EXPLORING STUDENT AND TEACHER VARIABLES RELATING TO INCLUSION OF STUDENTS WITH AUTISM SPECTRUM DISORDER IN GENERAL EDUCATION CLASSROOMS

by

MATTHEW JOEL SEGALL

(Under the Direction of Jonathan M. Campbell)

ABSTRACT

Although inclusion for students with autism spectrum disorders (ASD) is often recommended by experts, the challenge of this service delivery is significant for educators. The goal of the two studies presented in this dissertation is to investigate both teacher and student variables which may affect the practice of inclusion for students with ASD. In the first study, teachers, administrators and school psychologists were assessed on their attitudes, knowledge and experience as they relate to inclusion for students with ASD. Findings suggest interesting relationships amongst these variables which differed by group; furthermore, special education teachers and school psychologists reported higher levels of knowledge and experience than general education teachers and administrators. In the second study, first grade teachers provided their opinions about the educational placement of students whose characteristics (e.g., disability label and cognitive ability) varied by experimental condition. Results suggest that students with average cognitive ability were recommended for placement in less restrictive settings than students with cognitive impairment; the presence of a disability label did not influence decision making. The limitations and implications of these studies are discussed as well as directions for future research.

INDEX WORDS: Autism, Inclusion, Teacher attitudes

EXPLORING STUDENT AND TEACHER VARIABLES RELATING TO INCLUSION OF STUDENTS WITH AUTISM SPECTRUM DISORDER IN GENERAL EDUCATION CLASSROOMS

by

MATTHEW JOEL SEGALL

B.A., University of Virginia, 2003

M.A., University of Georgia, 2008

A Dissertation Submitted to the Graduate Faculty of the University of Georgia in Partial

Fulfillment of the Requirements for the Degree

DOCTOR OF PHILOSOPHY

ATHENS, GEORGIA

2011

EXPLORING STUDENT AND TEACHER VARIABLES RELATING TO INCLUSION OF

STUDENTS WITH AUTISM SPECTRUM DISORDER IN GENERAL EDUCATION

CLASSROOMS

by

MATTHEW JOEL SEGALL

Major Professor:	Jonathan M. Campbell
Committee:	Kevin Ayres
	A. Michele Lease
	Deanna Luscre

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION AND LITERATURE REVIEW

Students with autism spectrum disorders (ASD) represent a challenging population for education professionals. Due to an array of difficulties in the areas of communication, socialization, and problem behaviors (American Psychiatric Association [APA], 2000), such students typically require an organized plan of modifications, accommodations, and classroom interventions in public school settings (National Research Council [NRC], 2001). Furthermore, both due to legislative influences (Yell, Drasgow, & Lowrey, 2005; Yell, Katsiyannis, Drasgow, & Herbst, 2003) and a growing research base and professional support, students with ASD are often educated in general education classrooms alongside their typically developing peers. The Individuals with Disabilities Education Improvement Act (IDEIA, 2004), in particular, mandates that all students with special education needs have their needs met in the least restrictive environment such that no ill effects are experienced by the student with special needs or his or her peers. The mandate of inclusive education involves various stakeholders, including teachers, administrators, school psychologists, among other school professionals (NRC, 2001).

Generally referred to as inclusion, the practice of educating students with special needs in the same setting as typical peers is a well-researched topic. With respect to ASD, Mesibov and Shea (1996) list four general assumed benefits of inclusive education for students with autism: (a) higher academic expectations, (b) access to peer models of social behavior, (c) improved self concept and reduced stigma, and (d) development of positive attitudes by peers. While more research is needed to shed light on the strength and reality of these assumptions and proposed benefits (Harrower & Dunlap, 2001), there is strong agreement within the autism intervention literature that access to peers as models of typical behavior is paramount to development of appropriate social skills (Burack, Root, & Zigler, 1997; NRC, 2001).

In support of inclusive education for students with ASD, a number of peer reviewed journal articles have attempted to make recommendations for this practice (e.g., Harrower & Dunlap, 2001; Williams, 1995). Primary challenges are the social communicative deficits that define autism and related disabilities (APA, 2000). In the classroom, social and communicative deficits present an array of challenges from difficulties with expressing wants or needs to difficulties in comprehending social information contained in oral language, such as understanding the use of sarcasm or idioms. Exacerbating the challenge of ASD in the classroom is the substantial heterogeneity of symptom presentation. Students with ASD range in severity from very low to very high functioning. As a result, many guides and recommendations that appear in the literature are aimed toward students at the high functioning end of the spectrum (i.e., Asperger's syndrome or high-functioning autism). Even higher functioning students require a significant amount of support in the general education setting, and logically, students with greater severity will need stronger and more comprehensive supports, albeit different ones. Finally, there is a long list of associated symptoms and features of autism that present additional problems in the classroom. For example, although not diagnostic features, many persons with ASD have difficulties with shifting attention, oppositional behavior, and/or anxiety (Hendren, 2003). These challenges have important implications for educational programming within the classroom.

In order to account for the core symptomatology, heterogeneity of presentation, and associated features of ASD, researchers and practitioners recommend an assortment of practices and strategies for the classroom. Comprehensive treatment packages notwithstanding, many suggestions arise from practical solutions to account for the challenge of students with ASD. For example, environmental adaptations, such as altering the type of lighting within the classroom, attempt to account for sensory difficulties that may affect learning (Jordan, 2005). Similarly, in recognition of students' propensities for sameness and preference for predictability, classroom schedules, rules, and procedures should be clear, consistent, and

visible to the student (Griffin, Griffin, Fitch, Albera, & Gingras, 2006; Safran, 2002). In terms of teacher behaviors, it is noted that classroom teachers should serve as models of appropriate behavior, yet also serve as social translators (Safran), suggesting that teachers may need to explain the meaning and intent of a student with ASD's behavior and communication to other students in the classroom. Not surprisingly, knowledge of autism and effective practice options is often cited as essential for successful inclusion (Burack, Root, & Zigler, 1997; Dahle, 2003). Legislation implies that professionals working with students with autism should demonstrate an appropriate level of expertise in this area (Yell et al., 2003). Furthermore, if increased academic rigor is a benefit of inclusion, it follows that some degree of specialized instruction will be necessary (Mesibov & Shea, 1996). Some instructional techniques for students with autism include shortening assignments, pre-task sequencing to enhance motivation (Adcock & Cuvo, in press), and adapting instruction to capitalize on student strengths and interests (Williams, 1995).

Utilizing typically developing students through peer mediated interventions have a strong empirical basis with effects on both social and academic goals. Many researchers concur that merely placing a student with ASD in a room of typically developing students is insufficient for social behavior change (Burack et al., 1997; Mesibov & Shea, 1996). Rather, an active intervention must be implemented, typically involving training a peer with adequate social skills to intervene with the student with autism (Simpson, Myles, Sasso, & Kamps, 1997). Peer mediated interventions have resulted in positive outcomes, such as increased social initiations and increased social responses. Peer tutoring strategies have had similar positive social results with the additional benefit of increased academic behaviors (Kamps, Barbetta, Leonard, & Delquadri, 1994).

Given the nature of ASD, coupled with the vast array of classroom considerations and practices to accommodate such students in the general education setting, it is not surprising that many education professionals believe that positive teacher attitudes are essential for

positive student outcomes (Burack et al., 1997). The assumption is that a teacher who believes a student with ASD should not be included in general education classrooms is less likely to implement recommended procedures to facilitate successful inclusion; and, consequently, the reverse would also be true.

A substantial body of research exists examining teacher attitudes towards the practice of inclusion (see Avramidis & Norwich, 2002; Scruggs & Mastropieri, 1996 for reviews). The research literature suggests that teacher attitudes towards inclusion are generally positive. However, many factors, such as type of disability, severity of disability, experience with students with disabilities, professional training and knowledge of the disability, and access to resources and support, influence educator attitudes. To the extent that ASDs are both severe and relatively rare, teacher attitudes towards inclusive education for students with ASD are expected to be less positive when compared to less severe disabilities. However, teachers with special education experience and training are expected to demonstrate more positive attitudes than those without such training (Center & Ward, 1987; Villa, Thousand, Meyers, & Nevin, 1996). These hypotheses were supported in a study by McGregor and Campbell (2001). The authors asked both regular education and specialist staff to report attitudes towards inclusion for students with ASD. Most significantly, regular education teachers who reported having experience with students with ASD reported similarly positive attitudes to staff with special education training.

In efforts to extend this line of research, Segall (2007) sampled administrators, special education teachers, and general education teachers. Participants completed a comprehensive questionnaire (*Autism Inclusion Questionnaire [AIQ];* Segall & Campbell, 2007) assessing experience with ASD, knowledge of autism, attitudes towards inclusive education, awareness of classroom practices, and use of such practices. While an inadequate recruitment strategy yielded a meager return rate (*n* = 47; 10% return rate), the results supported the assertion that educators report generally positive attitudes towards inclusive education for students with ASD.

Most interesting was the finding that, whereas attitudes towards inclusion were not found to significantly correlate with other relevant variables (e.g., awareness of practice, knowledge of autism), attitude of the staff was reported as the most agreed upon factor for successful inclusion. Furthermore, analysis of the knowledge items indicated that education professionals lack a substantial amount of accurate information about autism.

The two studies that follow are efforts to extend this line of research, and further describe the attitudes and opinions of education professionals toward the inclusion of students with ASD in general education settings. The first study is a replication of the initial AIQ study by Segall (2007). The study extends these results by implementing an improved recruitment strategy and collecting information from a sample of school psychologists to add an additional comparison group and improve the generalizability of the findings.

In the second study, attitudes towards inclusion are assessed via a manipulation of brief vignettes. Participants are asked to read a short description of a student and then asked to provide their opinion of an appropriate educational placement for this student. The second study extends research on attitudes towards inclusion for students with ASD in several ways. First, the second study provides a measure of attitudes that is more concrete than previous studies. Teachers who place the student in general education settings are believed to be expressing a positive attitude toward inclusion. Second, the study experimentally manipulates characteristics of the student such that the results will shed light on student attributes that may affect educational placement.

Together, these studies add significant information to the current status and practice of inclusive education for students with ASD. In particular, the constructs of experience, knowledge, and attitudes are assessed and the relationship between these variables and important outcome measures such as awareness of classroom practices for students with ASD and decisions of educational placement are documented. Moreover, the relationship between significant student variables, such as cognitive ability and the presence of a diagnostic label,

and teacher opinions regarding placement are explored. All such findings have important

implications for the practice of inclusion for students with ASD and training for educators.

REFERENCES

Adcock, J., & Cuvo, A.J. (2009). Enhancing learning for children with autism spectrum disorders in regular education by instructional modifications. *Research in Autism Spectrum Disorders, 3*, 319-328.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed. – Text revision). Washington, DC: Author.

Avramidis, E., & Norwich, B. (2002). Teachers' attitudes towards integration/inclusion: A review of the literature. *European Journal of Special Needs Education, 17*, 129-147.

Burack, J. A., Root, R., & Zigler, E. (1997). Inclusive education for students with autism: Reviewing ideological, empirical, and community considerations. In D. J. Cohen & F. R. Volkmar (Eds.), *Handbook of autism and pervasive developmental disorders* (2nd ed., pp. 796-807). New York: Wiley and Sons.

Center, Y., & Ward, J. (1987). Teachers' attitudes towards the integration of disabled children into regular schools. *Exceptional Child, 34,* 41-56.

Dahle, K. B. (2003). Services to include young children with autism in the general classroom. *Early Childhood Special Education, 31*, 65-70.

Griffin, H. C., Griffin, L. W., Fitch, C. W., Albera, V., & Gingras, H. (2006). Educational interventions for individuals with Asperger syndrome. *Intervention in School and Clinic, 41*, 150-155.

Harrower, J. K., & Dunlap, G. (2001). Including children with autism in general education classrooms: A review of effective strategies. *Behavior Modification, 25*, 762-784.

Hendren, R.L. (2003). Contributions of the psychiatrist. In S. Ozonoff, S. J. Rogers, & R. L. Hendren (Eds.), *Autism spectrum disorders: A research review for practitioners* (pp. 37-53). Washington, DC: American Psychiatric Publishing, Inc.

Individuals with Disabilities Education Improvement Act of 2004, 20 U.S.C. § 1400 *et seq.* (2004) (reauthorization of the Individuals with Disabilities Act of 1990).

Jordan, R. (2005). Managing autism and Asperger's syndrome in current educational provision. *Pediatric Rehabilitation, 8*, 104-112.

Kamps, D. M., Barbetta, P. M., Leonard, B. R., & Delquadri, J. (1994). Classwide peer tutoring: An integration strategy to improve reading skills and promote peer interactions among students with autism and general education peers. *Journal of Applied Behavior Analysis, 27*, 49-61.

McGregor, E., & Campbell, E. (2001). The attitudes of teachers in Scotland to the integration of children with autism into mainstream schools. *Autism, 5*, 189-207.

Mesibov, G., & Shea, P. (1996). Full inclusion and students with autism. *Journal of Autism and Developmental Disorders, 26*, 337-346.

National Research Council. (2001). *Educating children with autism.* Committee on Educational Interventions for Children with Autism, Division of Behavioral and Social Sciences and Education. Washington, DC: National Academy Press.

Safran, J. S. (2002). Supporting students with Asperger's syndrome in general education. *Teaching Exceptional Children, 34*, 60-66.

Scruggs, T. E., & Mastropieri, M. A. (1996). Teacher perceptions of mainstreaming/inclusion, 1958-1995: A research synthesis. *Exceptional Children, 63*(1), 59-74.

Segall, M. J., & Campbell, J. M. (2007). *Autism Inclusion Questionnaire.* Unpublished measure, University of Georgia, Athens, Georgia.

Segall, M. J. (2007). *Inclusion of students with autism spectrum disorder: Educator experience, knowledge, and attitudes.* Unpublished master's thesis, University of Georgia, Athens, Georgia.

Simpson, R. L., Myles, B. S., Sasso, G. M., & Kamps, D. M. (1997). *Social skills for students with autism* (2nd ed.). Reston, VA: The Council for Exceptional Children.

Villa, R., Thousand, J., Meyers, H., & Nevin, A. (1996). Teacher and administrator perceptions of heterogeneous education. *Exceptional Children, 63*, 29-45.

Williams, K. (1995). Understanding the student with Asperger syndrome: Guidelines for

    teachers. *Focus on Autistic Behavior, 10*, 9-16.

Yell, M. L., Drasgow, E., & Lowrey, K. A. (2005). No child left behind and students with autism

    spectrum disorders. *Focus on Autism and Other Developmental Disabilities, 20*, 130-

    139.

Yell, M. L., Katsiyannis, A., Drasgow, E., & Herbst, M. (2003). Developing legally correct and

    educationally appropriate programs for students with autism spectrum disorders. *Focus*

    on Autism and Other Developmental Disabilities, 18, 182-191.

CHAPTER 2

FACTORS RELATING TO EDUCATION PROFESSIONALS' CLASSROOM PRACTICES FOR

THE INCLUSION OF STUDENTS WITH AUTISM SPECRUM DISORDERS

ABSTRACT

The education of students with autism spectrum disorders (ASD) is a particularly challenging issue for public schools. Due to legal and educational reasons, many children with ASD are included in the general education setting for all or portions of the day. Thus, it is essential to understand the current practices used to foster inclusive education for these students as well as various factors related to the implementation of classroom interventions. The current study used the Autism Inclusion Questionnaire to assess the experience, knowledge, attitudes and current practices of education professionals regarding ASD. Results suggest that special education teachers and school psychologists have higher levels of experience, training, and knowledge as compared to general education teachers and administrators. Attitudes towards inclusive education for students with ASD were generally positive, although attitudes were not a significant predictor of awareness or use of empirically supported interventions. Implications and future directions are discussed.

INDEX WORDS: Autism, Inclusion, Teacher attitudes

INTRODUCTION

Educating students with autism spectrum disorder (ASD) in public schools is a significant challenge (Robertson, Chamberlain, & Kasari, 2003; Yell, Katsiyannis, Drasgow, & Herbst, 2003), due in large part to core features, substantial heterogeneity of symptom presentation, and an array of associated behaviors and challenges (Eaves & Ho, 1997; Hendren, 2003). In recent years, more students with ASD have been educated in general education settings rather than in segregated environments, a practice generally referred to as inclusion (White, Scahill, Klin, Koenig, & Volmar, 2007). The practice of inclusion finds support both from special education law (Individuals with Disabilities Education Improvement Act {IDEIA}, 2004), which mandates that students be educated in the least restrictive environment, and from field experts (Koegel, & LaZebnik, 2004; National Research Council [NRC], 2001), who suggest that access to typical peer models is an essential component for effective acquisition of appropriate social behaviors.

A growing body of research has documented the experiences of students with ASD in inclusion settings. For example, Boutot and Bryant (2005) reported on the peer nomination ratings of 177 elementary school students, including ten students with ASD who were educated in regular education classrooms. The results suggested that there were no significant differences between students with ASD and their typically developing peers on measures of social preference, social impact, or social network affiliation. Whereas similar findings have been reported elsewhere (Robertson et al., 2003), other research has suggested that peer attitudes towards a child with autism viewed on videotape were significantly less positive than attitudes towards a typical peer (Campbell, Ferguson, Herzinger, Jackson, & Marino, 2004; Swaim & Morgan, 2001). Still other research using peer nomination methods indicates that although children with ASD are part of the larger social network, their involvement in that network is less than typical peers, particularly in terms of reciprocity, companionship, and acceptance (Chamberlain, Kasari, & Rotheram-Fuller, 2007).

Ochs and colleagues (2001) used ethnographic observation methods and video recordings to qualitatively explore the experiences of 16 students with ASD in inclusion settings. Their report suggests that across the classrooms observed, there exist both positive inclusion practices, such as peers patiently helping students with ASD or providing corrective feedback, and negative inclusion practices, such as ignoring students with ASD or displaying open disrespect. Furthermore, increased positive practices were associated with disclosure of disability label; that is, in classrooms in which the typical peers were aware that their classmate had an ASD diagnosis, more preferable behaviors were observed. Campbell et al. (2004) also found that disclosure of autism improved children's attitudes in an analogue study.

In order to assist teachers in educating students with ASD in inclusive settings, many authors have created summaries of inclusion practices for students with autism (e.g., Harrower & Dunlap, 2001), guides for the inclusion of students with Asperger's syndrome (e.g., Jordan, 2005; Williams, 1995), and works summarizing empirically evaluated treatments for persons with ASD (e.g., Simpson, 2005). These recommendations are numerous, and it is beyond the scope of this paper to review the various interventions appropriate for inclusive classrooms; instead, a brief review of broad categories of recommendations, such as environmental changes to the physical classroom, instructional techniques and modifications, social skills interventions, and general behavioral management strategies, will follow. A fifth category, teacher related variables, will thereafter be explored in depth.

Environmental adaptations. One of the most practical and simplest approaches to successfully include students with ASD in general education settings is to alter the educational environment to suit the student's unique needs (Mesibov & Shea, 1996; Jordan, 2005). For example, teachers may wish to adjust the type of lighting in the classroom or consider the use of alternative seating (Schilling & Schwartz, 2004) to account for sensory related challenges. In addition, the number of students in the classroom (Mesibov & Shea) and the seating location of the student (Safran, 2002; Williams, 1995) should be considered. Furthermore, classroom rules

and procedures should be clear and consistently applied (Griffin, Griffin, Fitch, Albera, &
Gingras, 2006; Safran) and likewise should be posted visually in the classroom (Harrower &
Dunlap, 2001).

 Instructional techniques and academic modifications. Specialized instruction is required
for nearly all students with ASD (Mesibov & Shea, 1996). Both homework and class work
assignments can be shortened to reduce the quantity of work (Griffin et al., 2006; Koegel, &
LaZebnik, 2004) and timed work sessions may be implemented (Williams, 1995). Also, tasks
can be strategically ordered to promote maintenance of skills and motivation (Adcock & Cuvo,
2009; Harrower & Dunlap, 2001).

 In terms of class instruction, many students with ASD learn best when information is
presented in a visual format (Jordan, 2005), and the use of computers and other assistive
technologies may be used (Safran, 2002). Providing additional prompts following task directions
is another successful adaptation (Koegel & LaZebnik, 2004). Also, lesson plans can be altered
to capitalize on the unique profile of strengths for a student with ASD, such as rote
memorization or specialized knowledge of a specific topic (Williams, 1995).

