	A
96. Adjusts well to changes in routine. ....	N	S	O	A
97. Worries about what other children think. ....	N	S	O	A
98. Is easily annoyed by others. ....	N	S	O	A
99. Acts strangely. ....	N	S	O	A
100. Pays attention. ....	N	S	O	A

## APPENDIX E

## Student-Teacher Relationship Scale


**Student-Teacher Relationship Scale™**  
**Response Form**

Teacher's name \_\_\_\_\_ Gender: M F Ethnicity \_\_\_\_\_ Date \_\_\_\_/\_\_\_\_/\_\_\_\_

Child's name \_\_\_\_\_ Grade \_\_\_\_\_ Gender: M F Ethnicity \_\_\_\_\_ Age \_\_\_\_\_

Please reflect on the degree to which each of the following statements currently applies to your relationship with this child. Using the point scale below, CIRCLE the appropriate number for each item. If you need to change your answer, DO NOT ERASE! Make an X through the incorrect answer and circle the correct answer.

1 Definitely does not apply	2 Does not really apply	3 Neutral, not sure	4 Applies somewhat	5 Definitely applies
1. I share an affectionate, warm relationship with this child.				
2. This child and I always seem to be struggling with each other.				
3. If upset, this child will seek comfort from me.				
4. This child is uncomfortable with physical affection or touch from me.				
5. This child values his/her relationship with me.				
6. This child appears hurt or embarrassed when I correct him/her.				
7. When I praise this child, he/she beams with pride.				
8. This child reacts strongly to separation from me.				
9. This child spontaneously shares information about himself/herself.				
10. This child is overly dependent on me.				
11. This child easily becomes angry with me.				
12. This child tries to please me.				
13. This child feels that I treat him/her unfairly.				
14. This child asks for my help when he/she really does not need help.				
15. It is easy to be in tune with what this child is feeling.				
16. This child sees me as a source of punishment and criticism.				
17. This child expresses hurt or jealousy when I spend time with other children.				
18. This child remains angry or is resistant after being disciplined.				
19. When this child is misbehaving, he/she responds well to my look or tone of voice.				
20. Dealing with this child drains my energy.				
21. I've noticed this child copying my behavior or ways of doing things.				
22. When this child is in a bad mood, I know we're in for a long and difficult day.				
23. This child's feelings toward me can be unpredictable or can change suddenly.				
24. Despite my best efforts, I'm uncomfortable with how this child and I get along.				
25. This child whines or cries when he/she wants something from me.				
26. This child is sneaky or manipulative with me.				
27. This child openly shares his/her feelings and experiences with me.				
28. My interactions with this child make me feel effective and confident.				

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Printed in the U.S.A.

## APPENDIX F

**Teacher and SEA Consent Form****THE UNIVERSITY OF BRITISH COLUMBIA****Department of Educational & Counselling  
Psychology & Special Education**

2125 Main Mall

Vancouver, B.C. Canada V6T 1Z4

Tel: (604) 822-6382

Fax: (604) 822-3302

**Consent Form****Exploring how Level of Training, Inclusion, and Problem Behaviour Affect Student-  
Teacher Relationships for Students with Autism Spectrum Disorders**

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**Principal Investigator:**

Kent McIntosh, Ph. D.

Department of Educational &  
Counselling Psychology and  
Special Education**Co-Investigator:**

Jacqueline Brown, B. A.

Master of Arts Student  
Department of Educational &  
Counselling Psychology and Special  
Education

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Dear School Faculty:

This is a request for you to take part in a study in your district. This research is being conducted to fulfill the requirements of a thesis for a Master's degree. The study is being funded by the Faculty of Education at the University of British Columbia. Only the investigators will have access to the information collected in this study. Please read the following form carefully. Sign and return one copy. Keep the other for your records.

**Purpose:**

The purpose of this study is to look at the quality of the relationships between students with Autism Spectrum Disorders (ASD) and their classroom teachers and special educational assistants. You are being invited to take part in this study because the ASD support team in your district has identified you as having a student with ASD in your classroom or as providing assistance to a student with ASD.