 Social skills interventions. Some of the most widely researched strategies related to
improving social skill development in the classroom are peer-mediated interventions (Simpson,
Myles, Sasso, & Kamps, 1997; Harrower & Dunlap, 2001). These strategies make use of an
important benefit to inclusion, namely access to peer models (Mesibov & Shea, 1996). As
authors have noted, integration alone will not necessarily facilitate acquisition of positive social
behaviors for students with ASD (Mesibov & Shea; Ochs, Kremer-Sadlik, Solomon, & Sirota,
2001; Strain, 1983). Thus, typically developing peers are actively incorporated into classroom
practices that promote social and academic development. Empirical support exists for a variety
of peer-mediated interventions (e.g., peer-initiation; cooperative learning groups). For example,
pivotal response training (Koegel, Koegel, Frea, & Freeden, 2001; Rogers, 2000) is an
intervention which focuses on increasing specific behaviors (e.g., asking questions) that

eventually lead to the acquisition of more complex and desirable behaviors. Research has shown that typically developing peers can be taught these procedures resulting in increases in positive social behavior (Pierce & Schreibman, 1995; 1997).

In some situations, teachers may wish to directly teach social skills (Jordan, 2005; Safran, 2002; Williams, 1995). An important aspect of direct skill instruction is task analysis, during which the teacher must decompose the social skill or behavior into small component parts, and teach each part in succession (Simpson et al., 1997). A significant benefit of direct instruction is that it can be incorporated with a variety of other strategies including peer-mediated interventions (Simpson et al.) and self-management strategies. Social stories can also be used in the classroom to promote positive behaviors and reduce unwanted behaviors such as anxiety or aggression (Safran; Griffin et al., 2006).

Behavioral strategies. Many practices to facilitate positive classroom outcomes for students with ASD are based on behavioral techniques (e.g., reinforcement of desired behaviors). For example, behavior contracts can be constructed with the student in which a specific desired behavior is identified and the student can earn a predetermined reward for engaging in that behavior at specified levels over a specified period of time (Alberto & Troutman, 2003). Likewise, functional behavior assessment and analysis can be used to identify the function of an undesired behavior with the aims of also identifying a more appropriate behavior to replace the undesired one (Herzinger & Campbell, 2007).

In addition, for older and high-functioning students, professionals purport that self-management strategies are well-suited for inclusive settings (Harrower & Dunlap, 2001; Rogers, 2000). For this technique, one or several behaviors are selected, and the student with ASD is trained to monitor and reinforce his own behavior (Koegel & LaZebnik, 2004). Prior research has also shown that unpredictable schedules of supervision increased the on-task behavior of students with ASD (Dunlap & Johnson, 1985). Additionally, using an unpredictable schedule of teacher supervision plus a self-management intervention has been shown to increase

appropriate behaviors and decrease unwanted self-stimulatory behaviors (Stahmer & Schreibman, 1992).

Teacher related variables. It is not surprising that teacher disposition and behavior are viewed as important to successful inclusion (Burack, Root, & Zigler, 1997; Safran & Safran, 2001). Beyond generally accepted personality traits, such as kindness and patience, experts suggest that teachers be predictable, consistent and concerned with social development in addition to academic gains (Safran & Safran). Furthermore, teachers should maintain classroom environments which promote tolerance, acceptance, and understanding as well as model these behaviors for all students (Safran, 2002). Due to difficulties with general social competence (Gutstein & Whitney, 2002), including social signaling (e.g., attending to appropriate social stimuli; Jordan, 2005), teachers should be vigilant in protecting their students with ASD from teasing and bullying (Griffin et al., 2006; Williams, 1995) and should act as social translators in the classroom (Safran). For example, students may not comprehend the implied meaning conveyed in non-literal speech (e.g., sarcasm or idiom) and the teacher can explain the communicative intent; likewise, when students with ASD have difficulty expressing their ideas clearly, the teacher should intervene and facilitate appropriate and accurate communication. It may also be necessary for teachers to both prompt students with ASD to engage in appropriate behavior and prompt peers to initiate social interactions with students with ASD (Odom & Watts, 1991).

Consistent with these suggestions is the recommendation that teachers of students with ASD be knowledgeable about the disorder itself (Jordan, 2005) and the various practice options and strategies that will facilitate inclusion for the individual student (Dahle, 2003; Fisher, Frey, & Thousand, 2003). Indeed, recent education laws suggest that teachers receive specialized training in order that they are highly qualified to educate students with ASD (Yell et al., 2003; Yell et al., 2005).

Some efforts have been made to assess the knowledge base of teachers and other education professionals about ASD. Early research suggested that teachers held incorrect beliefs about ASD, particularly in the realm of cognitive abilities, compared to autism specialists (Stone & Rosenbaum, 1988). Similarly, researchers have indicated that speech-language pathologists report inadequate knowledge of strategies for inclusion (Cascella & Colella, 2004) and require additional training (Schwartz & Drager, 2008). Other studies suggest that education professionals, such as administrators, special education teachers, and general education teachers, demonstrate a significant lack of knowledge about ASD, as opposed to incorrect information (Segall, 2007). Thus, it is not surprising that student teachers report that additional knowledge of disabilities would improve their opinions about inclusive education (Avramidis, Bayliss, & Burden, 2000b), and researchers have found a positive relationship between teacher knowledge, experience with disabilities, and teacher self-efficacy (Buell, Hallam, Gamel-McCormick, & Scheer,1999).

A fundamental assumption held by many educators and researchers is that the attitude educators hold toward the practice of inclusion is an important determinant of the success of inclusive education for students with ASD (Burack, Root, & Zigler, 1997; Segall, 2007). Ajzen's theory of planned behavior (2001) stresses the importance of attitudes and their relationship with other variables such as behavioral intentions, perception of control, and awareness of the beliefs of influential others. Stanovich and Jordan (1998) used Ajzen's model to investigate inclusion practices of teachers and found that administrators' beliefs about inclusion were the strongest predictors of teacher behavior. Interestingly, teacher attitudes did not mediate this relationship. Interventions for the purpose of altering attitudes towards students with disabilities and educational placement have been evaluated, including psychoeducational reports (Andrews & Gutkin, 1994) and coursework and training combining information about disabilities and experience in working with students with disabilities (Corrigan et al., 2001; Johnson & Cartwright, 1979).

Much research has focused on assessing educator attitudes towards inclusion (see Avramidis & Norwich, 2002; Scruggs & Mastropieri, 1996 for reviews). In general, findings from this body of research support the notion that educators hold positive attitudes towards the general concept of inclusion (Ward, Center, & Bochner, 1994). There are, however, several variables which influence the opinions of teachers and other education professionals, including type and severity of disability; training and knowledge of disabilities; and contact and experience with disabilities (Avramidis & Norwich; Hannah & Pilner, 1983). Even still, there are many conflicting results within the literature, particularly in their application regarding attitudes towards inclusion for students with ASD.

For example, researchers have demonstrated that type of disability and the presence of a label in a short vignette about a student with disabilities did not affect teachers' decisions of whether or not to include the student in general education classrooms (Myles & Simpson, 1989). Likewise, Brubaker, Bundy, Winslow, and Belcher (2010) found that, with the exception of visual supports, school psychologists were equally likely to recommend interventions for a child described as having autism or a child with the same behaviors but no diagnostic label. In addition, Forlin (1995) reported that attitudes towards inclusion for a student with an intellectual disability correlated strongly with attitudes towards a student with a physical disability. On the other hand, some studies report that general education teachers are less receptive towards inclusion of students with learning disabilities, intellectual disabilities, or behavior disorders (Williams & Algozzine, 1979) particularly when compared to students with hearing impairments or other physical disabilities (Soodak, Podell, & Lehman, 1998). Emotional and behavioral disabilities generate significant concern for inclusion for both student teachers (Avramidis, Bayliss, & Burden, 2000b; Hastings & Oakford, 2003) and currently practicing teachers (Avramidis, Bayliss, & Burden, 2000a).

Both school psychologists (Center & Ward, 1989) and principals (Praisner, 2003) have suggested that some disabilities are more suitable for inclusion than others. For example,

Barnett and Monda-Amaya (1998) found that less than one-third of principals in their sample would recommend inclusive practices for students with severe disabilities and cognitive disabilities. Other research indicates that principals are more optimistic than special education teachers that students with mild disabilities will benefit from inclusion (Cook, Semmel, & Gerber, 1999), suggesting that views about amenability for inclusion may differ across education professionals, which may be related to training and knowledge of disabilities.

One readily replicated finding is that teachers with special education qualifications report more favorable attitudes towards inclusion than those without special education qualification (Avramidis et al., 2000a; Center & Ward, 1987; Villa, Thousand, Meyers, & Nevin, 1996). For example, special education teachers, as compared to general education teachers, in the northeast United States were more likely to report that special education students do not detract from the education of typically developing students when placed in the same classroom (Knoff, 1985). Furthermore, principals with special education training (Center, Ward, Parmenter, & Nash, 1985) and school psychologists (Center & Ward, 1989) hold more positive attitudes towards inclusion than general education teachers. Accordingly, general education teachers report more need for training on inclusion practices than special education teachers, who also report high self-efficacy related to educating students with disabilities (Buell et al., 1999). Similarly, studies have demonstrated that teachers with greater knowledge of behavioral principles and higher self-efficacy reported more adaptive reactions to the stress of students with challenging behavior (Hastings & Brown, 2002). In a study of 65 principals, participants expressed little agreement upon a definition of inclusion and suggested that teachers were not properly trained to implement inclusive practices (Barnett & Monda-Amaya, 1998).

Attitudes towards inclusion have improved as a result of an intervention that included a combination of information about disabilities and supervised experience working with students with disabilities (Johnson & Cartwright, 1979), lending support for the contact hypothesis. The contact hypothesis suggests that there is an inverse relationship between experience with a

person with disability and negative perceptions of such persons (Corrigan et al., 2001). Early research on this effect indicates that teachers from schools with integrated practices report more positive attitudes towards integration than teachers without such experiences (Harasymiw & Horne, 1974), and more recent research has supported this finding.

For example, teachers from schools with restrictive settings for students with disabilities reported less positive attitudes towards inclusion (Center & Ward, 1987) and view resource room service delivery as appropriate for students with mild disabilities (Coates, 1989; Semmel, Abernathy, Butera, & Lesar, 1991). These findings suggest that teachers are not acquiring experience with students with disabilities and, therefore, are unlikely to feel positively towards educating such students in general education settings. Indeed, whereas teachers from schools without inclusive practices report strong negative feelings about inclusion (Vaughn, Schumm, Jallad, Slusher, & Saumell, 1996), teachers from inclusive schools report more positive attitudes towards the practice (Avramidis, Bayliss, & Burden, 2000a). Among principals, contact has also been shown to be related to attitudes towards inclusion. For example, Praisner (2003) found a significant positive correlation between experience with disabilities and attitude towards inclusion.

From the literature reviewed above, several hypotheses can be made regarding educator attitudes towards inclusion and ASD. In chief, as type and severity of disability have been shown to influence attitudes, it is likely that attitudes towards inclusion of students with ASD would be less positive than other disabilities. As stated in the DSM-IV-TR (American Psychiatric Association, 2000), ASDs "are characterized by severe and pervasive impairment in several areas of development" (p. 69). Additionally, the relative rarity of ASDs compared to learning disabilities, for example, may lead educators to report less desirable attitudes. As educators may have had few contacts and experiences with students with ASD, contact theory predicts less positive attitudes towards including them in the general education setting. On the other hand, educators who have special education training and/or specific experience with

students with ASD (Robertson, Chamberlain, & Kasari, 2003) will likely demonstrate stronger positive opinions about inclusion for such students than educators without such training and experience.

Indeed, with respect to ASD, there is a growing body of research evaluating these hypotheses. Cook (2001), for example, assessed teachers' opinions about students with obvious disabilities (e.g., autism) and hidden disabilities (e.g., attention deficit-hyperactivity disorder). In this study, teachers were more likely to report feeling indifferent (versus rejection, concern, or attachment) to students with obvious disabilities. Some research suggests that teachers may be unprepared to provide instruction to students with autism (Cook, Tankersley, Cook, & Landrum, 2000; Stoiber, Gettinger, & Geotz, 1998), which may explain the reported indifference. On the other hand, school psychologists with a high level of knowledge of ASD reported neutral opinions about a variety of potential interventions for these students (Brubaker et al., 2010). Similar to other findings, special education teachers in the Stoiber et al. study (1998) reported being significantly more prepared to work with students with ASD than general education teachers. However, across educator types, teachers indicated that autism, as compared to other disabilities such as learning disabilities or mild cognitive disabilities, will need the most degree of accommodations (Stoiber et al., 1998). One study of elementary school principals, the majority of whom had no experience with students with ASD, suggests that these administrators would place students with ASD in general education infrequently and were more likely to place such students in the most restrictive settings at their school (Praisner, 2003).

Other research has presented far more optimistic results. In a small study of general education teachers from 12 elementary school classrooms which contained a student with autism, participants reported generally positive relationships with these students (Robertson, Chamberlain, & Kasari, 2003). Further analysis indicated that this relationship was moderated by the target students' peer status, such that students with higher status were viewed more positively. However, it is worth noting that no significant differences were found in overall levels

of social inclusion between included students with autism and their classmates. This finding is surprising given other studies of peer attitudes towards children with ASD (e.g., Swaim & Morgan, 2001).

In a study by McGregor and Campbell (2001) both regular education and specialist staff were surveyed about their attitudes towards inclusion of students with ASD. Teachers who reported having experience with a student with autism reported positive attitudes towards the practice, independent of teacher type. In this study, participants indicated that the severity of autism was in important factor for inclusion. Additional research investigating teacher opinions about potential outcomes for persons with ASD suggests that success in school is both an important and likely outcome, yet attaining the highest education possible is viewed as more important than likely (Ivey, 2007).

In efforts to extend this line of research, Segall (2007) sampled administrators, special education teachers, and general education teachers. The results supported the assertion that educators report generally positive attitudes towards inclusive education for students with ASD. Interestingly, whereas attitudes towards inclusion were not found to significantly correlate with other relevant variables (e.g., awareness of practice, knowledge of autism), attitude of the staff was reported as the most agreed upon factor for successful inclusion. Furthermore, analysis of the knowledge items indicated that education professionals lack a substantial amount of accurate information about autism.

Purpose of the current study. Research in the area of attitudes towards inclusive education for students with ASD is clearly in its early stages. Results suggest that while attitudes towards the practice of inclusion for these students may be generally positive, a variety of factors related to both the student (e.g., severity) and the teacher (e.g., experience) affect the strength of these opinions. Thus, the present study seeks to replicate the Segall (2007) investigation using the Autism Inclusion Questionnaire (AIQ; Segall & Campbell, 2007). Specifically, the current study (a) further assesses education professionals' backgrounds and

perspectives in the areas of prior experience working with children with ASD, knowledge of ASD, attitudes towards inclusive education, and classroom practices, and (b) includes a sample of school psychologists. It is important to extend the study to include school psychologists because school psychologists are responsible for conducting special education eligibility assessments and participate in discussions regarding educational programming and placement for eligible students. Furthermore, ASD litigation continues to grow, and a procedural violation of special education law includes having Autism eligibility evaluations conducted by professionals with poor knowledge of ASD (Yell et al., 2003). When performing the role of school-based consultant, school psychologists must be knowledgeable about ASD and various classroom support strategies for inclusion (Safran & Safran, 2001). Having positive attitudes towards inclusive education for students with ASD is essential for serving this function.

Several questions and related hypotheses regarding AIQ responses are posed:

(a) Does the experience, training, knowledge and attitudes of education professionals relate to the use of more effective classroom strategies for inclusion? The author hypothesizes that more experience, more training, greater knowledge, and positive attitudes will relate to the use of more effective classroom strategies.

(b) Do education professionals (e.g., administrators, general education teachers, special education teachers, and school psychologists) differ in their knowledge of ASD and their awareness of classroom strategies? The author predicts that special education teachers and school psychologists will earn significantly higher knowledge scores when compared to other groups.

(c) Do attitudes differ between groups of education professionals? The author predicts that general education teachers will hold less positive attitudes towards the inclusion of students with ASD than special education teachers, administrators, or school psychologists.

METHODS

Participants

Forty-five schools across the state of Georgia were recruited to participate in the study. In order to achieve a sample representative of the state, schools were selected regionally, representing schools in the Northeast, Northwest, Southeast, Southwest, and Central geographic areas of the state. Equal numbers of schools were recruited from each region (i.e., nine schools), and within each region, equal numbers of elementary, middle and high schools were recruited (i.e., three elementary schools, three middle schools, and three high schools). Schools were recruited from approximately three counties per region. In addition, the department of special education was contacted from each county in which schools have participated, in order to recruit a sample of school psychologists serving the same locations. Seventy-five psychologists were invited to participate in the study.

The final sample included 33 schools (73% participation rate) located within 15 counties throughout the state of Georgia. Participation within schools ranged from 10% to 100%, with the median participation rate at 50%. Sixty-two questionnaires (41.3% response rate) were completed by elementary school educators; 38 by middle school educators (25.3%); 67 by high school educators (44.6%). In addition, 33 school psychologists participated in the study (44.0% response rate).

In total, 196 (out of 525; 37.3% response rate) education professionals completed the survey. Prior research suggests that this rate of response is acceptable for survey research (Chafouleas, Riley-Tillman, & Sassu, 2006; Warwick & Lininger, 1975). Thirty-nine questionnaires were completed by administrators; 53 by general education teachers; 71 by special education teachers; and 33 by school psychologists. The majority of respondents were women (84%) and of Caucasian background (91%). Many participants had earned master's degrees or higher; however, administrators and school psychologists were significantly more likely than general education and special education teachers to hold higher educational

degrees, $F(3,191) = 25.6$, $p < .001$. Additional demographic information is presented in Table 2.1.

Measure

The *Autism Inclusion Questionnaire* (AIQ; Segall & Campbell, 2007) was utilized in the present investigation and contains six sections. The first section, Demographic Information and Experience, collects information regarding present and past education professional experience, special education training and experience, and key demographic variables (e.g., sex, age, ethnicity, etc.). Items for this section were adapted from the surveys developed by Praisner (2003) and McGregor and Campbell (2001). Three forms of the AIQ, an Administrator Form, a Teacher Form and a Psychologist Form, were created to allow different questions to be posed in Section I and appropriate wording and instructions throughout the survey (see Appendices A, B, and C).

The second section, Knowledge of Autism Spectrum Disorders, contains 15 items proposed to measure one's knowledge of ASD in three areas: diagnosis and symptomatology; treatment; and etiology. Knowledge items were adapted from Stone (1987), Shah (2001), and Furnham and Buck (2003). The questions in this section are presented as True/False statements; in addition, a 'Don't Know' option was included and respondents were instructed to select this response rather than guess. Segall (2007) found the internal consistency of this scale to be good ($\alpha = .86$).

Section 3, Opinions about Inclusive Education, contains 27 Likert-type scale items. Six response choices range from Strongly Agree to Strongly Disagree, and a seventh option, "No opinion or neutral," is available. On 11 items, respondents evaluate whether various factors (e.g., the severity of disability) are important for successful inclusion. Seven statements measure participants' attitudes towards inclusion in general and inclusion of students with ASD in particular. Additionally, four items were selected to allow comparison of attitudes towards disabilities other than ASD. On these four items, the disability identified was changed to either

Table 2.1

Description of Participants

Demographic Variables	% or *M* (*SD*)	*n*
Professional Type		
Administrator	19.9	39
General Education Teacher	27.0	53
Special Education Teacher	36.2	71
School Psychologist	16.8	33
Female	84.4	162
Ethnicity		
Caucasian	91.3	178
African American	7.7	15
Age (in years)	42.6 (10.4)	181 [a]
Highest Degree Earned		
Bachelor's	18.5	36
Master's	26.7	52
Specialist's	44.1	86
Doctorate	10.3	20
Time in Current Position (in years)	7.7 (7.0)	195
Training and Experience		
Certified in Special Education or School Psychology	54.1	106
Specific ASD Training	33.8	66
Specific ASD Experience	56.7	110
Student with ASD Currently in Classroom	25.0	49

Note. [a] 181 participants reported their age.

ADHD or Special Education Needs. Items in this section were adapted from McGregor and Campbell (2001), Furnham and Buck (2003), Praisner (2003), and Stone (1987).

The fourth section, Classroom Behaviors, presents 20 behaviors related to ASD. Participants are asked to rate how disruptive each behavior would be if exhibited by any student in their classroom. Each behavior contained five response choices ranging from Highly Disruptive to Not At All Disruptive. Items in this section were adopted from the DSM-IV-TR (APA, 2000), CARS (Schopler, Reichler, & Renner, 1988), and McGregor and Campbell (2001).

Section 5, Classroom Practices, contains a list of 37 strategies, interventions, and practices that may be useful in the inclusion of a student with ASD in the general education setting. These practices were acquired from a variety of sources including Simpson and colleagues (2005), Alberto and Troutman (2003), and guides for parents and teachers (e.g., Safran, 2002; Harrower & Dunlap, 2001; Williams, 1995). In particular, 19 interventions are summarized by Simpson et al. (2005) who has rated each practice as "Scientifically Based," "Promising," "Limited Supporting Information," or "Not Recommended." For each practice in the list, participants are asked to note whether they have heard of a particular practice, whether they have used the strategy, and whether they think it could be effective in better including a student with ASD in the classroom. The final section of the AIQ contains one item offering the participant an opportunity to participate in future research such as focus groups discussing inclusive education for students with ASD.

Procedure

Forty-five public schools (15 elementary schools, 15 middle schools, and 15 high schools) were selected to participate in the study. Within each of the five regions of the state (see *Participants* above), counties were randomly selected; and within each county, schools were randomly selected to be contacted. Contact information for each selected school was obtained from the Georgia Department of Education website.

Prior to mailing materials to schools, principals (or other administrators) were contacted via phone. During the phone contact, the researcher explained the nature of the study, and asked for permission to mail a packet of materials to the administrator at the school. Packets of materials contained an instructions sheet for the consenting administrator, two AIQ – Administrator forms, and eight AIQ – Teacher forms; each AIQ was accompanied by a consent form and a stamped return envelope. Administrators were asked to distribute two AIQ – Administrator forms to school administrators, four AIQ – Teacher forms to general education teachers, and four AIQ – Teacher forms to special education teachers. In addition, administrators were informed that three randomly selected questionnaires would result in a $50 gift card for the participating school.

In addition, the department of special education from each county from which schools participated was contacted. The director or supervisor of this department was asked for permission to send AIQ – Psychologist forms to their staff of school psychologists. Again, the nature of the study was described, and the director was asked to distribute questionnaires to their team of school psychologists. Directors were informed that a small incentive is associated with the study, such that one of the school psychologist questionnaires that are returned will be randomly selected, and the department from which that questionnaire came received a $50 gift card. Upon consent, directors were asked the number of staff school psychologists working in that department, and that number of questionnaires was mailed to the director; 75 AIQs were mailed to supervisors of school psychologists.

In order to increase return rates, three follow-up email contacts were made. The first follow-up was an email to the administrator or director within one or two days of the packet of materials being mailed. The second and third follow-up contacts occurred one month later and approximately three weeks prior to the end of the data collection.

Data Reduction and Analysis

Survey data was analyzed using SPSS software. The proposed hypotheses were evaluated using ANOVA and multiple regression procedures. For the purpose of analysis, several total scores were created.

An Experience Total Score was calculated by summing a participant's affirmative responses to having certification (i.e., special education or school psychologist), specific autism training, specific autism experience, and currently having a student with autism special education eligibility in the classroom. Thus, the Experience Total Score could range from 0 to 4. Internal consistency in the initial study using the AIQ (Segall, 2007) was acceptable ($\alpha = .77$)

A Knowledge Total Score was calculated by summing the number of correct responses to the 15 knowledge items. In addition, the number of 'Don't Know' responses were summed, and a Percent Correct Score was calculated by dividing the Knowledge Total Score by the difference between 15 and the number of 'Don't Know' responses [Percent Correct Score = Knowledge Total Score / (15 - # of Don't Know)]. Missing data from the Knowledge of ASD section were recoded as 'Don't Know' responses. Internal consistency was good ($\alpha = .83$) and similar to the internal consistency found in the initial study using the AIQ (Segall, 2007).

From the Opinions about Inclusive Education section, seven items (item 2, 18, 21, 22, 23, 25, and 27) comprised an Attitude toward ASD Inclusion Total Score. Responses to items 2, 18, 22, 25, and 27 were reverse scored such that positive attitudes were reflected in higher scores. Scores for the Attitude Total Score can range from 7 to 49. In the current study, Attitude toward ASD Inclusion Total Scores ranged from 29 to 49, with scores falling between 35 and 49 reflecting positive attitudes (average score of 5 or higher, suggesting Slightly Agree or stronger) and scores falling between 29 and 34 representing attitudes that are neither positive nor negative. Internal consistency was acceptable ($\alpha = .68$).

A Disruptive Behavior Total Score was calculated by summing the 20 items in the Classroom Behaviors section. Responses were coded as follows: highly disruptive = 5;

disruptive = 4; somewhat disruptive = 3, slightly disruptive = 2, not at all disruptive = 1. Accordingly, scores for the Disruptive Behavior Total Score could range from 20 to 100, and the actual range of scores was 20 to 96 (M = 63.1, SD = 13.0, n = 188). Internal consistency was excellent (α = .93).

Finally, two total scores were calculated based on responses to the Classroom Practices section. An Awareness of Practice Total Score was calculated by summing the number of strategies for which participants indicate awareness. A Use of Practice Score was calculated by summing the number of strategies for which participants indicate current or prior use. It is important to note that only the 19 strategies discussed in the Simpson and colleagues (2005) treatment guide were included in this score, and strategies were weighted according to Simpson's categorization. Thus, use of Scientifically Based Practices was scored as 3; use of Promising Practices was scored as 2; use of Limiting Supporting Information practices was scored as 1; and use of Not Recommended practices was scored as 0. Using this scoring procedure, the Use of Practice Score can range from 0 to 33. Internal consistency was excellent (α = .91) for the Awareness of Practice Total Score and good (α = .81) for the Use of Practice Score; these estimates of reliability are similar to what was described in the initial study using the AIQ (Segall, 2007).

It is important to note that of the 196 participants who completed the survey, 19 participants did not complete the AIQ fully enough to produce all calculated total scores. In the final data analysis, listwise deletion was used to account for these participants' incomplete responses.

RESULTS

Relationships between Disruptive Behaviors, Experience, Knowledge, Attitudes, Awareness of Strategies, and Use of Strategies

Correlation analysis revealed significant positive relationships between all total scores except for educators' perceptions of behaviors (see Table 2.2). That is, greater amounts of

Table 2.2

Correlations between Total Scores for Disruptive Behaviors (DIS), Autism Experience (EXP),

Knowledge of Autism Spectrum Disorders (KNOW), Attitude towards Inclusion of Students with

Autism Spectrum Disorders (ATT), Awareness of Practices to Include Students with Autism

Spectrum Disorders (AWARE), and Use of Practices (USE)

Entire Sample (N = 183)

	DIS	EXP	KNOW	ATT	AWARE
EXP	.02	---	---	---	---
KNOW	-.08	.56**	---	---	---
ATT	-.10	.34**	.33**	---	---
AWARE	-.05	.58**	.66**	.41**	---
USE	.03	.52**	.47**	.30**	.74**

Note. ** *p* < .01 (two-tailed); lower DIS scores suggest a perception of less disruptiveness.

Administrators (n = 35)

	DIS	EXP	KNOW	ATT	AWARE
EXP	-.30	---	---	---	---
KNOW	-.12	.45**	---	---	---
ATT	-.12	.29	.02	---	---
AWARE	-.28	.43*	.33	.19	---
USE	-.31	.44**	.30	.31	.76**

Note. * *p* < .05 (two-tailed); ** *p* < .01 (two-tailed); lower DIS scores suggest a perception of less

disruptiveness.

Table 2.2 (con't).

Correlations between Total Scores for Disruptive Behaviors (DIS), Autism Experience (EXP),

Knowledge of Autism Spectrum Disorders (KNOW), Attitude towards Inclusion of Students with

Autism Spectrum Disorders (ATT), Awareness of Practices to Include Students with Autism

Spectrum Disorders (AWARE), and Use of Practices (USE)

General Education Teachers (n = 49)

	DIS	EXP	KNOW	ATT	AWARE
EXP	.03	---	---	---	---
KNOW	-.13	.40**	---	---	---
ATT	-.25	.14	.49**	---	---
AWARE	-.05	.24	.58**	.53**	---
USE	-.02	.29*	.41**	.43**	.77**

Note. * *p* < .05 (two-tailed); ** *p* < .01 (two-tailed); lower DIS scores suggest a perception of less

disruptiveness.

Special Education Teachers (n = 68)

	DIS	EXP	KNOW	ATT	AWARE
EXP	.14	---	---	---	---
KNOW	-.12	.38**	---	---	---
ATT	-.04	.21	.17	---	---
AWARE	-.05	.53**	.69**	.29*	---
USE	.16	.44**	.51**	.17	.74**

Note. * *p* < .05 (two-tailed); ** *p* < .01 (two-tailed); lower DIS scores suggest a perception of less

disruptiveness.

Table 2.2 (con't).

Correlations between Total Scores for Disruptive Behaviors (DIS), Autism Experience (EXP),

Knowledge of Autism Spectrum Disorders (KNOW), Attitude towards Inclusion of Students with

Autism Spectrum Disorders (ATT), Awareness of Practices to Include Students with Autism

Spectrum Disorders (AWARE), and Use of Practices (USE)

School Psychologists (n = 31)

	DIS	EXP	KNOW	ATT	AWARE
EXP	-.12	---	---	---	---
KNOW	-.43*	.40*	---	---	---
ATT	-.21	.07	-.01	---	---
AWARE	-.11	.16	.29	-.02	---
USE	-.02	.21	.03	-.21	.52**

Note. * *p* < .05 (two-tailed); ** *p* < .01 (two-tailed); lower DIS scores suggest a perception of less

disruptiveness.

experience related to more correct responses to Knowledge items, more positive attitudes, reported awareness of more strategies, and reported use of more effective strategies. All relationships between experience, knowledge, attitudes, awareness of strategies and use of strategies were significant at the .01 level.

Additional analyses were conducted to determine if these relationships differed by educator type, and these results are presented in Table 2.2. Differences in correlations were tested across educator groups with family-wise error corrections, and no statistically significant differences were noted. However, interesting trends emerged. The most striking finding was that attitudes were weakly correlated with the other constructs for administrators, special education teachers and school psychologists, whereas for general education teachers, attitudes towards inclusion for students with ASD were moderately correlated with knowledge, awareness and use of strategies but not experience. In addition, for school psychologists only three constructs were significantly related: disruptive behaviors and knowledge ($r = -.43$, p < .05) experience and knowledge ($r = .40$, $p < .05$) and awareness and use of strategies ($r = .52$, $p < .01$).

A multiple regression analysis, in which total scores for Disruptive Behaviors, Experience, Knowledge, and Attitudes (independent variables) were hypothesized to predict Awareness of Practice (dependent variable), suggests that experience, knowledge and attitudes each are significant predictors, accounting for 53% of the total variance. Knowledge alone accounted for 43% of the variance, $b = .66$, $p < .001$. Due to the group differences shown in the original correlation analysis, independent regression analyses were conducted for each educator group. For administrators, experience was the only salient predictor of awareness of practice, accounting for 17% of the variance, $b = .41$, $p = .012$. For general education teachers, knowledge and attitudes significantly predicted awareness of practice, accounting for 42% of the variance; knowledge alone accounted for 33% of the variance, $b = .58$, $p < .001$ For special education teachers, knowledge and experience significantly predicted awareness of practice, accounting for 56% of the variance; knowledge alone accounted for 47% of the variance, $b =$

.69, $p < .001$. Interestingly, there were no significant predictors of awareness of practice within the school psychologist group.

A second multiple regression analysis, in which total scores for Disruptive Behaviors, Experience, Knowledge, and Attitudes (independent variables) were hypothesized to predict Use of Practice (dependent variable). This analysis suggests that Experience and Knowledge were significant predictors, accounting for 31% of the variance; experience alone accounted for 27% of the variance, $b = .52$, $p < .001$. As with awareness of practice as an outcome variable, these analyses were conducted separately for each educator group, producing varied results. For administrators, experience was the only salient predictor of use of strategies, accounting for 21% of the variance, $b = .46$, $p = .005$. For general education teachers, attitudes were the only salient predictor of use of strategies, accounting for 18% of the variance, $b = .42$, $p = .002$. For special education teachers, knowledge and experience significantly predicted awareness of practice, accounting for 30% of the variance; knowledge alone accounted for 23% of the variance, $b = .48$, $p < .001$. Interestingly, there were no significant predictors of awareness of practice within the school psychologist group.

Group Differences in Knowledge, Awareness, and Attitudes

Total scores for Autism Experience, Knowledge of ASD, Attitude towards Inclusion of students with ASD, Awareness of Strategies for Inclusion of students with ASD, and Use of Strategies are reported in Table 2.3. Tukey Kramer's test was used in post-hoc analyses to account for unequal group sizes. No significant group differences were found for disruptive behavior total scores, $F(3,184) = .55$, *n.s.*

For the Knowledge Total Score, general education teachers ($M = 5.7$, $n = 53$) and administrators ($M = 5.5$, $n = 39$) achieved scores which were significantly lower ($F(3,191) = 25.3$, p<.001) than both special education teachers ($M = 8.2$, $n = 70$) and school psychologists ($M = 10.8$, $n = 33$); however, the scores of general education teachers and administrators did not differ significantly from each other. School psychologists' knowledge of autism was

Table 2.3

Total Scores for Autism Experience (EXP), Knowledge of Autism Spectrum Disorders (KNOW),

Attitude towards Inclusion of Students with Autism Spectrum Disorders (ATT), Awareness of

Practices to Include Students with Autism Spectrum Disorders (AWARE), and Use of Practices

(USE)

| | Total Scores | | | | |
	EXP	KNOW	ATT	AWARE	USE
Administrators (*n*=39)	0.64 (.7)	5.51 (3.5)	39.90 (4.7)	17.32 (6.2)	6.13 (4.2)
General Education Teachers (*n*=53)	.91 (1.0)	5.70 (3.7)	38.86 (4.8)	16.02 (6.3)	3.43 (4.1)
Special Education Teachers (*n*=71)	2.59 (1.2)	8.21 (2.8)	42.16 (3.6)	23.46 (5.5)	10.06 (6.7)
School Psychologists (*n*=33)	2.55 (.8)	10.79 (1.7)	41.55 (3.3)	26.42 (5.9)	9.94 (6.4)
Total Sample[a] (*N*=196)	1.74 (1.3)	7.43 (3.6)	40.72 (4.4)	20.77 (7.2)	7.47 (6.3)

Note. Data is presented as mean (standard deviation); [a] Group differences found for all five total

scores, *p* < .001

significantly greater than special education teachers ($p = .001$). For the Awareness of Strategies Total Score, general education teachers ($M = 16.0$, $n = 52$) and administrators ($M = 17.3$, $n = 37$) reporting having heard of significantly fewer strategies, $F(3,188) = 30.0$, $p < .001$, relating to autism inclusion than both special education teachers ($M = 23.5$, $n = 70$) and school psychologists ($M = 26.4$, $n = 33$).

Additional analyses revealed important findings regarding educators' knowledge of autism. In a pattern similar to the Knowledge Total Score, general education teachers ($M = 6.8$, $n = 53$) and administrators ($M = 7.2$, $n = 39$) selected "Don't Know" responses significantly more frequently than either special education teachers ($M = 3.6$, $n = 70$) or school psychologists ($M = 1.5$, $n = 33$), $F(3,191) = 19.4$, $p < .001$. On average, the total sample selected "Don't Know" to five items, and with "Don't Know" responses accounted for in the Percent Correct Score, participants answered 69% of the items correctly, again with significant group differences, $F(3,191) = 7.9$, $p < .001$. Table 2.4 presents summary data for correct responses and "Don't Know" responses for each Knowledge item.

Nearly all participants ($n = 178$, 92%) reported positive attitudes towards autism inclusion as measured by the Attitudes towards Inclusion of students with ASD Total Score (i.e., scores 35 and above); the remaining participants reported attitudes which were neither positive nor negative (i.e., scores between 22 and 34). However, while the sample in general viewed inclusive education for students with ASD favorably, group differences were observed, $F(3,185) = 7.0$, $p < .001$. Special education teachers' attitudes ($M = 42.2$, $n = 69$) were significantly more positive than either administrators ($M = 39.9$, $n = 39$) or general education teachers ($M = 38.9$, $n = 50$). On the other hand, while school psychologists' ($M = 41.6$, $n = 31$) and special education teachers' attitudes did not differ significantly, school psychologists' attitudes were significantly more favorable than general education teachers but not administrators. No differences were found between the attitudes of general education teachers and administrators.

Table 2.4

Descriptive Results for Educators' Performance on the Knowledge of ASD items (n = 195)

Knowledge of ASD Items	% correct	% don't know
Symptoms and Diagnosis		
The diagnostic criteria for Asperger's syndrome are identical to high-functioning autism.	29.7	53.8
ASDs are developmental disorders.	39.5	37.9
ASDs only exist in childhood.	77.9	20.5
Children with ASDs are very similar to one another.	63.6	27.2
Most children with ASDs have cognitive abilities in the intellectually disabled range.	17.4	32.3
Most children with ASDs have special talents of abilities.	19.5	26.7
The core deficits in ASDs are Impaired Social Understanding, Language Abnormalities, and Impaired Sensory Functioning.	2.6	26.7
Treatment and Intervention		
Behavior therapy is an intervention most likely to be effective for children with ASDs.	56.9	37.4
Early intervention demonstrates no additional benefit to children with an ASD.	76.9	20.0
If an intervention works for one child with an ASD, it will definitely work for another child with an ASD.	88.7	11.3
Medication can alleviate the core symptoms of ASDs.	46.2	44.6
With proper intervention, most children with an ASD will eventually "outgrow" the disorder.	70.3	27.7
Etiology		
Genetic factors play an important role in the causes of ASDs.	43.6	43.1
In many cases, the cause of ASDs is unknown.	71.3	26.2
Traumatic experience very early in life can cause an ASD.	39.5	53.8

Two additional results relating to educator attitudes should be noted. First, of 11 potential factors, participants were in the strongest agreement that the attitude of the staff was important for successful inclusion. No educator group differences were found for this item, $F(3,191) = .65$, *n.s.* Second, while marginal group differences were found, $F(3,191) = 2.9$, $p = .04$, such that special education teachers were more in agreement with the statement "All students with an ASD should be included in general education settings" than general education teachers, the majority of participants felt neutral towards this statement ($M = 4.3$, $n = 195$).

A mixed model analysis of variance was conducted to determine if educator groups rated potentially disruptive behaviors differentially and if particular behaviors would emerge as more disruptive than others. Using a Huynh-Feldt correction for violation of the sphericity assumption, the within-subjects analysis suggests a main effect for disruptive behaviors, $F(14.39,2646.92) = 149.0$, $p < .001$. Controlling for family-wise error rates, the level of disruptiveness of specific behaviors was not rated differentially by educator groups. The mean ratings for each behavior and the percent of participants who rated the behavior as "highly disruptive" are presented in Table 2.5. Screaming ($M = 4.6$) and aggression to others ($M = 4.5$) emerged as two of the most disruptive behaviors.

DISCUSSION

A great deal of prior research has explored the assessment of teacher attitudes, both towards particular students with special education needs and towards the practice of inclusive education for such students (Avramidis & Norwich, 2002). Only recently, however, have studies specifically investigated these attitudes as they apply to students with ASD (Horrocks, White, & Roberts, 2008; McGregor & Campbell, 2001; Segall, 2007). Furthermore, there are a number of constructs related to attitudes, such as knowledge, experience, and training, which have not been fully explored in the literature in the realm of education for students with ASD. The purpose of the current study, then, was to illuminate the current levels of these variables and describe a sample of education professionals (i.e., administrators, general education teachers,

Table 2.5

Educators' Ratings of Behaviors associated with Autism Spectrum Disorders

Disruptive behaviors	Mean[a]	% Highly Disruptive
Screaming, crying, or tantruming	4.55	71.4
Aggression (to peers or adults)	4.48	67.9
Non-compliance to teacher authority	4.19	44.9
High levels of activity	3.65	27.0
Inappropriate emotionality	3.61	21.4
Preoccupation with touching, smelling, or tasting objects/people	3.51	4.6
Off-task behavior	3.41	12.2
Repetitive, bizarre, or echolalic speech	3.41	19.9
Resistance and negative reaction to changes in the schedule	3.25	11.7
Rudeness in making requests	3.21	8.7
Problems with non-verbal behavior	3.02	10.2
Sensitivity to sounds	3.00	5.1
Strange or unusual body movements	2.97	10.7
Fear of harmless objects	2.81	7.1
Preoccupation with one particular object or toy	2.75	4.6
Poor peer relations	2.63	2.6
Aloofness of lack of awareness of what the teacher is doing	2.51	2.6
Difficulty in reciprocal conversation	2.39	3.1
Lack of peer relations	2.10	1.5
Eye contact avoidance	1.55	0.0

Note. n = 188; [a] = Higher scores imply the behavior is more disruptive

special education teachers, and school psychologists) who completed a measure assessing teacher experience and training, knowledge of autism, and attitudes towards inclusive education for students with ASD. In addition, these education professionals responded to items describing their awareness and use of an extensive list of practices and strategies to promote inclusive education for students with ASD.