### **Research Study Participation:**

- 1) Taking part in this portion of the study means that you agree to:
  - a) Complete a 10 minute questionnaire regarding your recent training in ASD and the percentage of the school day in which the student receives SEA support.
  - b) Complete a 15 minute rating scale on your relationship with the student.
  - c) Complete a 30 minute rating scale about the student's behaviour (problem behaviour, study skills, and adaptability) within the classroom.
- 2) Once you consent to participating in this study, a consent form will be sent to the student's parents. The parents will not be required to return the form unless they object to their child's participation in the study.

### **Potential Risks:**

Risks for your participation in this study are expected to be minimal.

### **Potential Benefits:**

By taking part in this study, you will help improve our understanding of student-teacher and student-SEA relationships with students with ASD. Benefits to you as an individual are not expected.

### **Compensation:**

To compensate you for your time completing these questionnaires you will receive a \$20 gift card to a local educational store. If you choose to withdraw before completion, you will receive compensation for questionnaires completed to that point.

### **Confidentiality:**

Your identity in this study will remain strictly confidential; only the investigators of this study will see your individual responses. All documents will be identified only by code number and kept in a lockable filing cabinet and password-protected computer files at the University of British Columbia. No individual or school will be identified by name in any reports of the study.

### **Contact for concerns about the rights of research subjects:**

If at any time you have concerns about your treatment or rights as a research participant, you may contact the Research Subject Information Line in the UBC Office of Research Services at the University of British Columbia at (604) 822-8598.

### **Consent:**

Your participation in this study is entirely voluntary and you may refuse to participate or withdraw from the study at any time without jeopardy to your employment or relationship with the school district.

Your signature below indicates that you consent to participate in this study and you have received a copy of this consent form (Pages 1-3) for your own records.

---

Participant's Signature

Date

---

Printed Name of the Participant signing above

---

Name of School

## APPENDIX G

## Parent Consent Form

## THE UNIVERSITY OF BRITISH COLUMBIA



**Department of Educational & Counselling  
Psychology & Special Education**  
2125 Main Mall  
Vancouver, B.C. Canada V6T 1Z4  
Tel: (604) 822-6382  
Fax: (604) 822-3302

**Consent Form**

**Exploring how Level of Training, Inclusion, and Problem Behaviour Affect Student-Teacher Relationships for Students with Autism Spectrum Disorders**

**Principal Investigator:**

Kent McIntosh, Ph. D.  
Department of Educational &  
Counselling Psychology and  
Special Education

**Co-Investigator:**

Jacqueline Brown, B. A.  
Master of Arts Student  
Department of Educational &  
Counselling Psychology and Special  
Education

Dear Parent/Guardian(s):

This is a request for information to be obtained about your child. This research is being conducted to fulfill the requirements of a thesis for a Master's degree. The study is being funded by the Faculty of Education at the University of British Columbia. Only the investigators will have access to the information collected in this study. Please read the following form carefully.

**Purpose:**

The purpose of this study is to examine the quality of the relationships between students with Autism Spectrum Disorders (ASD) and their classroom teachers and special educational assistants. Information about your child is being requested because the ASD support team in your district identified your child as receiving services in the area of ASD.



### **Research Study Participation:**

1) Taking part in this portion of the study means that you allow teachers and special education assistants who work with your child to:

- a) Complete a 15 minute rating scale on their relationship with your child. The scale asks school personnel to rate the student-teacher relationship. Some of the questions include: "open to sharing feelings" and "strong reaction to separation."
- b) Complete a 30 minute rating scale about your child's behaviour (adaptive and problem behaviour) in the classroom). Some of the questions include: "responds appropriately when asked a question" and "cannot wait to take turn."
- c) Complete a 10 minute questionnaire about their own training and experience in working with students with ASD.

### **Potential Risks:**

Although teachers and educational assistants are being asked to consider their relationship with your child, it is not anticipated that the questions will have a negative impact on their relationship with your child.

### **Potential Benefits:**

By allowing information about your child to be released, you will help improve our understanding of student-teacher and student-SEA relationships with students with ASD. You will also be providing crucial information on potential factors that may impact inclusion for students with ASD.

### **Confidentiality:**

Your child's identity in this study will remain strictly anonymous; the investigators of this study will never know your child's name or any other identifying information, and no identifying information will be written or recorded. This means that the information provided to the researchers will never have your child's name on the document. All documents will be identified by code number only and kept in a lockable filing cabinet and password-protected computer files at the University of British Columbia. No individual student, teacher or school will be identified by name in any reports of the study.

### **Contact for concerns about the rights of research subjects:**

If at any time you have concerns about your child's treatment or rights as a research participant, you may contact the Research Subject Information Line in the UBC Office of Research Services at the University of British Columbia at (604) 822-8598.

**Consent:**

Your consent for your child's teachers to participate in this study is entirely voluntary and you may refuse to participate or withdraw from the study at any time without jeopardy to your child's standing within the school.

If you allow your child to participate, you don't have to do anything. Keep this form for yourself. If you do not want your child to participate, please sign this form and return it to your child's classroom teacher in the next seven days.

By signing and returning this form,

I, \_\_\_\_\_ **DO NOT WISH** to have  
(parent/legal guardian)

\_\_\_\_\_ included in the project program.  
(child's name)

Please do not include my child in the study.

\_\_\_\_\_  
Name of School

\_\_\_\_\_  
Name of Teacher

\_\_\_\_\_  
Name of Special Educational  
Assistant



## APPENDIX H

*The University of British Columbia*  
*Office of Research Services*  
**Behavioural Research Ethics Board**  
 Suite 102, 6190 Agronomy Road, Vancouver,  
 B.C. V6T 1Z3

## CERTIFICATE OF APPROVAL - FULL BOARD

<b>PRINCIPAL INVESTIGATOR:</b> Kent McIntosh	<b>INSTITUTION / DEPARTMENT:</b> UBC/Education/Educational & Counselling Psychology, and Special Education	<b>UBC BREB NUMBER:</b> H09-00192
<b>INSTITUTION(S) WHERE RESEARCH WILL BE CARRIED OUT:</b>		
<b>Institution</b>	<b>Site</b>	
N/A	N/A	
<b>Other locations where the research will be conducted:</b> Research will be conducted with participants in the Richmond and Vancouver school districts. If there are an insufficient number of consenting participants in these two school districts, the North Vancouver and West Vancouver School Districts will be contacted for potential participation. Data collection will consist of meetings with school personnel in these districts. The PI has contacted the first two aforementioned school districts for consent for participation and will submit letters of support from each district when a proviso is issued by BREB and before recruitment or data collection will commence. The PI will submit these letters as soon as they are available. <b>RESPONSE TO PROVISOS:</b> The school districts are now named above.		
<b>CO-INVESTIGATOR(S):</b> Jacqueline A. Brown		
<b>SPONSORING AGENCIES:</b> University of British Columbia - "Exploring how Level of Training, Inclusion, and Problem Behaviour Impact Student-Teacher Relationships for Students with ASD"		
<b>PROJECT TITLE:</b> Exploring how Level of Training, Inclusion, and Problem Behaviour Affect Student-Teacher Relationships for Students with Autism Spectrum Disorders		
<b>REB MEETING DATE:</b> February 12, 2009	<b>CERTIFICATE EXPIRY DATE:</b> February 12, 2010	
<b>DOCUMENTS INCLUDED IN THIS APPROVAL:</b>		<b>DATE APPROVED:</b> February 26, 2009
<b>Document Name</b>	<b>Version</b>	<b>Date</b>
<b><u>Protocol:</u></b>		
Graduate Student Research Grant Application	1.0	October 26, 2008
Thesis Proposal	1.0	January 29, 2009
<b><u>Consent Forms:</u></b>		
Parent Consent	1.0	January 26, 2009
Teacher and Special Educational Assistant Consent	1.0	January 27, 2009
<b><u>Questionnaire, Questionnaire Cover Letter, Tests:</u></b>		
Behavior Assessment System for Children (Child Version)	N/A	January 29, 2009
Behavior Assessment System for Children (Preschool Version)	N/A	January 29, 2009
Special Educational Assistant Questionnaire	1.0	January 29, 2009
Student-Teacher Relationship Scale	N/A	January 29, 2009
Teacher Questionnaire	1.0	January 29, 2009
The application for ethical review and the document(s) listed above have been reviewed and the procedures were found to be acceptable on ethical grounds for research involving human subjects.		
<i>Approval is issued on behalf of the Behavioural Research Ethics Board          and signed electronically by one of the following:</i> Dr. M. Judith Lynam, Chair Dr. Ken Craig, Chair Dr. Jim Rupert, Associate Chair Dr. Laurie Ford, Associate Chair Dr. Anita Ho, Associate Chair		