Overall, the sample reported favorable attitudes towards the practice of inclusive education for students with ASD, which is consistent with previous research on the practice of inclusion in general (Avramidis & Norwich, 2002). However, this sample varied on their attitudes and a number of other related constructs such as experience and training, knowledge of ASD, and awareness and use of practice options. Specifically, general education teachers reported the least positive attitudes; although their opinions generally favored inclusion, their ratings were less strong than special education teachers or school psychologists. This finding is consistent with previous research on educator attitudes related to autism (McGregor & Campbell, 2001). As a whole, the participants felt neutral that all students with ASD should be included in general education settings and felt strongly that the attitude of the staff was an important factor in the successful inclusion of a student with ASD.

Differences were observed on assessments of knowledge, awareness of practice, and use of strategies. In particular, school psychologists and special education teachers reported higher levels of each of these constructs as compared to general education teachers and administrators. This suggests a significant need for adaptations in educator training modules, as administrators, special education teachers, general education teachers, and school psychologists are all charged with effectively implementing the individualized education plans for students with ASD who are educated alongside their typically developing peers.

The constructs measured on the AIQ were all related in the direction to suggest increased experience and training relates to more favorable attitudes and more favorable implementation of empirically supported practices. That is, participants with higher levels of

experience, knowledge, and awareness of practice options also reported more positive attitudes towards inclusive education and more experience in using empirically validated treatments as outlined by Simpson and colleagues (2005). While the causal relationship between these variables must be explored in greater depth, regression analyses suggest that knowledge of autism is a strong predictor of awareness of practice and experience in the area of autism is a strong predictor of the use of empirically supported interventions.

However, it is significant that when the responses of educator groups were analyzed separately, interesting patterns emerged. Specifically, whereas knowledge constructs, experience and attitudes were all significantly positively correlated in the combined sample, these relationships were weakened at the group level. For example, only for general education teachers were the relationships between attitudes and knowledge, awareness of practice and use of strategies significant. Also, for school psychologists, the relationships between behaviors and experience, experience and knowledge, and awareness and use of strategies were significant, but no other correlations were statistically significant. Similarly, correlation patterns amongst these constructs were different for special education teachers and administrators. One possible interpretation is that the nature of the roles of these education professionals differs in ways that alter the nature of the relationships of these variables. Thus, it may be that for general education teachers, who may receive professional training geared towards educating typically developing students, one's attitude toward inclusive education is a more salient factor than for a special education teacher, in which case knowledge of autism may be more relevant.

Results in the current study suggest this may be the case. When awareness of practice and use of empirically supported interventions were viewed as outcome measures, each educator group demonstrated a different relationship among the variables. For example, in the administrator group, experience was predictive of awareness and use of practice, whereas in the general education group, attitudes were the strongest predictors of these constructs.

Regarding the relationship of the current study to educator training modules, it is also important to highlight that the current study suggests that education professionals demonstrated a lack of knowledge and endorsed misconceived beliefs. For example, general education teachers and administrators responded that they did not know the answer to about 7 out of 15 items assessing current knowledge of autism. Moreover, on average, participants reporting having heard of just 21 out of 37 possible strategies to support inclusive education for students with ASD. With "Don't Know" responses on the knowledge section accounted for, participants on average responded correctly to approximately 70% of the items, suggesting a large number of misconceptions.

Other researchers have found that education professionals endorse a variety of misconceptions about autism, particularly in terms of etiology (Brubaker, Bundy, Winslow, & Belcher, 2010; Schwartz, & Drager, 2008; Stone, 1987). Several of these misconceptions may be worth noting as they provide some commentary on the distinctions between the field of education and other related disciplines. For example, over 70% of respondents reported that the core deficits of ASDs are impairments in social understanding, language and communication, and sensory functioning. While psychiatric diagnosis does not consider sensory abnormalities to be a core deficit of ASD, sensory abnormalities are taken into consideration in terms of assessment for special education eligibility. In addition, about half of the participants in the current study reported beliefs that most children with ASDs are not cognitively impaired and have special talents and abilities. While current studies suggest that the proportions of individuals with both ASD and cognitive impairment are changing (Edelson, 2006), there is not yet consensus that the majority of persons with ASD fall above the cognitive impairment classification. In addition, it is unclear whether the endorsement that the majority of children with ASD have special talents and abilities reflects a strongly held belief of optimism or a misconception that many individuals with ASD are also savants. A conservative conclusion of

these findings is that additional training would be advantageous to clarify education professionals' understanding of these issues.

Content validity for the Knowledge scale was evaluated in two primary ways. First, knowledge items were derived from both previous studies assessing knowledge of ASD and are largely based on the DSM-IV-TR (APA, 2000) description of pervasive developmental disorders. Second, an initial item tryout suggested that researchers and experts in the field of ASD responded with high accuracy to knowledge items. Thus, efforts were made to create a knowledge measure which could accurately assess one's knowledge of ASD in terms of symptoms and diagnosis, treatment and intervention, and etiology, and the measure appears to be internally reliable (α = .83 in the present study).

Implications

There are several important implications based on the results of the current study. In chief, the relationship between experience, knowledge, and attitudes is a complex one and may differ for various educator groups. For example, while lower levels of knowledge were reported by general education teachers and administrators, as compared to special education teachers or school psychologists, knowledge was a salient predictor of awareness of practice for general and special education teachers but not for administrators or school psychologists. Therefore, in order to maximize the effectiveness of training module reform, the importance of these variables should be taken into account across training programs. In other words, general education teachers may best be prepared to work with students with ASD by infusing additional coursework expanding their knowledge of autism and addressing their opinions about inclusive education for these students; on the other hand, increasing the experience of administrators, in terms of working with students with ASD, may have a more direct effect on their awareness of strategies to support these students. However, within the broad sample of all educator participants in this study, experience, knowledge, attitudes were all interrelated, suggesting that

the targeting of one construct from a training module perspective may indeed have an effect on other constructs.

Given the higher levels of knowledge, experience and attitudes reported, both school psychologists and special education teachers would likely be effective trainers of education professionals and consultants regarding inclusive education (Brubaker et al., 2010; Williams, Johnson, & Sukhodolsky, 2005). Teacher training and personnel preparation are clearly needed in the area of autism spectrum disorders (Addison, & Lerman, 2009; Morrier, Hess, & Heflin, 2011). High levels of favorable attitudes towards inclusive education for students with ASD in the current sample suggest that the challenge of inclusion may more strongly relate to training models rather than to resistance; although this suggestion may not be true for school psychologists (Brubaker et al.). Further study of this hypothesis should be explored more fully as knowledge alone does not fully predict behavior (Kennedy et al., 2004).

Limitations and Future Directions

One important limitation of the current study is that while the overall sample is larger than the previous study using the AIQ (Segall, 2007), educator group (e.g., administrators, school psychologists) samples were relatively small. Future investigations should increase the sample sizes of educator groups in exploring the replication of these findings. Similarly, samples of additional populations, such as paraprofessionals, student teachers, and parents, should be examined.

Generalization of the current findings is also limited by the regional nature of the sample. Education professionals in this study may not represent all educators in the United States or in other countries. Further, while the response rate of the current study is acceptable, it is plausible that a response bias exists such that education professionals who lack interest in education of students with ASD or have negative beliefs about inclusive education for these students did not participate in the study.

It cannot be understated that the responses on a questionnaire such as the AIQ cannot measure behavior; without observational data to document teacher behavior and practice, the findings of the present study represent only an estimate of teachers' training, experience and beliefs. That is, educator report of awareness of practice and use of strategies may not reflect precise understanding and implementation of these interventions and practices. In addition, it is possible that the AIQ may not fully capture all aspects of training, experience and educator beliefs. Future investigations in the area of successful inclusion for students with ASD should incorporate observational data along with measurement of constructs assessed by the AIQ in order to portray the most accurate picture of inclusion for students with ASD. Further, it is important to recognize that the autism spectrum is quite broad and the AIQ lacks specificity in referencing varying profiles of students with ASD. Indeed, analysis of the potentially disruptive behaviors associated with ASD suggests that educators perceive a number of these as "highly disruptive" (e.g., aggression to others). It is quite likely that opinions about inclusive education and the implementation of this practice may be different for students with various profiles along the autism spectrum.

It is interesting that the initial study using the AIQ (Segall, 2007) did not find a significant correlation between attitudes towards inclusion and awareness and use of practice. However, as the direction of the relationship between these constructs was consistent, it is possible that the increased sample size in the present study illuminated the significant strength of these relationships. On the other hand, this disparity in results may relate to the lower levels of internal consistency for the attitudes scale as compared to the other scales generated by the AIQ; that is, it is possible that items on the AIQ are not effectively measuring attitudes towards inclusive education.

Further support for this explanation is found in the high levels of positive attitudes reported by participants. Indeed, 92% of the sample reported attitudes to suggest favorable opinions about inclusive education for students with ASD; no participant reported unfavorable

opinions. Accordingly, the lack of variability in response to statements about inclusion for students with ASD may either suggest that education professionals are uniformly in favor of the practice of inclusion or that the AIQ does not effectively measure this construct. Future study measuring the attitudes of education professionals towards ASD appears warranted. In particular, measurement of constructs such as affective, conative and cognitive attitudes towards inclusion (Hannah & Pilner, 1983), self-efficacy (Ajzen, 2001) would capture educator beliefs more fully. Specifically regarding the conative attitudes, or behavioral intentions, of an educator, teacher resistance to change and intervention acceptability should be explored.

Alternatively, constructs such as experience and knowledge demonstrated adequate levels of internal consistency on the AIQ, and these constructs significantly predicted outcomes such as awareness of strategies and use of effective strategies with empirical support. Specifically, knowledge was most predictive of the number of inclusion practices of which education professionals were aware; experience was most predictive of education professionals reported use of treatments categorized by Simpson and colleagues (2005).

Accordingly, the AIQ represents a potential assessment tool for evaluating educator quality and expertise in the area of ASD. Students with ASD will likely benefit from placement with education professionals who are experienced, are knowledgeable, and report favorable attitudes about a particular student's placement and potential. Administrators and other educators in leadership positions may benefit from the use of an instrument which can validly assess these constructs. The creation and validation of such tools would be an important area for both research and practice.

REFERENCES

Adcock, J., & Cuvo, A.J. (2009). Enhancing learning for children with autism spectrum
disorders in regular education by instructional modifications. *Research in Autism Spectrum Disorders, 3*, 319-328.

Addison, L., & Lerman, D. (2009). Descriptive analysis of teachers' responses to problem behavior following training. *Journal of Applied Behavior Analysis, 42*, 485-490.

Ajzen, I. (2001). Nature and operation of attitudes. *Annual Review of Psychology, 52,* 27-58.

Alberto, P. A., & Troutman, A. C. (2003). *Applied behavior analysis for teachers* (6th ed.). Upper Saddle River, NJ: Prentice-Hall.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed. – Text revision). Washington, DC: Author.

Andrews, L. W., & Gutkin, T. B. (1994). Influencing attitudes regarding special class placement using a psychoeducational report: An investigation of the elaboration likelihood model. *Journal of School Psychology, 32*, 321-337.

Avramidis, E., Bayliss, P., & Burden, R. (2000a). A survey into mainstream teachers' attitudes towards the inclusion of children with special educational needs in the ordinary school in one local education authority. *Educational Psychology, 20*, 191-211.

Avramidis, E., Bayliss, P., & Burden, R. (2000b). Student teachers' attitudes towards the inclusion of children with special education needs in the ordinary school. *Teaching and Teacher Education, 16*, 277-293.

Avramidis, E., & Norwich, B. (2002). Teachers' attitudes towards integration/inclusion: A review of the literature. *European Journal of Special Needs Education, 17*, 129-147.

Barnett, C., & Monda-Amaya, L. E. (1998). Principal's knowledge of and attitudes toward inclusion. *Remedial and Special Education, 19*, 181-192.

Boutot, E. A., & Bryant, D. P. (2005). Social integration of students with autism in inclusive settings. *Education and Training in Developmental Disabilities, 40*, 14-23.

Brubaker, R., Bundy, M.B., Winslow, M.P., & Belcher, K. (2010). School psychologists' beliefs about autism: Impact on classroom intervention acceptability. *Journal of the Trainer's of School Psychologists, 29,* 51-64.

Buell, M., Hallam, R., Gamel-McCormick, M., & Scheer, S. (1999). A survey of general and special education teachers' perceptions and in-service needs concerning inclusion. *International Journal of Disability, Development, and Education, 46,* 143-156.

Burack, J. A., Root, R., & Zigler, E. (1997). Inclusive education for students with autism: Reviewing ideological, empirical, and community considerations. In D. J. Cohen & F. R. Volkmar (Eds.), *Handbook of autism and pervasive developmental disorders* (2nd ed., pp. 796-807). New York: Wiley and Sons.

Campbell, J. M, Ferguson, J. E., Herzinger, C. V., Jackson, J. N., & Marino, C. (2004). Combined descriptive and explanatory information improves peers' perceptions of autism. *Research in Developmental Disabilities, 25*, 321-339.

Cascella, P. W., & Colella, C. S. (2004). Knowledge of autism spectrum disorders among Connecticut school speech-language pathologists. *Focus on Autism and Other Developmental Disabilities, 19*, 245-252.

Center, Y., & Ward, J. (1987). Teachers' attitudes towards the integration of disabled children into regular schools. *Exceptional Child, 34,* 41-56.

Center, Y., & Ward, J. (1989). Attitudes of school psychologists towards the integration of children with disabilities. *International Journal of Disability, 36*, 117-132.

Center, Y., Ward, J., Parmenter, T., & Nash, R. (1985). Principals' attitudes towards the intergration of disabled children into regular schools. *Exceptional Child, 32,* 149-160.

Chafouleas, S.M., Riley-Tillman, T.C., & Sassu, K.A. (2006). Acceptability and reported use of daily behavior report cards among teachers. *Journal of Positive Behavioral Interventions, 8*, 174-182.

Chamberlain, B., Kasari, C., & Rotheram-Fuller, E. (2007). Involvement or isolation? The social networks of children with autism in regular classrooms. *Journal of Autism and Developmental Disorders, 37*, 230-232.

Coates, R. D. (1989). The regular education initiative and opinions of regular classroom teachers. *Journal of Learning Disabilities, 22*, 532-536.

Cook, B. G. (2001). A comparison of teachers' attitudes towards their included students with mild and severe disabilities. *Journal of Special Education, 34*, 203-213.

Cook, B. G., Semmel, M. I., & Gerber, M. M. (1999). Attitudes of principals and special education teachers toward inclusion: Critical differences of opinion. *Remedial and Special Education, 20*, 199-207, 256.

Cook, B. G., Tankersley, M., Cook, L., & Landrum, T. J. (2000). Teachers' attitudes toward their included students with diabilities. *Exceptional Children, 67*, 115-135.

Corrigan, P. W., River, L. P., Lundin, R. K., Penn, D. L., et al. (2001). Three strategies for changing attributions about severe mental illness. *Schizophrenia Bulletin, 27*, 187-195.

Dahle, K. B. (2003). Services to include young children with autism in the general classroom. *Early Childhood Special Education, 31*, 65-70.

Dunlap, G., & Johnson, J. (1985). Increasing independent responding of autistic children with unpredictable supervision. *Journal of Applied Behavior Analysis, 18*, 227-236.

Eaves, L. C., & Ho, H. H. (1997). School placement and academic achievement in children with autistic spectrum disorders. *Journal of Developmental and Physical Disabilities, 9*, 277-291.

Edelson, M.G. (2006). Are the majority of children with autism mentally retarded? A systematic evaluation of the data. *Focus on Autism and Other Developmental Disabilities, 21*, 66-83.

Fisher, D., Frey, N., & Thousand, J. (2003). What do special educators need to know and be prepared to do for inclusive schooling to work? *Teacher Education and Special Education, 26*, 42-50.

Forlin, C. (1995). Educators' beliefs about inclusive practices in Western Australia. *British Journal of Special Education, 22,* 179-185.

Furnham, A., & Buck, C. (2003). A comparison of lay-beliefs about autism and obsessive-compulsive disorder. *International Journal of Social Psychiatry, 49*, 287-307.

Griffin, H. C., Griffin, L. W., Fitch, C. W., Albera, V., & Gingras, H. (2006). Educational interventions for individuals with Asperger syndrome. *Intervention in School and Clinic, 41*, 150-155.

Gutstein, S. E., & Whitney, T. (2002). Asperger syndrome and the development of social competence. *Focus on Autism and Other Developmental Disabilities, 17*, 161-171.

Hannah, M. E., & Pilner, S. (1983). Teacher attitudes toward handicapped children: A review and synthesis. *School Psychology Review, 12*, 12-25.

Harasymiw, S. J., & Horne, M. D. (1974). Integration of handicapped children: Its effect on teacher attitudes. *Education, 96*, 153-158.

Harrower, J. K., & Dunlap, G. (2001). Including children with autism in general education classrooms: A review of effective strategies. *Behavior Modification, 25*, 762-784.

Hastings, R. P., & Brown, T. (2002). Behavioural knowledge, causal beliefs and self-efficacy as predictors of special educators' emotional reactions to challenging behaviors. *Journal of Intellectual Disability Research, 46*, 144-150.

Hastings, R. P., & Oakford, S. (2003). Student teachers' attitudes towards the inclusion of the children with special needs. *Educational Psychology, 23*, 87-94.

Hendren, R.L. (2003). Contributions of the psychiatrist. In S. Ozonoff, S. J. Rogers, & R. L. Hendren (Eds.), *Autism spectrum disorders: A research review for practitioners* (pp. 37-53). Washington, DC: American Psychiatric Publishing, Inc.

Herzinger, C.V., & Campbell, J.M. (2007). Comparing functional assessment methodologies: A

   quantitative synthesis. *Journal of Autism and Developmental Disorders, 37*, 1430-1445.

Horrocks, J.L., White, G., & Roberts, L. (2008). Principals' attitudes regarding inclusion of

   children with autism in Pennsylvania public schools. *Journal of Autism and*

   Developmental Disorders, 38, 1462-1473.

Individuals with Disabilities Education Improvement Act of 2004, 20 U.S.C. § 1400 *et seq.*

   (2004) (reauthorization of the Individuals with Disabilities Act of 1990).

Ivey, J. K. (2007). Outcomes for students with autism spectrum disorders: What is important

   and likely according to teachers? *Education and Training in Developmental Disabilities,*

   42, 3-13.

Johnson, A. B., & Cartwright, C. A. (1979). The roles of information and experience in

   improving teachers' knowledge and attitudes about mainstreaming. *The Journal of*

   Special Education, 13, 453-461.

Jordan, R. (2005). Managing autism and Asperger's syndrome in current educational provision.

   Pediatric Rehabilitation, 8, 104-112.

Knoff, H. M. (1985). Attitudes toward mainstreaming: A status report and comparison of regular

   and special educators in New York and Massachusetts. *Psychology in the Schools, 22*,

   411-418.

Koegel, L. K., Koegel, R. L., Frea, W. D., & Freeden, R. M. (2001). Identifying early intervention

   targets for children with autism in inclusive school settings. *Behavior Modification, 25*,

   745-761.

Koegel, L.K., & LaZebnik, C. (2004). *Overcoming Autism: Finding the Answers, Strategies, and*

   Hope That Can Transform a Child's Life. New York, NY: Penguin Group.

McGregor, E., & Campbell, E. (2001). The attitudes of teachers in Scotland to the integration of

   children with autism into mainstream schools. *Autism, 5*, 189-207.

Mesibov, G., & Shea, P. (1996). Full inclusion and students with autism. *Journal of Autism and Developmental Disorders, 26*, 337-346.

Morrier, M.J., Hess, K.L., & Heflin, L.J. (2011). Teacher training for implementation of teacher strategies for students with autism spectrum disorders. *Teacher Education and Special Education, 34*, 119-132.

Myles, B. S., & Simpson, R. L. (1989). Regular educators' modification preferences for mainstreaming mildly handicapped children. *Journal of Special Education, 22*, 479-491.

National Research Council. (2001). *Educating children with autism.* Committee on Educational Interventions for Children with Autism, Division of Behavioral and Social Sciences and Education. Washington, DC: National Academy Press.

Ochs, E., Kremer-Sadlik, T., Solomon, O., & Sirota, K. G. (2001). Inclusion as social practice: Views of children with autism. *Social Development, 10*, 399-419.

Odom, S. L., & Watts, E. (1991). Reducing teacher prompts in peer-mediated interventions for young children with autism. *The Journal of Special Education*, *25*, 26-43.

Pierce, K., & Schriebman, L. (1995). Increasing complex social behaviors in children with autism: Effects of peer-implemented pivotal response training. *Journal of Applied Behavior Analysis*, *28*, 285-295.

Pierce, K., & Schreibman, L. (1997). Multiple peer use of pivotal response training to increase social behaviors of classmates with autism: Results from trained and untrained peers. *Journal of Applied Behavior Analysis, 30*, 157-160.

Praisner, C. L. (2003). Attitudes of elementary school principals toward the inclusion of students with disabilities. *Exceptional Children, 69*, 135-145.

Robertson, K., Chamberlain, B., & Kasari, C. (2003). General education teachers' relationships with included students with autism. *Journal of Autism and Developmental Disorders, 33*, 123-130.

Rogers, S. (2000). Interventions that facilitate socialization in children with autism. *Journal of Autism and Developmental Disabilities, 30*, 399-409.

Safran, J. S. (2002). Supporting students with Asperger's syndrome in general education. *Teaching Exceptional Children, 34*, 60-66.

Safran, J. S., & Safran, S. P. (2001). School-based consultation for Asperger syndrome. *Journal of Educational and Psychological Consultation, 12*, 385-395.

Schilling, D. L., & Schwartz, I. S. (2004). Alternative seating for young children with autism spectrum disorder: Effects on classroom behavior. *Journal of Autism and Developmental Disorders, 34*, 423-432.

Schopler, E., Reichler, R., & Renner, B. (1988). *The Childhood Autism Rating Scale (CARS).* Los Angeles: Western Psychological Services.

Schwartz, H., & Drager, K.D.R. (2008). Training and knowledge in autism among speech-language pathologists: A survey. *Language, Speech, and Hearing Services in Schools, 39*, 66-77.

Scruggs, T. E., & Mastropieri, M. A. (1996). Teacher perceptions of mainstreaming/inclusion, 1958-1995: A research synthesis. *Exceptional Children, 63*, 59-74.

Segall, M. J., & Campbell, J. M. (2007). *Autism Inclusion Questionnaire.* Unpublished measure, University of Georgia, Athens, Georgia.

Segall, M. J. (2007). *Inclusion of students with autism spectrum disorder: Educator experience, knowledge, and attitudes.* Unpublished master's thesis, University of Georgia, Athens, Georgia.

Semmel, M. I., Abernathy, T. V., Butera, G., & Lesar, S. (1991). Teacher perceptions of the regular education initiative. *Exceptional Children, 58*, 9-24.

Shah, K. (2001). What do medical students know about autism? *Autism, 5,* 127-133.

Simpson, R. L., de Boer-Ott, S.R., Griswold, D.E., Myles, B.S., Byrd, S.E., Ganz, J.B., et al.
(2005). *Autism Spectrum Disorders: Interventions and Treatments for Children and
Youth.* Thousand Oaks, CA: Corwin Press.

Simpson, R. L., Myles, B. S., Sasso, G. M., & Kamps, D. M. (1997). *Social skills for students
with autism* (2nd ed.). Reston, VA: The Council for Exceptional Children.

Soodak, L. C., Podell, D. M., & Lehman, L. R. (1998). Teacher, student and school attributes as
predictors of teachers' responses to inclusion. *Journal of Special Education, 31*, 480-
497.

Stahmer, A. C., & Schreibman, L. (1992). Teaching children with autism appropriate play in
unsupervised environments using a self-management treatment package. *Journal of
Applied Behavior Analysis, 25*, 447-459.

Stanovich, P. J., & Jordan, A. (1998). Canadian teachers' and principals' beliefs about inclusive
education as predictors of effective teaching in heterogeneous classrooms. *Elementary
School Journal, 98*, 221-238.

Stoiber, K.C., Gettinger, M., Goetz, D. (1998). Exploring factors influencing parents' and early
childhood practitioners' beliefs about inclusion. *Early Childhood Research Quarterly, 13*,
107-124.

Stone, W. L. (1987). Cross-disciplinary perspectives on autism. *Journal of Pediatric
Psychology, 12*, 615-630.

Stone, W. L., & Rosenbaum, J. L. (1988). A comparison of teacher and parent views of autism.
Journal of Autism and Developmental Disorders, 18, 403-414.

Strain, P. (1983). Generalization of autistic children's social behavior change: Effects of
developmentally integrated and segregated settings. *Analysis and Intervention in
Developmental Disabilities, 3*, 23-34.

Swaim, K. F., & Morgan, S. B. (2001). Children's attitudes and behavioral intentions toward a

    peer with autistic behaviors: Does a brief educational intervention have an effect?

    Journal of Autism and Developmental Disorders, 31, 195-205.

Vaughn, S., Schumm, J. S., Jallad, B., Slusher, J., & Saumell, L. (1996). Teachers' views of

    inclusion. *Learning Disabilities Research and Practice, 11*, 96-106.

Villa, R., Thousand, J., Meyers, H., & Nevin, A. (1996). Teacher and administrator perceptions

    of heterogeneous education. *Exceptional Children, 63*, 29-45.

Ward, J., Center, Y., & Bochner, S. (1994). A question of attitudes: Integrating children with

    disabilities into regular classrooms? *British Journal of Special Education, 21,* 34-39.

Warwick, D. P., & Lininger, C. A. (1975). *The sample survey: Theory and practice.* New York:

    McGraw Hill Book Company.

White, S.W., Scahill, L., Klin, A., Koenig, K., & Volkmar, F.R. (2007). Educational placements

    and service use patterns of individuals with autism spectrum disorders. *Journal of*

    Autism and Developmental Disorders, 37, 1403-1412.

Williams, K. (1995). Understanding the student with Asperger syndrome: Guidelines for

    teachers. *Focus on Autistic Behavior, 10*(2), 9-16.

Williams, S.K., Johnson, C., & Sukhodolsky, D.G. (2005). The role of the school psychologist in

    the inclusive education of school-age children with autism spectrum disorders. *Journal of*

    School Psychology, 43, 117-136.

Williams, R. J., & Algozzine, B. (1979). Teachers' attitudes toward mainstreaming. *The*

    Elementary School Journal, 80(2), 63-67.

Yell, M. L., Drasgow, E., & Lowrey, K. A. (2005). No child left behind and students with autism

    spectrum disorders. *Focus on Autism and Other Developmental Disabilities, 20*, 130-

    139.

Yell, M. L., Katsiyannis, A., Drasgow, E., & Herbst, M. (2003). Developing legally correct and

educationally appropriate programs for students with autism spectrum disorders. *Focus

on Autism and Other Developmental Disabilities, 18*, 182-191.

CHAPTER 3

FACTORS INFLUENCING THE EDUCATIONAL PLACEMENT OF STUDENTS WITH

AUTISM SPECTRUM DISORDERS

Segall, M. J., & Campbell, J. M. To be submitted to *Journal of Autism and Developmental Disorders*

ABSTRACT

Due to legal and therapeutic reasons, children with autism spectrum disorders (ASD) are often educated in general education settings. As such, it is important to understand the variables that might affect a student's placement in inclusive education settings, simultaneously considering student variables (e.g., disability label) and teacher variables (e.g., knowledge of autism). Investigators experimentally manipulated the cognitive ability and diagnostic label of a student with ASD characteristics and asked first grade teachers to provide their opinion on the student's educational placement. Results suggested that cognitive ability, but not label, significantly impacted decision making. The results hold important implications for special education decision making as well as training for educators.

INDEX WORDS: Autism, Placement, Teacher attitudes

INTRODUCTION

For both legal and therapeutic reasons, students with autism spectrum disorders (ASDs) are increasingly educated in general education settings alongside their typically developing peers. Special education law mandates that all children be educated in the least restrictive environment (LRE; Individuals with Disabilities Education Improvement Act {IDEIA}, 2004), implying that children with disabilities should be educated with typical peers and given access to the general curriculum to the extent that harm is not increased and access to learning is not decreased for any student. Litigation involving the education of students with ASD has led experts to recommend that school districts employ a variety of education professionals who have considerable expertise in ASD (Yell, Drasgow, & Lowrey, 2005). Moreover, ASD assessment should lead to thoughtful programming which occurs in inclusive settings to the extent that it is appropriate (Yell, Katsiyannis, Drasgow, & Herbst, 2003). Indeed, there are several important assumed benefits of educating students with ASD in the general education setting, including (a) higher academic expectations, (b) access to peer models of social behavior, (c) improved self-concept and reduced stigma, and (d) development of positive attitudes by typical peers (Mesibov & Shea, 1996).

Many experts in the field of ASD treatment share the view that children with ASD should be included in the general education curriculum to the greatest extent possible (Mastergeorge, Rogers, Corbett, & Solomon, 2003; National Research Council, 2001). However, due to the vast array of services available and the heterogeneity of symptom presentation, LRE environments for students with ASD may best be conceptualized as a continuum of educational placements and services (Mesibov & Shea, 1996). In this way, some students, who need a great deal of support and with certain relevant features (e.g., low cognitive ability), may be educated in more restrictive settings, such as self-contained classrooms, and other students, who may demonstrate higher intelligence or received early intervention (Harris & Handleman, 2000), may be educated in general education settings. It is suggested that this continuum of placements

allows for practice of social or functional skills (Mesibov & Shea), protection against negative perceptions and stigma (Jordan, 2005), and proper services for highly emotional and reactive students (Williams, 1995).

Prior research has investigated the effects of general education placement (as opposed to special class placement) for students with severe disabilities (Carlberg & Kavale, 1980; Buysse & Bailey, 1993) with mixed results. Early meta-analytic work on the benefits of special class placement for students with disabilities (Carlberg & Kavale) suggested that students with disabilities were slightly worse off in special class placement as compared to regular class placement across several outcome measures (e.g., achievement, social outcomes). When outcomes were evaluated differentially by disability type, the authors found that cognitive disabilities were best served in regular education settings, whereas students with learning and behavioral problems had better outcomes in special class placements. A subsequent review by Buysse and Bailey (1993) found that lower aptitude students experienced more desirable outcomes in segregated classroom settings whereas students with stronger cognitive abilities achieved higher gains in the areas of language and cognitive skills in regular classrooms. In addition, social gains were more likely to occur in general education classes (Buysse & Bailey), and other research has supported this finding (Kennedy, Shukla, & Fryxell, 1997).

Some studies have investigated the effects of inclusion for students with ASD. Two studies included in the Buysse and Bailey review reported exclusively on students with ASD: one suggested that language and developmental gains were equivalent in segregated and regular class settings (Harris, Handleman, Kristoff, Bass, & Gordon, 1990); the other suggested that integrated settings yielded improved social interaction outcomes (Strain, 1983).

Boutot and Bryant (2005) reported on 10 students with ASD who were educated in general education classrooms for at least half of their school day. Their analyses suggested that these students were no different than peers on a variety of social status constructs. Other investigators have found that students with ASD in inclusive settings are viewed positively by

both their teachers and their peers (Robertson, Chamberlain, & Kasari, 2003), whereas other studies suggest that attitudes of peers towards a child with ASD is less positive than those towards a typically developing child (Campbell, Ferguson, Herzinger, Jackson, & Marino, 2004; Swaim & Morgan, 2001).

A recent investigation of social networks within classrooms that contained a student with ASD produced a complex picture (Chamberlain, Kasari, & Rotheram-Fuller, 2007). Results suggested that while students with ASD are not isolated from their typically developing peers, the quality of these relationships is not ideal. Indeed, students with ASD do not perceive themselves as lonely or isolated, yet they are rated by their peers as less socially accepted. Ochs and colleagues (2001) have framed the issue in terms of positive and negative inclusion practices, suggesting that some behaviors by peers and teachers promote social inclusion for students with ASD (e.g., patience, disclosure of disability) and other behaviors (e.g., rejection, scorn) contribute to poor social experiences and outcomes.

Soukop, Wehmeyer, Bashinski, and Bovaird (2007) reported on the inclusion experiences of 19 elementary school students with intellectual and developmental disabilities, two of whom had ASD. For the purpose of their analyses, the authors grouped students by the amount of time they spent in the general education setting: high inclusion (more than 75% of the school day), medium inclusion (50-75%), and low inclusion (less than 50%). Results suggested that students in the high and medium inclusion groups spent significantly more time working on grade level materials and goals. On the other hand, students in the low inclusion group were significantly more likely to have spent time working on specific IEP objectives.

Given the variety of positive and negative findings regarding inclusion for students with ASD, consideration of the variables that are related to general education placement is warranted. In one study, Myles and Simpson (1989) had general education teachers read brief descriptions of students with disabilities, manipulating both the disability type and the presence of a diagnostic label. While not specific to ASD, these authors found that neither classification

nor label resulted in teachers suggesting the student should not be educated in regular classrooms. On the other hand, given the challenge of educating students with ASD in general education settings and the significant range in ability and severity for such students, other authors have suggested additional variables that predict educational placement.

Consistently, researchers have found that cognitive ability is highly associated with regular class placement for students with ASD. For example, children with higher ability at the time they began an intensive behavioral treatment were more likely to be placed in general education settings at follow-up six years later (Harris & Handleman, 2000). Likewise, a retrospective analysis of 76 children with an ASD diagnosis suggested that as cognitive ability increases, the likelihood of general education placement significantly increases (Eaves & Ho, 1997). Other important variables related to placement appear to be academic ability (Eaves & Ho) and age at which intervention begins (Harris & Handleman), whereas social abilities are less emphasized in placement decisions (White, Scahill, Klin, Koenig, & Volkmar, 2007).

Once placed in inclusive settings, several teacher variables may contribute to the student's success in the classroom. Segall (2007) found that while education professionals rated the attitude of the staff as an important factor for successful inclusion for students with ASD, participant attitudes were not significantly correlated with awareness of practice options available to support students with ASD. On the other hand, greater knowledge of autism, in terms of symptomatology, etiology and treatment, was associated with increased awareness and experience with classroom practices. Other studies have found that special education teachers are more likely to view the attitude of the staff as more important to success than general education teachers (McGregor & Campbell, 2001), and in general, experts suggest that staff attitudes are crucial to appropriate implementation and positive outcomes (Burack, Root, & Zigler, 1997).

In addition to attitudes, the presence of support staff (i.e., paraprofessionals) has been viewed as a potential factor for successful inclusion. Some studies imply that such support staff

may prove a hindrance to social outcomes by interfering with natural social interactions between students with disabilities and their typical peers (Giangreco & Broer, 2005). Other reports promote the use of paraprofessionals for students with ASD in inclusive settings (Yell et al., 2005).

Special Education Placement Decisions

While the current special education paradigm may be transitioning towards new models of decision making (e.g., response to intervention), typically a group of invested individuals meet to determine the eligibility, educational goals, educational placements and services for students with ASD. The group often consists of administrators, special education teachers, general education teachers, school psychologists, parents, among other education professionals (e.g., behavioral specialists, speech-language pathologists). At the outset, the process may begin with an observation or concern from a parent or teacher regarding a student's behavior or classroom progress. Thereafter, this team of professionals and caregivers convene according to special education law regulations to discuss the future course of action, including assessment and observation, recommendations for treatment, implementation of interventions, and progress monitoring.

Given that special education decision making involves multiple disciplines, it is essential to understand domains of convergence and divergence with respect to attitudes, knowledge, experience, and training of various professional groups with respect to ASD. Prior research, described above, suggests that teachers will recommend more restrictive educational placements for students with ASD having low (as opposed to average) cognitive ability (White et al., 2007); however, no study to date has documented this effect experimentally. Furthermore, while some research has documented teacher attitudes towards ASD and related variables (e.g., attitudes towards inclusion, knowledge of ASD, experience with students with ASD; McGregor & Campbell, 2001; Segall, 2007), additional research is needed to clarify the relationship between these variables and important outcomes, such as placement decisions.

It is particularly important to explore the constructs of attitudes, knowledge, and experience among general education first grade teachers. Whereas Kindergarten may be the student with ASD's initial experience with public education, it is in the first grade that academic goals take some precedence over developmental (e.g., gross motor development) or social (e.g., sharing and cooperation) goals. Consequently, in this year of school, the practice of inclusive education takes on a more typical implementation in which a balance must be found between accommodating the student's special education needs in accessing the general curriculum and ensuring the student is viewed and treated as a member of the classroom community.

Purpose of the current study. The purpose of the present study is to explore how disability labels and cognitive ability affect the placement decisions of education professionals, specifically first grade teachers. In addition, investigators examine how other variables, such as attitudes, knowledge and experience, relate to placement decisions. The current study focuses on the following research questions and associated hypotheses:

(a) Is there an effect of disability label on first-grader teachers' educational placement decisions? The author predicts that a student who is labeled as having an ASD (e.g., autism; Asperger's syndrome) will be placed in a more restrictive setting compared to a student who is not labeled.

(b) Is there an effect of intelligence level on first-grade teachers' educational placement decisions? The author predicts that a student who is described as having average intelligence will be placed in a less restrictive setting compared to a student who is described as cognitively impaired.

(c) Are there interactive effects of disability label and intelligence level on first-grade teachers' educational placement decisions? The author predicts there will be no interaction between these two variables.

(d) Do relationships exist between first-grade teacher attitudes, knowledge, and experience and placement decisions? The author predicts that teachers with less positive attitudes, knowledge and experience will render more restrictive placement decisions.

METHODS

Participants

General education first grade teachers were recruited to participate in the study. Initial permission to conduct this research was obtained from two large counties in the state of Georgia. Two hundred ninety seven teachers were invited to participate in the study; of these, 132 expressed interest in completing the study (44% interest rate). Of the 132 who received the study materials to complete, 108 teachers completed survey questions (82% response rate). Of the original 297 teachers invited to participate, 108 completed the survey (36% participation rate) sufficiently to analyze the primary research questions.

The final sample was almost exclusively female (99%). Approximately three-fourths of the sample identified their ethnicity as Caucasian/white, and about one-fifth identified as African American. Eighty three percent of the sample held master's degrees or higher. In addition, whereas 87% of participants reported confidence in their behavior management abilities, one-third or less had taken a course in which autism was the main content area or had receive specific training in the area of autism. Thirteen participants (12%) reported having special education certification.

Approximately two thirds of the sample ($n = 69$) has worked with at least one student with ASD in the past, and 18% ($n = 20$) currently have a student with ASD in their classroom; forty-one additional participants currently have students with other special education needs in their classroom. Additional demographic information is presented in Table 3.1.

Table 3.1

Description of Participants

Demographic Variables	% or *M* (*SD*)	*n*
Female	99.0	100
Ethnicity		
Caucasian	76.0	79
African American	22.1	23
Other	1.9	2
Age (in years)	38.8 (10.4)	99
Highest Degree Earned		
Bachelor's	17.3	18
Master's	67.3	70
Specialist's	15.4	16
Time in Current Position (in years)	6.4 (6.0)	102
Training and Experience		
Certified in Special Education	12.3	13
Specific ASD Course	33.3	35
Specific ASD Experience	31.1	33
Student with ASD Currently in Classroom	18.5	20
Worked with Student with ASD in Past	65.1	69

Note: Due to missing data, descriptive data do not sum to 108.

Research Design and Materials

Based on the descriptions used in a study by Campbell and colleagues (2004), a description of a student, Robby, was created for this study (see Appendix D). Robby is described as displaying a number of behaviors and features associated with ASD, including eye contact avoidance, poor peer relations, echolalia, and strange or unusual body movements. In addition, the descriptions vary across six conditions: (a) Robby is described as having cognitive abilities in the range for moderate intellectual disability and he is not labeled; (b) Robby is described as having cognitive abilities in the range for moderate intellectual disability and he is labeled as having autism; (c) Robby is described as having cognitive abilities in the range for moderate intellectual disability and he is labeled as having intellectual disability; (d) Robby is described as having cognitive abilities in the average range and he is not labeled; (e) Robby is described as having cognitive abilities in the average range and he is labeled as having autism; and (f) Robby is described as having cognitive abilities in the average range and he is labeled as having Asperger's syndrome.

Measure

The *Placement and Services Survey* (PASS) was created to accompany the descriptions of Robby (see Appendix E). The PASS is a modified version of the Autism Inclusion Questionnaire (AIQ; Segall & Campbell, 2007), and contains ten sections.

In section 1, participants rate a variety of potential educational placements for Robby on a scale of highly inappropriate to highly appropriate. These placement options include, residential facility, special school, self contained classroom, and general education classroom, and were derived from options on an individual education plan form from the state of Georgia. In addition, participants are asked to indicate which of the placements is most appropriate for Robby. Finally, from a range of IDEIA (2004) categories, participants indicate a category of eligibility under which Robby could potentially receive special education services. This item

serves as a manipulation check suggesting whether participants indeed inferred that Robby has an ASD.

Sections 2 and 3 ask participants to report on their personal definition of successful inclusion. The first item is an open-ended response prompt asking participants to write their definition of successful inclusion. Next, participants rate 11 possible outcome measures on their level of importance to their definition of successful inclusion. Some of the listed outcome measures have been used in the literature to demonstrate intervention effects, whereas others were included based on practical outcomes related to inclusion (e.g., passes first grade, 85% attendance). Finally, 10 factors for successful inclusion are listed and participants are asked to rate these factors on a 6 response Likert-type scale ranging from strongly agree to strongly disagree. These items are similar to those which appear on the AIQ.

The fourth section contains 32 statements related to Robby and inclusive education. Items in this section were selected to assess a variety of constructs including affective attitudes towards Robby, general cognitive attitudes towards inclusive education for students like Robby, cognitive attitudes towards Robby, behavioral intentions regarding educating Robby, teacher self-efficacy, and perceptions of subjective norms related to educating Robby. These constructs were included in order to better assess teacher attitudes towards inclusion based on theory of planned behavior (Ajzen, 2001). Items within this section were adapted from the Parental Attitudes Towards Children with Handicaps scale (Rosenbaum, Armstrong, & King, 1987), AIQ (Segall & Campbell, 2007), or otherwise written to align with Ajzen's recommendations. Participants are asked to rate each statement on a 6-response Likert-type scale, ranging from strongly agree to strongly disagree.

Section 5 identifies 7 behaviors that are related to ASD and are contained in the description of Robby. Participants are asked to report on the level of disruption each behavior may cause in a general education classroom. Five response options range from highly disruptive to not at all disruptive.

In section 6, 15 practice options are listed, which are derived from the list originally used on the AIQ (Segall & Campbell, 2007). Participants are asked to indicate if they have heard of the practice, if it would be helpful to Robby in the previously identified most appropriate placement, and the extent to which the practice would be effective. Four response options include very effective, effective, somewhat effective, and not effective.

In section 7 participants respond to a number of items related to their experience and training with ASD. Items include amount of experience, training opportunities, certification in special education, and familiarity with behavioral techniques for classroom management.

Section 8 contains 10 items proposed to measure one's knowledge of ASD. The items on this section are adapted from the AIQ (Segall & Campbell, 2007) knowledge section, and reflect the items with the best reliability and strongest contributors to the Knowledge Total Score. As with the Segall (2007) investigation, the questions in this section are presented as True/False statements; in addition, a 'Don't Know' option is included and respondents are instructed to select this response rather than guess.

Finally, section 9 requires participants to respond to a variety of demographic variables and section 10 requests participant contact information for incentive distribution purposes. Also, one item asks participants to indicate if they wish to be contacted for future research studies related to inclusive education for students with ASD.

Pilot Study Results

An initial pilot study was conducted to (a) explore study hypotheses; (b) estimate time to complete the survey; and (c) to identify unclear items, items which could be eliminated, and items which could be added. Twenty-eight graduate students and faculty in school psychology and special education programs were randomly assigned to study conditions. It is important to note that during this phase of the pilot study only conditions A, B, D, E. and F were included; condition C was added following the pilot study. Results suggested a significant main effect for cognitive ability, $F(1,17) = 6.94$, $p = .017$. That is, when Robby was described as having

average cognitive ability, as opposed to low cognitive ability, participants recommended less restrictive educational placement. The effect size for this finding was large ($f = .51$). There was no significant main effect for presence of disability label, $F(1,17) = 1.63$, *n.s.*, with a small effect size ($f = .19$). Furthermore, there were no significant interactive effects, and the effect size for this analysis was small ($f = .14$). In addition, within conditions D, E, and F, in which Robby is described as having average cognitive ability, disability label did not affect participants' placement decisions for Robby. Participants spent approximately 25 minutes completing study materials. Following the pilot study, several minor changes were made to some items in order to improve clarity.

Power analysis. Based upon the results of the initial pilot study, a power analysis was conducted to determine the ideal sample size for investigating the primary research questions. Expecting a large effect size for the effect of cognitive ability on educational placement and controlling type 1 error at 5%, a sample size of 34 participants would be required to keep type 2 error at or below 20%. On the other hand, a sample size of approximately 950 participants would be required to evaluate the effect of disability label or the interactive effects of label and cognitive ability on placement with the same type 1 and type 2 error expectations based on the small effect sizes found in the pilot study. Accordingly, the results of the analyses of disability label and the interaction should be considered exploratory in the present study, and larger sample sizes may be required in the future to adequately capture these effects.

Procedure

The principal of randomly selected elementary schools from consenting counties was contacted via phone and/or electronic mail prior to sending study materials. The researcher explained the nature of the study and the expectations of each participant. In particular, participants were asked to review the consent and keep the copy for their own records. Next, participants were asked to read the description of Robby and then complete the PASS. Materials were completed online or returned to the investigator via post mail. In addition,

participants were eligible to win a small incentive. Twelve participants were randomly chosen at the completion of data collection to receive a $50 gift card.

Upon receiving permission from school principals (or other consenting administrators), potential participants were contacted via email. Potential participants were given the option of completing the study materials online (i.e., SurveyGizmo) or by hand via a mailed hard copy. Participants requesting an online questionnaire were e-mailed a direct link to the study survey and indicated their consent through the web-based materials. Participants requesting a hard copy questionnaire were asked to sign a consent form and return the consent and study materials in a stamped addressed envelop. Each teacher was randomly assigned to one of the six study conditions and the final sample consisted of approximately equal groups: A ($n = 18$), B ($n = 18$), C ($n = 16$), D ($n = 20$), E ($n = 20$), and F ($n = 16$). Participants in varying experimental groups did not different on any demographic or experience and training variables, and participants electing to complete the materials online versus mailed materials were equally represented across conditions.

However, it is important to note that participants who completed the study online ($n = 68$) differed in several ways from participants who received their materials in the mail ($n = 40$). For example, participants who received their materials in the mail were more likely to identify as African American ($\chi^2 = 10.4$, $p = .015$), have a student with ASD currently in their classroom ($\chi^2 = 36.6$, $p < .001$), and have received specific training in ASD ($\chi^2 = 17.1$, $p < .001$). No other demographic or experience/training differences were found based on materials preference. While these are important findings to report and consider, as participants were randomly assigned to experimental conditions regardless of materials preference, it is unlikely that these differences confound the study results. For example, participant responses on the most appropriate educational placement did not vary based on their preference for how to complete the study materials (i.e., mailed versus online), $F(1,106) = .05$, $n.s.$, and this was true for the

appropriateness of all specific placement options (e.g., self-contained partial, general education for 80% of the day, etc.) as well.

Upon receipt of the completed study materials, the researcher detached the portion of the PASS requesting participant contact information, and stored this information separately from the completed questionnaire. At the completion of data collection, twelve participants were randomly selected to receive the study incentive.

Data Analysis

Due to the experimental group design, the above research questions and associated hypotheses were evaluated via a 2 x 2 factorial analysis of variance (ANOVA) with disability label (labeled or unlabeled) and intelligence level (low or average IQ) identified as independent variables. For the purpose of clarity, responses by participants in Condition C (i.e., intellectual disability label) were evaluated only in comparison to responses of participants in Condition A and B; similarly, responses by participants in Condition F (i.e., Asperger's syndrome label) were evaluated only in comparison to responses of participants in Condition D and E. This occurred via a one-way ANOVA, with disability label (e.g., unlabeled or autism or Asperger's syndrome) as the independent variable. Table 3.2 presents the experimental groups along with explanations of the main and interaction effect analyses.

The dependent variable was the participant's response to the question, "Which educational setting is most appropriate for Robby?" There are seven response options, ranging from highly restricted placements to general education placements (see Appendix E). Response options were scored as follows: residential facility (1), special school (2), self-contained classroom all day (3), self-contained classroom for part of the day (4), general education classroom for at least 50% of the day (5), general education classroom for at least 80% of the day (6), and general education classroom for the entire day (7).

In addition, in order to detect possible relationships between teacher variables and placement selections, correlation analyses were conducted. Specifically, the domains of

Table 3.2

Experimental Groups

		Disability Label			
		No Label	Autism	Intellectual Disability	Asperger's syndrome
Cognitive Ability	Low (IQ = 50)	Condition A (n = 18)	Condition B (n = 18)	Condition C (n = 16)	X
	Average (IQ = 100)	Condition D (n = 20)	Condition E (n = 20)	X	Condition F (n = 16)

Note: Main and interactive effects were evaluated via a 2 x 2 factorial analysis of variance involving Conditions A, B, D, and E. Two separate subsequent one-way analyses of variance to detect differences of disability label within cognitive ability groups were conducted: comparison of Conditions A, B, and C, and comparison of Conditions D, E, and F.

experience, knowledge of ASD, attitude towards inclusive education for students with ASD, emotional attitudes towards Robby, behavioral intentions towards Robby, cognitive attitudes towards Robby, teacher self-efficacy, perceived subjective norms, and disruptive behaviors were hypothesized as possible predictors of educational placement.

RESULTS

As a manipulation check, participants were asked to identify the IDEIA category of eligibility which best applied to Robby. Approximately two-thirds of participants ($n = 71$) suggested that the Autism category best applied. Other responses included Significant Developmental Delay ($n = 12$), Specific Learning Disability ($n = 7$), Speech Language Impairment ($n = 5$), Other Health Impairment ($n = 3$), and Multiple Disabilities ($n = 2$). Seven participants responded that Robby did not need special education services. Responses varied according to the experimental condition (see Table 3.3). Statistical analyses were conducted both with and without the responses of participants who did not believe Robby met special education eligibility under the Autism or Significant Developmental Delay category. As no significant differences were found, the following analyses include the larger sample.

No main effect was found for the disability label on participants' selection of the most appropriate educational placement for Robby (see Table 3.4 and 3.5). The finding was consistent both when Robby's cognitive ability was described as cognitively impaired [$F(2,49) = .482$, *n.s.*] and as average [$F(2,53) = 1.15$, *n.s.*]. A significant main effect emerged for cognitive ability [$F(1,72) = 16.1$, $p < .001$], such that students described as having cognitive impairment ($M = 4.7$) were placed in more restrictive settings than students described as having average cognitive ability ($M = 5.7$). There was no statistically significant interaction between cognitive ability and disability label, $F(1,72) = .05$, *n.s.*.

Post-hoc Analyses across and within Ability Conditions

In addition to selecting the most appropriate placement for Robby, participants were asked to rate the level of appropriateness for each of the seven possible placements as well as

Table 3.3

Categories of Special Education Eligibility for Robby by Experimental Condition

	Experimental Condition					
	Condition A (Low ability, no label)	Condition B (Low ability, labeled Autism)	Condition C (Low ability, labeled Intellectual Disability)	Condition D (Average ability, no label)	Condition E (Average ability, labeled Autism)	Condition F (Average ability, labeled Asperger's)
Autism	$n = 4$	$n = 15$	$n = 6$	$n = 17$	$n = 20$	$n = 9$
SDD	$n = 3$	$n = 1$	$n = 7$	$n = 0$	$n = 0$	$n = 0$
SLD	$n = 4$	$n = 0$	$n = 2$	$n = 0$	$n = 0$	$n = 1$
SLI	$n = 0$	$n = 0$	$n = 1$	$n = 1$	$n = 0$	$n = 3$
OHI	$n = 2$	$n = 1$	$n = 0$	$n = 0$	$n = 0$	$n = 0$
Mult	$n = 1$	$n = 1$	$n = 0$	$n = 0$	$n = 0$	$n = 0$
None	$n = 3$	$n = 0$	$n = 0$	$n = 2$	$n = 0$	$n = 2$

Note: SDD = Significant Developmental Delay; SLD = Specific Learning Disability; SLI = Speech Language Impairment; OHI = Other Health Impairment; Mult = Multiple Disabilities

Table 3.4

Main and Interaction Effects for 2 x 2 Factorial ANOVA (comparison of Conditions A, B, D, and E)

		ANOVA statistics	
	df	*F*	*p*
Disability Label	1	1.9	.175
Cognitive Ability	1	19.1	.000
Interaction	1	.001	.973
Error	72		

Table 3.5

Main Effects for Disability Labels within Low Cognitive Ability (comparison of Conditions A, B, and C) and Average Cognitive Ability (comparison of Conditions D, E, and F)

		ANOVA statistics	
	df	*F*	*p*
Low Cognitive Ability	2	.482	.620
Error	49		
Average Cognitive Ability	2	1.15	.324
Error	53		

the appropriateness of placement in their own classroom. Participants who read that Robby had cognitive impairment, as opposed to those in the average cognitive ability conditions, reported that a self contained placement for the entire day was more appropriate, $F(1,102) = 8.9$, $p = .004$. The result was also found for placing Robby in a self contained classroom for portions of the day, $F(1,104) = 17.2$, $p < .001$. The opposite pattern occurred for the placements of general education for 80% of the day ($F(1,102) = 33.1$, $p < .001$), 100% of the day ($F(1,104) = 26.3$, $p < .001$), and the participant's classroom ($F(1,103) = 7.9$, $p = .006$; see Figure 3.1).

Furthermore, participants who read that Robby had average intellectual ability responded differentially to whether their own classroom was an appropriate placement for Robby, $F(2,51) = 4.9$, $p = .011$, according to Robby's given disability label. That is, the participant's classroom was deemed less appropriate for Robby when Robby was described as having autism versus no label at all ($p = .009$). No difference was found between the autism and Asperger's label conditions.

Classroom behaviors

A total score was calculated to summarize the total level of disruptiveness of Robby's behavior (7 items, $\alpha = .81$, good). Teachers' perceptions of the disruptiveness of the behaviors exhibited by Robby did not differ based on Robby's cognitive ability, $F(1,101) = 1.4$, *n..s.*, or based on the presence of a disability label, $F(1,71) = .65$, *n.s.*. However, there was a moderate significant relationship between perception of disruptive behaviors and the appropriateness of the teachers' own classroom as a placement for Robby ($r = -.31$, $p = .002$). Teachers who perceived Robby's behaviors as more disruptive were less likely to report that their own classroom was an appropriate placement for Robby.

Using a Huynh-Feldt correction for violation of the sphericity assumption, there was a main effect for disruptive behaviors, $F(5.6,564.8) = 65.1$, $p < .001$, such that specific behaviors were rated differentially from one another. Eye contact avoidance ($M = 1.6$), in particular, emerged as the least disruptive behavior rated. Table 3.6 displays the mean ratings for each

Figure 3.1
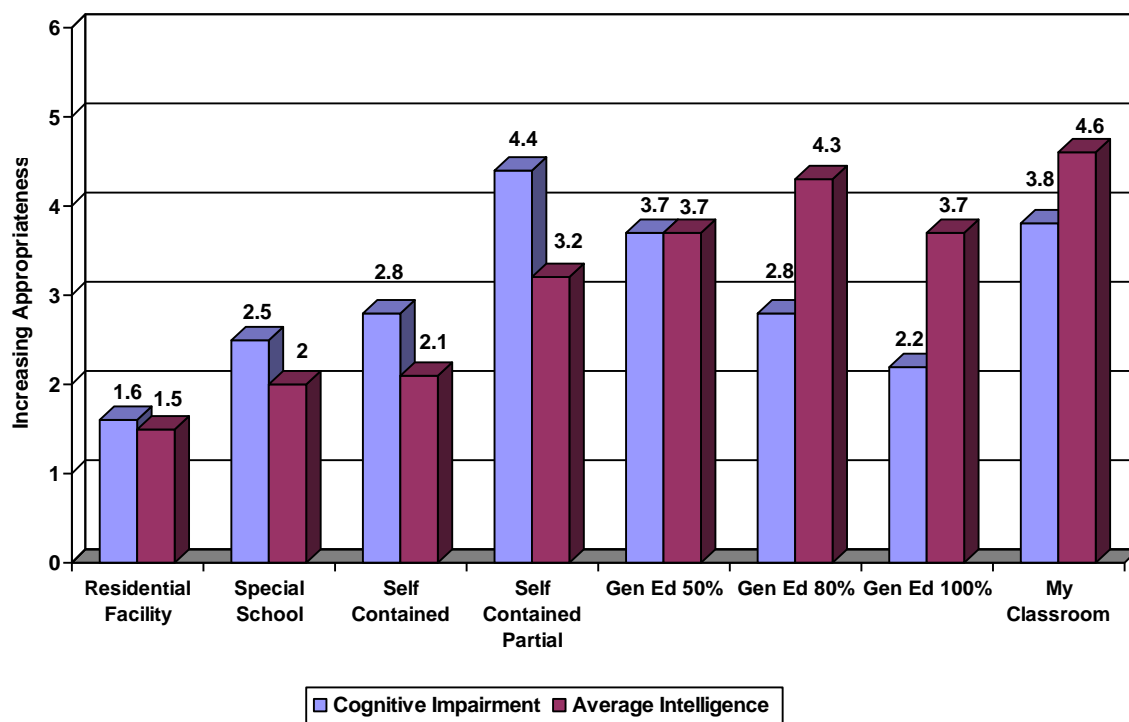
First-grade teachers' ratings of educational placement for a student described with and without

a cognitive impairment (Item: "How appropriate are the following placements for Robby?)

Table 3.6

First Grade Teachers' Perceptions of Disruptiveness of Behaviors associated with Autism

Spectrum Disorders

Disruptive behaviors	Mean[a]	% Highly Disruptive
Negative reaction to changes in schedule	3.50	14.4
High levels of activity	3.38	15.4
Repetitive or bizarre speech	3.19	16.3
Strange or unusual motor movements	3.16	9.6
Inattention	2.95	3.9
Poor peer relations	2.82	2.9
Eye contact avoidance	1.62	0.0

Note. *n* = 103; [a] = Higher scores indicate that the behavior is perceived as more disruptive;

range 1 (Not at all disruptive) to 5 (Highly disruptive)

potentially disruptive behavior and the percentage of participants who rated the behavior as highly disruptive.

Teacher Variables

Constructs measured on the "How you feel about Robby?" section included Affective Attitudes (e.g., I would be pleased if Robby was a student in my classroom), General Attitudes towards Inclusion (e.g., It is important for children like Robby to receive special education services at school), Cognitive Attitudes (e.g., Robby will want to do many things for himself), Behavioral Intentions (e.g., I would encourage other students in my class to interact with Robby), Self Efficacy (e.g., I am a competent teacher), and Subjective Norms (e.g., I value my principal's opinions on placement decisions for students at our school). Responses to these items did not differ significantly by the ability manipulation; that is, participants responded similarly whether Robby was described as having low or average cognitive ability. Thus, items within a given construct were summed to create total scores, and internal consistency was measured using Cronbach's alpha as follows: Affective Attitudes (5 items, α = .43, unacceptable), Cognitive Attitudes towards Inclusion (5 items, α = .47, unacceptable), Cognitive Attitudes (5 items, α = .72, acceptable), Behavioral Intentions (6 items, α = .68, acceptable), Self Efficacy (6 items, α = .77, acceptable), and Subjective Norms (4 items, α = .82, good). Due to unacceptable levels of internal consistency reliability (Gersten, Fuchs, Compton, Coyne, Greenwood, & Innocenti, 2005), Affective Attitudes and Cognitive Attitudes towards Inclusion were not analyzed along with the other teacher variables.

Total scores for knowledge of ASD and experience and training were also calculated. The correct responses to all 10 Knowledge section items were summed to produce the total score (10 items, α = .73, acceptable). For experience and training, affirmative responses to items inquiring about prior work with students with ASD, current work with students with ASD, coursework in ASD, specific training in ASD, special education certification, and familiarity with behavioral techniques were scored as 1 for each item. This produced an experience and

training total score (6 items, α = .71, acceptable). No significant differences were found on the knowledge total score or the experience/training total score by experimental condition.

As shown in Table 3.7, correlations amongst the beliefs and attitudes of teachers (i.e., cognitive attitudes about Robby, behavioral intentions, self-efficacy and subjective norms) were low to moderate (i.e., r between .24 and .51) and in the positive direction. That is, stronger positive attitudes were found to relate to higher levels of self efficacy and subjective norms. Of these constructs, behavioral intentions were found to significantly relate to knowledge of ASD (r = .31) and experience and training (r = .22) of the participants, but not to their perception of the disruptiveness of Robby's behaviors (r = -.18). Significant relationships were observed between self-efficacy and knowledge (r = .39), experience (r = .50), and perception of disruptive behaviors (r = -.27). Cognitive attitudes about Robby were significantly related to teachers' perceptions of problem behaviors associated with ASD (r =- .38) but not to their knowledge or experience. Knowledge and experience/training were moderately significantly related to each other (r = .52). Similar patterns and correlations were observed independent of the ability manipulation.

A multiple regression analysis was conducted, in which Cognitive Attitudes about Robby, Behavioral Intentions, Self Efficacy, Subjective Norms, Knowledge of ASD, Experience and Training, and Perception of Disruptive Behaviors (independent variables) were hypothesized to predict teachers' educational placement for Robby (dependent variable). Results suggest that Self Efficacy and Subjective Norms were the only salient predictors, accounting for 21% of the variance. That is, teachers with high levels of self-efficacy and beliefs that other stakeholders would be in favor of inclusion were more likely to place Robby in less restrictive settings than teachers reporting lower levels of self-efficacy and fewer beliefs that others would favor inclusion. Knowledge, experience, perceptions of disruptive behaviors associated with ASD and other attitudes constructs were not significant variables in predicting Robby's placement.

Table 3.7

Correlations between Attitude Total Scores for Cognitive Attitudes about Robby (COG),

Behavioral Intentions (BEH), Self Efficacy (EFF) Subjective Norms (SUB), Knowledge (KNOW),

Experience/Training (EXP), and Disruptive Behaviors (DIS)

	COG	BEH	EFF	SUB	KNOW	EXP
BEH	.39**	---	---	---	---	---
EFF	.24*	.51**	---	---	---	---
SUB	.27**	.31**	.37**	---	---	---
KNOW	.02	.23*	.39**	.07	---	---
EXP	-.004	.31*	.50**	.02	.56**	---
DIS	-.38**	-.19	-.27**	-.09	-.06	.05

Note. ** $p < .01$ (two-tailed); * $p < .05$ (two-tailed); $n = 97$; higher scores for DIS reflect higher

levels of perceived disruptiveness

A second multiple regression analysis was conducted, in which Cognitive Attitudes about Robby, Behavioral Intentions, Self Efficacy, Subjective Norms, Knowledge of ASD, Experience and Training, and Perception of Disruptive Behaviors (independent variables) were hypothesized to predict teachers' opinion about the appropriateness of their own classroom (dependent variable) as an educational placement for Robby. Results suggest that Self Efficacy and Cognitive Attitudes about Robby were the only salient predictors, accounting for 30% of the variance. That is, teachers with high levels of self-efficacy and favorable opinions about Robby were more likely to report that their own classroom is an appropriate setting for Robby. Knowledge, experience, perception of disruptive behaviors associated with ASD, and other attitudes constructs were not significant variables in predicting these opinions.

Intervention choices

The experimental conditions (e.g., label and cognitive ability) did not affect the quantity of intervention choices selected for Robby by first grade general education teachers ($M = 9.7$, $SD = 2.6$). That is, whether Robby's cognitive ability was delayed or average, and regardless of disability label, teachers reported that about 10 strategies (out of a list of 15) would be helpful to Robby. Table 3.8 displays the percentages of participants who indicated awareness of the practice and whether that a particular strategy would be helpful to Robby. With the exception of occupational therapy services, $F(1,101) = 5.9$, $p = .02$, no differences were found in specific practice recommendations for Robby with cognitive impairment or average ability; occupational therapy services were more likely to be recommended if Robby was described as having cognitive impairment. On average, participants recommended a practice they had heard of 89% of the time (range: 56% - 100%).

DISCUSSION

While there has been considerable research investigating educator attitudes towards students with special education needs and the practice of inclusion to support these students (Avramidis & Norwich, 2002), few studies have focused on these constructs as they apply to

Table 3.8

First Grade Teachers' Awareness of Practices and Recommendations for Robby

Service and Practice Options	Heard of		Helpful	
	%	*n*	%	*n*
Modifications to class assignments	100	104	98	102
Speech-language pathologist services	100	104	92	95
Occupational Therapist services	100	104	85	88
Paraprofessional who works with Robby	99	103	93	96
Adapting the classroom environment	95	99	96	95
Educating typically developing students about Robby	89	93	96	89
Reinforcement contingencies for appropriate behavior	79	82	99	81
Assistive technology/ alternative communication devices	78	81	56	45
Functional behavioral assessment/analysis	67	70	89	62
Social skills direct instruction	67	70	83	58
Visual activity schedules	65	68	99	67
Peer-mediated social skills interventions	65	68	82	56
Sensory integration	49	50	94	47
Naturalistic prompting procedures	18	19	95	18
Discrete trial training	8	8	75	6

Note: 'Helpful' percentages are based on respondents who reported awareness of the particular practice

students with ASD. Furthermore, investigations are needed to explore the relationship between educator attitudes and important outcomes, such as the educational placement of students with ASD. Using a methodology similar to an earlier study by Myles and Simpson (1989), the present study sought to identify important student and education variables that may relate to less restrictive placements of students with ASD.

The primary finding of the current study was that the cognitive ability of a hypothetical student with ASD significantly affected first grade teachers' opinions regarding the student's placement. Specifically, for a student described as having cognitive impairment (e.g., IQ = 50), first grade general education teachers placed the student in a more segregated setting than when the student was described as having average cognitive ability. While this finding is not surprising and is consistent with other descriptive reports (White et al., 2007), the experimental design in the current study lends additional credence to the impact of cognitive functioning on educational placement.

On the other hand, the presence of a disability label did not significantly affect placement decisions. That is, whether the student was described as having autism or whether there was no indication of a diagnostic label, students were placed in equivalent settings. However, within the average cognitive ability conditions, participants reported that their own classroom was a less appropriate placement for students described as having autism versus no label at all. The label of Asperger's syndrome did not affect placement decisions as compared to the label of autism or no label at all. Brubaker and colleagues (2010) found similar results in which school psychologists were generally equivalently in favor of interventions for student independent of an autism, versus no-label, condition. It is plausible that in the current study the student's characteristics and behaviors were more salient than the particular disability label. Indeed, disability label had no significant effect on the perception of disruptiveness of specific behaviors exhibited by Robby.

In examining teacher variables which may relate to educational placement, self efficacy and subjective norms emerged as significant predictors of educational placement. That is, teachers who believed they were competent teachers were more likely to recommend student placement in a less restrictive setting. Similarly, teachers who believed that significant stakeholders (i.e., principal, other general education teachers, director of special education, and parents) valued inclusion were more likely to place the hypothetical student in a less segregated placement. Experience with autism or knowledge of autism were not found to be significant predictors of placement decisions, nor were the teachers' perceptions of the disruptiveness of behaviors associated with ASD.

These findings are interesting and warrant future research. Studies have explored the relationship between training, experience and beliefs in the context of "successful inclusion" (e.g., McGregor & Campbell, 2001; Soodak, Podell, & Lehman, 1998), and generally found that greater levels of knowledge and experience with a student with special education needs is associated with more positive attitudes towards inclusion, and, thus, better outcomes. However, in the current study, more inclusive placements were recommended independent of teacher knowledge, experience, and various attitudes. The importance of teacher self-efficacy and perception of the beliefs of important others have been examined in other investigations (e.g., Ajzen, 2001; Buell, Hallam, Gamel-McCormick, & Scheer, 1999; Stanovich, & Jordan, 1998), and additional research on these constructs is needed in the area of ASD.

Participants, on average, selected 10 practices (out of 15) designated as "helpful" to the hypothetical student within the participants' recommended educational placement. In addition, only occupational therapy services were recommended differentially for students with varying levels of cognitive ability, such that occupational therapy was viewed as helpful more frequently in the intellectual impairment conditions as compared to the average ability conditions. Other practice options, such as peer education and visual activity schedules, were recommended equally regardless of cognitive ability, suggesting that first grade teachers believe interventions

will have value for students with ASD independent of their cognitive potential. However, it is important to note that important interventions and practices in the field of ASD treatment, such as discrete trial training and naturalistic prompting methods, were not well known by this sample; moreover, the relationship between awareness of practice and recommendation of practice was strong. Thus, participants in this study may have lacked the expertise to discriminate between an intervention they had heard of and an intervention which would appropriately apply to a student with ASD of varying cognitive ability.

Implications

The significant main effect of cognitive ability on educational placement has strong implications in several areas. In chief, this finding further highlights the importance of reliable measurement of cognitive ability in diagnostic and special education eligibility assessments. Many experts in the field believe this is an important targeted area of evaluation for this population (Ozonoff, Goodlin-Jones & Solomon, 2005), and the current study highlights this need as it significantly contributes to teacher's opinions about educational placement.

The impact of cognitive functioning is also important in the context of team based decision making for the educational placement of students with ASD. Based on the present study, cognitive ability can have a significant effect on a student's access to the general education curriculum and interactions with typically developing peers. Teacher awareness that a student has average ability clearly results in more favorable endorsement of general education placements when compared to lower cognitive functioning. The particular diagnosis or disability label of a student did not have a significant impact on placement decisions for first grade general education teachers, and the designation of Asperger's syndrome or autism did not produce differential placements for a student described as having average cognitive ability.

On the other hand, self efficacy and subjective norms were found to be significant teacher variables predictive of placement. This suggests that in team based decision making meetings about a student's educational placement, teachers who feel competent in their

teaching ability in this area will be more likely to recommend less restrictive placements. In addition, the views of principals, parents and directors of special education are likely to have significant influences in these decisions. While not altogether unexpected results, these findings highlight the complexity of such decision-making endeavors and suggest there is more at play than the characteristics of an individual student. Further research exploring the complex dynamics of the special education team-based decision-making process for students with ASD is recommended.

Limitations and Future Directions

These findings should be interpreted conservatively. Foremost, analysis of the manipulation check to determine whether participants viewed the student as requiring special education services under the Autism category of eligibility was not encouraging. Approximately one-third of the sample did not indicate that Autism was the appropriate eligibility, and several participants who specifically read that Robby was diagnosed with autism still suggested other categories (e.g., other health impairment). Thus, it is plausible that the description of Robby was not sufficient in activating teacher beliefs about autism, potentially confounding other results.

Furthermore, the lack of discrimination between awareness of practice and recommendation for Robby, regardless of experimental condition, presents an interpretative concern. While in practice, strategies such as peer mediated social skills interventions or social skills direct instruction may be implemented quite differently for a student with cognitive impairment and a student with average cognitive ability, the PASS was insufficiently sensitive to assess these subtleties. Additional research is needed to illuminate the specific characteristics of the interventions and practices recommended for students with ASD.

In addition, the sample size in the current study was not sufficiently large to appropriately test the effect of disability label on first grade teachers' educational placement of the student. The current study produced similar results to the pilot study using the PASS, suggesting that, if there is indeed an effect of label on placement, the effect is quite small and large samples would

be needed to detect this difference. Other studies have found similar minimal effects of diagnostic label on intervention choices for students with ASD (Brubaker, Bundy, Winslow, & Belcher, 2010). Further research is warranted to explore this student variable.

Conclusions from the results of the present study should be made in the context of the hypothetical nature of the methods. That is, teachers in this study responded to the hypothetical possibility that the student described would be at their school next year. It is plausible that participants may have responded differently to an actual student. Further research is needed to elucidate this likelihood. In addition, the findings from the current study apply specifically to a limited sample of first grade teachers in the state of Georgia. It is unclear if similar findings would be found for teachers of different grade levels or from a different geographic location.

It is also important to contextualize these findings based on the description of Robby. The vignettes of Robby describe a student with a very mild profile of ASD. It is possible that Robby's mild impairments may have contributed to some of the non-significant results. For example, if Robby was particularly disruptive in the classroom, perhaps due to poor coping skills, would similar results have been found? Clearly, additional research is needed to explore the numerous student variables, beyond cognitive ability and label, which may affect the opinions of teachers on educational placement for students with ASD. Prior research has suggested that age of intervention (Harris & Handleman, 2000), academic achievement (Eaves & Ho, 1997) and social behaviors (Chamberlain, Kasari, & Rotheram-Fuller, 2007) may also influence placement decisions. In the current study, the perceived disruptiveness of behaviors associated with ASD did not significantly predict educational placement or the teachers' willingness to educate Robby in their own classroom.

Although key constructs were measured by the PASS, the current study did not fully operationalize and test the theory of planned behavior (Azjen, 2001) for making placement decisions about a student with ASD. Constructs such as self-efficacy and subjective norms are important variables within this theory, and in the current study, they were particularly relevant in

predicting teachers' opinions about educational placement. Future investigations should more fully determine the utility of this theory for this particular behavior and population. In addition, total scores measuring various types of attitudes (e.g., cognitive, affective, behavioral) did not emerge as significant teacher variables in understanding placement decisions.

REFERENCES

Ajzen, I. (2001). Nature and operation of attitudes. *Annual Review of Psychology, 52,* 27-58.

Avramidis, E., & Norwich, B. (2002). Teachers' attitudes towards integration/inclusion: A review
of the literature. *European Journal of Special Needs Education, 17*, 129-147.

Boutot, E. A., & Bryant, D. P. (2005). Social integration of students with autism in inclusive
settings. *Education and Training in Developmental Disabilities, 40*, 14-23.

Brubaker, R., Bundy, M.B., Winslow, M.P., & Belcher, K. (2010). School psychologists' beliefs
about autism: Impact on classroom intervention acceptability. *Journal of the Trainer's of
School Psychologists, 29,* 51-64.

Buell, M., Hallam, R., Gamel-McCormick, M., & Scheer, S. (1999). A survey of general and
special education teachers' perceptions and in-service needs concerning inclusion.
International Journal of Disability, Development, and Education, 46, 143-156.

Burack, J. A., Root, R., & Zigler, E. (1997). Inclusive education for students with autism:
Reviewing ideological, empirical, and community considerations. In D. J. Cohen & F. R.
Volkmar (Eds.), *Handbook of autism and pervasive developmental disorders* (2nd ed., pp.
796-807). New York: Wiley and Sons.

Buysse, V., & Bailey, D. B. (1993). Behavioral and developmental outcome in young children
with disabilities in integrated and segregated settings: A review of comparative studies.
The Journal of Special Education, 26, 434-461.

Campbell, J. M., Ferguson, J. E., Herzinger, C. V., Jackson, J. N., & Marino, C. (2004).
Combined descriptive and explanatory information improves peers' perceptions of
autism. *Research in Developmental Disabilities, 25*, 321-339.

Carlberg, C., & Kavale, K. (1980). The efficacy of special versus regular class placement for
exceptional children: A meta-analysis. *The Journal of Special Education, 14*, 295-309.

Chamberlain, B., Kasari, C., & Rotheram-Fuller, E. (2007). Involvement or isolation? The social networks of children with autism in regular classrooms. *Journal of Autism and Developmental Disorders, 37*, 230-232.

Eaves, L. C., & Ho, H. H. (1997). School placement and academic achievement in children with autistic spectrum disorders. *Journal of Developmental and Physical Disabilities, 9*, 277-291.

Gersten, R., Fuchs, L.S., Coyne, M., Greenwood, C., & Innocenti, M.S. (2005). Quality indicators for group experimental and quasi-experimental research in special education. *Exceptional Children, 71*, 149-164.

Giangreco, M. F., & Broer, S. M. (2005). Questionable utilization of paraprofessionals in inclusive schools: Are we addressing symptoms or causes? *Focus on Autism and Other Developmental Disabilities, 20*, 10-26.

Harris, S. L., & Handleman, J. S. (2000). Age and IQ at intake as predictors of placement for young children with autism: A four- to six-year follow-up. *Journal of Autism and Developmental Disorders, 30*, 137-141.

Harris, S. L., Handleman, J. S., Kristoff, B., Bass, L., & Gordon, R. (1990). Changes in language development among autistic and peer children in segregated and integrated preschool settings. *Journal of Autism and Developmental Disorders, 20*, 23-31.

Individuals with Disabilities Education Improvement Act of 2004, 20 U.S.C. § 1400 *et seq.* (2004) (reauthorization of the Individuals with Disabilities Act of 1990).

Jordan, R. (2005). Managing autism and Asperger's syndrome in current educational provision. *Pediatric Rehabilitation, 8*, 104-112.

Kennedy, C. H., Shukla, S., & Fryxell, D. (1997). Comparing the effects of educational placement on the social relationships of intermediate school students with severe disabilities. *Exceptional Children, 64*, 31-47.

Mastergeorge, A. M., Rogers, S. J., Corbett, B. A., & Solomon, M. (2003). Nonmedical interventions for autism spectrum disorders. In S. Ozonoff, S. J. Rogers, & R. L. Hendren (Eds.), *Autism spectrum disorders: A research review for practitioners* (pp. 133-160). Washington, DC: American Psychiatric Publishing, Inc.

Mesibov, G., & Shea, P. (1996). Full inclusion and students with autism. *Journal of Autism and Developmental Disorders, 26*, 337-346.

McGregor, E., & Campbell, E. (2001). The attitudes of teachers in Scotland to the integration of children with autism into mainstream schools. *Autism, 5*, 189-207.

Myles, B. S., & Simpson, R. L. (1989). Regular educators' modification preferences for mainstreaming mildly handicapped children. *Journal of Special Education, 22*, 479-491.

National Research Council. (2001). *Educating children with autism.* Committee on Educational Interventions for Children with Autism, Division of Behavioral and Social Sciences and Education. Washington, DC: National Academy Press.

Ochs, E., Kremer-Sadlik, T., Solomon, O., & Sirota, K. G. (2001). Inclusion as social practice: Views of children with autism. *Social Development, 10*, 399-419.

Ozonoff, S., Goodlin-Jones, B.L., & Solomon, M. (2005). Evidenced based assessment of autism spectrum disorders in children and adolescents. *Journal of Clinical Child and Adolescent Psychology, 34,* 523-540.

Robertson, K., Chamberlain, B., & Kasari, C. (2003). General education teachers' relationships with included students with autism. *Journal of Autism and Developmental Disorders, 33*, 123-130.

Rosenbaum, P.L., Armstrong, R.W., & King, S.M. (1987). Parental attitudes toward children with handicaps: New perspectives with a new measure. *Developmental and Behavioral Pediatrics, 8*, 327-334.

Segall, M. J., & Campbell, J. M. (2007). *Autism Inclusion Questionnaire.* Unpublished measure, University of Georgia, Athens, Georgia.

Segall, M. J. (2007). *Inclusion of students with autism spectrum disorder: Educator experience, knowledge, and attitudes.* Unpublished master's thesis, University of Georgia, Athens, Georgia.

Soodak, L.C., Podell, D.M., & Lehman, L.R. (1998). Teacher, student and school attributes as predictors of teachers' responses to inclusion. *Journal of Special Education, 31,* 480-497.

Soukop, J.H., Wehmeyer, M.L., Bashinski, S.M., Bovaird, J.A. (2007). Classroom variables and access to the general curriculum for students with disabilities. *Exceptional Children, 74*, 101-120.

Stanovich, P. J., & Jordan, A. (1998). Canadian teachers' and principals' beliefs about inclusive education as predictors of effective teaching in heterogeneous classrooms. *Elementary School Journal, 98*, 221-238.

Strain, P. (1983). Generalization of autistic children's social behavior change: Effects of developmentally integrated and segregated settings. *Analysis and Intervention in Developmental Disabilities, 3*, 23-34.

Swaim, K. F., & Morgan, S. B. (2001). Children's attitudes and behavioral intentions toward a peer with autistic behaviors: Does a brief educational intervention have an effect? *Journal of Autism and Developmental Disorders, 31*, 195-205.

White, S.W., Scahill, L., Klin, A., Koenig, K., & Volkmar, F.R. (2007). Educational placements and service use patterns of individuals with autism spectrum disorders. *Journal of Autism and Developmental Disorders, 37*, 1403-1412.

Williams, K. (1995). Understanding the student with Asperger syndrome: Guidelines for teachers. *Focus on Autistic Behavior, 10*(2), 9-16.

Yell, M. L., Drasgow, E., & Lowrey, K. A. (2005). No child left behind and students with autism spectrum disorders. *Focus on Autism and Other Developmental Disabilities, 20*, 130-139.

Yell, M. L., Katsiyannis, A., Drasgow, E., & Herbst, M. (2003). Developing legally correct and

    educationally appropriate programs for students with autism spectrum disorders. *Focus*

    on Autism and Other Developmental Disabilities, 18, 182-191.

CHAPTER 4

CONCLUDING REMARKS

Though inclusive education for students with autism spectrum disorders (ASD) remains a frequently recommended practice (National Research Council, 2001), the challenge of educating students with social, communication, and behavioral concerns alongside their typically developing peers is significant (Robertson, Chamberlain, & Kasari, 2003). An array of interventions, practices, and strategies exist to both address the developmental goals of students with ASD and to mollify the difficulties faced by general education teachers tasked with meeting the needs of these students (Harrower & Dunlap, 2001; Simpson et al., 2005). Yet, the provision of intervention techniques is insufficient to produce what is often referred to as "successful inclusion" for students with ASD. Attitudes towards students with ASD, as well as attitudes towards the practice of inclusive education for such students, are frequently cited as important factors affecting success (Burack, Root, & Zigler, 1997).

The goal of the two studies presented was to investigate both teacher variables and student variables which may affect the practice of inclusion for students with ASD. Although a large body of research exists describing teacher attitudes towards inclusion and a variety of specific disabilities, few such studies have addressed this construct for autism spectrum disorders. Therefore, the current studies sought to build upon the existing literature, contribute new important findings for both theory and practice, and illuminate areas for further study and additional research.

The first study described used a recently created assessment tool called the Autism Inclusion Questionnaire (AIQ; Segall & Campbell, 2007) to gain insight into the constructs of experience, knowledge and attitudes for a group of education professionals in the state of

Georgia. Specifically, school administrators, general education teachers, special education teachers, and school psychologists ($N = 196$) provided information regarding their level of experience in working with students with ASD, their knowledge of autism spectrum disorder in general, their attitudes towards inclusive education for students with ASD, and awareness and use of interventions and practices associated with educating students with ASD. The analyses included group level comparisons of these constructs as well as regression techniques to learn about the relationship amongst the constructs.

Group comparisons demonstrated that school psychologists and special education teachers were more knowledgeable about autism and subsequently reported increased awareness and use of practices as compared to administrators and general education teachers. Accordingly, experience working with students with ASD and specific training opportunities in ASD were reported at higher levels in the school psychologist and special educator groups than administrators and general education teachers.

Regarding attitudes towards inclusion for students with ASD, general education teachers reported the least favorable attitudes overall compared to other educator groups. Yet, the vast majority of the sample (92%), regardless of educator type, reported attitudes which favored the practice of inclusive education. Attitudes and other variables were correlated positively with each other, suggesting a complex interrelationship between an educator's experience, knowledge, and attitudes. Furthermore, regression analyses suggested that when use of empirically supported strategies was identified as an outcome measure, experience and training was significantly predictive; when awareness of practice options was the outcome, knowledge of autism was the most salient predictor. Attitudes were not predictive of either outcome.

Taken together, the findings suggest the need for training which prepares all education professionals to work with students with ASD. All groups sampled in this study hold important roles within the current education paradigm for students with ASD (Burack, Root, & Zigler, 1997; Yell, Katsiyannis, Drasgow, & Herbst, 2003), and general education teachers and

administrators, specifically, reported significantly less experience and knowledge than their colleagues. In addition, the analysis of education professionals' attitudes presents important inconsistencies within the ASD education literature. In chief, if the attitude of the educator is an important factor for successful inclusion of students with ASD, then a sample of education professionals who hold globally positive attitudes towards the inclusion should also report high levels of use of empirically supported interventions for this population. Indeed, this was true of special education teachers and school psychologists but not administrators and general education teachers. One possible explanation is that the AIQ did not fully capture the complexities of teacher attitudes in a way that can meaningfully relate to inclusive education for students with ASD.

Accordingly, the second study presented in this dissertation aimed to more fully capture the attitudes of first grade general education teachers while also exploring student variables which may change one's opinion. Specifically, the Placement and Services Survey (PASS), an adaptation of the AIQ, was completed by a group of 108 first grade general education teachers after reading about a student named Robby. In study materials, Robby was described as demonstrating many characteristics consistent with an autism spectrum disorder. In half of the vignettes, Robby was described as having low cognitive ability; in the other half, Robby was described as having average cognitive ability. In addition, within each ability group, Robby's label was varied. The PASS required teachers to make judgments on the appropriateness of various possible educational placements, ranging from highly restrictive (e.g., special school) to highly inclusive (e.g., general education classroom for the entire day). In addition, participants provided information about their experience, training, knowledge of autism, opinions about Robby, and the strategies that may best support Robby in the selected educational setting. Importantly, the opinions section gleaned information not only about attitudes towards inclusion for Robby, but also the participant's emotional attitudes, behavioral intentions, cognitive

attitudes towards the student, perception of teaching efficacy, and the importance of the opinions of valued others (e.g., principals).

The results of the study suggest that cognitive ability is a salient variable which affects placement decisions. That is, when Robby was described as having average cognitive ability, he was placed in less restrictive settings by the first grade teachers than when Robby was described as having low cognitive ability. This finding is consistent with other research studies documenting the current educational placements of students with ASD (White, Scahill, Klin, Koenig, & Volkmar, 2007). However, this finding represents a unique attempt to experimentally manipulate the cognitive ability of a student requiring a placement decision. The label of the student, regardless of cognitive ability, did not affect placement decisions, and there were no interactive effects between cognitive ability and disability label.

Other variables such as Self Efficacy and Subjective Norms were found to predict placement decisions. Interestingly, teachers who viewed themselves as effective teachers for a student like Robby and perceived the opinions of other stakeholders as supporting inclusion for Robby were more likely to place Robby in less restrictive settings.

The implications of the placement study in tandem with the AIQ study are interesting. In general, the practice of inclusion for students with ASD appears well supported by in-service educational professionals. Educators in both studies reported favorable attitudes, and specifically in the placement study, only two teachers placed Robby in a self-contained classroom for the entire day; all other participants recommended that Robby be placed in less restrictive settings, promoting at least some time during the school day with typically developing peers. The finding strongly suggests that educators report a basic level of comfort with educating students with ASD alongside typical peers. Moreover, teacher variables such as experience in working with students with ASD, knowledge of ASD, and self-efficacy are likely important training areas in which to target in order to improve attitudes that are supportive of inclusive education. The relationship between experience, knowledge, self-efficacy, inclusive

placements and use of empirically supported interventions for students with ASD appears to be a positive one based on these studies together.

However, there are important limitations to these studies that suggest the need for future research. Foremost, based upon anecdotal information and experience, the author believes that neither the AIQ nor the PASS fully captures the beliefs of education professionals in a way which relates to the difficult role of educating students with ASD in the general education setting. Due to the design of each study, true behavior was not measured, and it is far different to report opinions about a hypothetical student than to implement an individualized education plan for a real student with ASD. It would be incorrect to conclude that all teachers who reported having used empirically supported interventions have actually done so with fidelity and efficacy; this is an area for future research in which the AIQ or PASS are used in conjunction with teacher observations to document implementation and effectiveness.

The exploration of teacher attitudes towards students with ASD and inclusive education for these students should continue. The psychometric properties of the AIQ and PASS can be significantly improved; in particular, items assessing emotional attitudes and cognitive attitudes on the PASS were not sufficiently correlated with one another and therefore total scores to represent these constructs could not be generated. On the AIQ, the measurement of attitudes towards inclusion for students with ASD was quite broad, and as the PASS study demonstrated, the characteristics of the student in question holds significant value. Other studies investigating educator attitudes regarding ASD should attempt to explore constructs such as treatment acceptability and resistance. Perhaps teachers report favorable attitudes towards inclusion, and yet when faced with the very real task of implementing intervention or altering teaching methods to accommodate and better education students with ASD, these same teachers may report low levels of acceptability and high levels of resistance. Fuller exploration of Ajzen's theory of planned behavior (2001) and models of motivation (Abrami, Poulsen, & Chambers, 2004) may be useful guidelines for the creation of future assessment tools and study.

Other studies should continue to explore the student variables associated with placement decisions and attitudes towards students with ASD. While the current placement study investigated the effects of cognitive ability and disability label on the placement opinions of teachers, the significant heterogeneity of the autism spectrum lends itself to a host of important future studies. For example, disruptive behaviors in the classroom, such as blurting out or aggression to others, are often cited as significant barriers to inclusion. Altering Robby's profile based on these variables and many others (e.g., age at start of intervention, communication skills, social competency, etc.) would likely produce interesting and important results.

As students with ASD continue to receive educational placements alongside their typical peers, it is crucial that research continue to illuminate the important teacher and student variables which relate to successful inclusion for these students. The studies presented in this dissertation clearly suggest the need for more thorough training for all educators, but many questions remain regarding the true nature of teacher attitudes and the student variables which have significant impact on the opportunity to learn in the general education classroom.

REFERENCES

Abrami, P.C., Poulsen, C., & Chambers, B. (2004). Teacher motivation to implement an
educational innovation: Factors differentiating users and non-users of cooperative
learning. *Journal of Educational Psychology, 24,* 201-216.

Ajzen, I. (2001). Nature and operation of attitudes. *Annual Review of Psychology, 52,* 27-58.

Burack, J. A., Root, R., & Zigler, E. (1997). Inclusive education for students with autism:
Reviewing ideological, empirical, and community considerations. In D. J. Cohen & F. R.
Volkmar (Eds.), *Handbook of autism and pervasive developmental disorders* (2nd ed., pp.
796-807). New York: Wiley and Sons.

Harrower, J. K., & Dunlap, G. (2001). Including children with autism in general education
classrooms: A review of effective strategies. *Behavior Modification, 25*, 762-784.

National Research Council. (2001). *Educating children with autism.* Committee on Educational
Interventions for Children with Autism, Division of Behavioral and Social Sciences and
Education. Washington, DC: National Academy Press.

Robertson, K., Chamberlain, B., & Kasari, C. (2003). General education teachers' relationships
with included students with autism. *Journal of Autism and Developmental Disorders, 33*,
123-130.

Segall, M. J., & Campbell, J. M. (2007). *Autism Inclusion Questionnaire.* Unpublished measure,
University of Georgia, Athens, Georgia.

Simpson, R. L., de Boer-Ott, S.R., Griswold, D.E., Myles, B.S., Byrd, S.E., Ganz, J.B., et al.
(2005). *Autism Spectrum Disorders: Interventions and Treatments for Children and
Youth.* Thousand Oaks, CA: Corwin Press.

White, S.W., Scahill, L., Klin, A., Koenig, K., & Volkmar, F.R. (2007). Educational placements
and service use patterns of individuals with autism spectrum disorders. *Journal of
Autism and Developmental Disorders, 37*, 1403-1412.

Yell, M. L., Katsiyannis, A., Drasgow, E., & Herbst, M. (2003). Developing legally correct and

educationally appropriate programs for students with autism spectrum disorders. *Focus*

on Autism and Other Developmental Disabilities, 18, 182-191.

Appendix A

Autism Inclusion Questionnaire – Administrator Form

Section 1: Demographic Information and Experience

Today's Date: _____

School _____   County _____

Sex: Male ☐   Female ☐   Age _____

Ethnicity: African American   ☐   Asian American   ☐   Caucasian/White   ☐

Hispanic/Latino   ☐   Native American   ☐   Other ☐ _____

Administrative Title: Principal   ☐   Assistant Principal   ☐   Other ☐ _____

What is your highest degree earned?   High School diploma ☐   Associate's degree ☐   Bachelor's degree   ☐

Master's degree   ☐   Specialist's degree ☐   Doctorate degree   ☐

Time in current position: _____ years _____ months

Please list any prior Educator positions held and the length of time in that position.

1_____

2_____

3_____

Are you **certified** in Special Education?   Yes ☐   No ☐

If 'No', have you had **training** in Special Education?   Yes ☐   No ☐

If 'Yes', please explain. _____

_____

_____

About how many students are in your school? _____   How many teachers? _____

About how many students in your school have an IEP? _____   How many self-contained classrooms? _____

Have you had specific **training** to educate students with an Autism Spectrum Disorder (ASD)?   Yes ☐   No ☐

If 'Yes', please explain. _____

_____

Have you had specific **experience** working with or educating students with an Autism Spectrum Disorder (ASD)? Yes ☐   No ☐

If 'Yes', please explain. _____

_____

_____

Section 2: Knowledge of Autism Spectrum Disorders

Circle TRUE or FALSE for the following questions based on your current knowledge of Autism Spectrum Disorders (ASDs).

Please, DO NOT GUESS. If you are unsure of an answer, please circle DON'T KNOW.

1. The diagnostic criteria for Asperger's Syndrome are identical to High Functioning Autism.	True	False	Don't Know
2. ASDs are developmental disorders.	True	False	Don't Know
3. Genetic factors play an important role in the causes of ASDs.	True	False	Don't Know
4. ASDs exist only in childhood.	True	False	Don't Know
5. Behavior therapy is an intervention most likely to be effective for children with ASDs.	True	False	Don't Know
6. Children with ASDs are very similar to one another.	True	False	Don't Know
7. Early intervention demonstrates no additional benefit to children with an ASD.	True	False	Don't Know
8. If an intervention works for one child with an ASD, it will definitely work for another child with an ASD.	True	False	Don't Know
9. Medication can alleviate the core symptoms of ASDs.	True	False	Don't Know
10. Most children with ASDs have cognitive abilities in the intellectually disabled range.	True	False	Don't Know
11. Most children with ASDs have special talents or abilities.	True	False	Don't Know
12. In many cases, the cause of ASDs is unknown.	True	False	Don't Know
13. The core deficits in ASDs are Impaired Social Understanding, Language Abnormalities, and Impaired Sensory Functioning.	True	False	Don't Know
14. Traumatic experience very early in life can cause an ASD.	True	False	Don't Know
15. With proper intervention, most children with an ASD will eventually "outgrow" the disorder.	True	False	Don't Know

Section 3: Opinions about Inclusive Education

Please mark the response that best describes how you feel about the following statements:

	Strongly Agree	Agree	Somewhat Agree	Somewhat Disagree	Disagree	Strongly Disagree	No opinion or Neutral
1. The severity of disability is an important factor in the successful inclusion of a student with **ADHD**.	☐	☐	☐	☐	☐	☐	☐
2. Children with an **ASD** should be integrated in general education settings.	☐	☐	☐	☐	☐	☐	☐
3. The help of an auxiliary teaching professional (i.e. paraprofessional) is an important factor in the successful inclusion of a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
4. The academic ability of the student is an important factor in the successful inclusion of a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
5. The severity of disability is an important factor in the successful inclusion of a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
6. The student's personality is an important factor in the successful inclusion of a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
7. The attitude of the staff is an important factor in the successful inclusion of a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
8. All students with an **ASD** should be included in general education settings.	☐	☐	☐	☐	☐	☐	☐
9. Children with **special educational needs** should be integrated in general education settings.	☐	☐	☐	☐	☐	☐	☐
10. One on one intervention is an important factor in the successful inclusion of a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
11. Encouraging students with an **ASD** to interact with typically developing peers is an important factor in the successful inclusion of a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
12. The use of reinforcement schedules is an important factor in the successful inclusion of a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
13. Medication and drug therapy is an important factor in the successful inclusion of a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
14. Children with **ADHD** should be integrated in general education settings.	☐	☐	☐	☐	☐	☐	☐

	Strongly Agree	Agree	Somewhat Agree	Somewhat Disagree	Disagree	Strongly Disagree	No opinion or Neutral
15. Only teachers with extensive special education experience can be expected to deal with students with **special education needs** in a school setting.	☐	☐	☐	☐	☐	☐	☐
16. The attitude of the staff is an important factor in the successful inclusion of a student with **special needs**.	☐	☐	☐	☐	☐	☐	☐
17. Only teachers with extensive special education experience can be expected to deal with students with an **ASD** in a school setting.	☐	☐	☐	☐	☐	☐	☐
18. Inclusive education enhances the learning experience of students with disabilities.	☐	☐	☐	☐	☐	☐	☐
19. The severity of disability is an important factor in the successful inclusion of a student with **special needs**.	☐	☐	☐	☐	☐	☐	☐
20. Only teachers with extensive special education experience can be expected to deal with students with **ADHD** in a school setting.	☐	☐	☐	☐	☐	☐	☐
21. Students with **classic autism** are too impaired to benefit from the activities of a regular school.	☐	☐	☐	☐	☐	☐	☐
22. A good general education teacher can do a lot to help a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
23. No discretionary financial resources should be allocated for the inclusion of students with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
24. The attitude of the staff is an important factor in the successful inclusion of a student with **ADHD**.	☐	☐	☐	☐	☐	☐	☐
25. Students without disabilities can benefit from contact with students with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
26. Special schools specifically designed for their needs are the most appropriate placement for students with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
27. It is important for children with an **ASD** to receive special education services at school.	☐	☐	☐	☐	☐	☐	☐

Section 4: Classroom Behaviors

Please indicate how disruptive the following behaviors might be if exhibited by any student in your classroom:

	Highly Disruptive	Disruptive	Somewhat Disruptive	Slightly Disruptive	Not at all Disruptive
Aggression (to peers or adults).	☐	☐	☐	☐	☐
Aloofness or lack of awareness of what the teacher is doing.	☐	☐	☐	☐	☐
Difficulty in reciprocal conversation.	☐	☐	☐	☐	☐
Eye contact avoidance.	☐	☐	☐	☐	☐
Fear of harmless objects.	☐	☐	☐	☐	☐
High levels of activity.	☐	☐	☐	☐	☐
Inappropriate emotionality (e.g. inappropriate anxiety or inappropriate laughter).	☐	☐	☐	☐	☐
Lack of peer relations.	☐	☐	☐	☐	☐
Non compliance to teacher authority.	☐	☐	☐	☐	☐
Off-task behavior.	☐	☐	☐	☐	☐
Poor peer relations.	☐	☐	☐	☐	☐
Preoccupation with one particular object or toy.	☐	☐	☐	☐	☐
Preoccupation with touching, smelling or tasting objects or people.	☐	☐	☐	☐	☐
Problems with non-verbal behavior (e.g. pointing randomly or using bizarre gestures).	☐	☐	☐	☐	☐
Repetitive, bizarre, or echolalic speech	☐	☐	☐	☐	☐
Resistance and negative reaction to changes in the schedule.	☐	☐	☐	☐	☐
Rudeness in making requests.	☐	☐	☐	☐	☐
Screaming, crying, or tantruming.	☐	☐	☐	☐	☐
Sensitivity to sounds.	☐	☐	☐	☐	☐
Strange or unusual body movements such as finger flicking, spinning, or rocking	☐	☐	☐	☐	☐

Section 5: Classroom Practices

From the following list, please CIRCLE 1) whether YOU have HEARD OF the strategy, 2) whether any TEACHER(S) in your school have USED the strategy, and 3) whether YOU think it is or could be EFFECTIVE **in better including a student with an ASD**:

Strategy	Heard of this?		Used? Choose One			Effective? Choose One			
1. Applied behavior analysis (ABA)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
2. Art therapy	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
3. Assistive technology	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
4. Augmentative and alternative communication (AAC)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
5. Behavior contract	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
6. Choice making	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
7. Direct instruction of social skills	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
8. Discrete trial training (DTT)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
9. Edible reinforcement	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
10. Educating typically developing students about ASD.	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
11. Extra time to complete assignments.	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
12. Facilitated communication (FC)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
13. Floor time	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
14. Functional Behavior Assessment/Analysis (FBA)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
15. Gentle Teaching	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
16. Incidental teaching	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
17. Joint action routines (JARs)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
18. Peer initiation	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
19. Peer tutoring	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
20. Picture exchange communication system (PECS)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective

Strategy	Heard of this?		Used? Choose One			Effective? Choose One			
21. Pivotal response training (PRT)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
22. Play-oriented strategies	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
23. Preferential seating	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
24. Priming techniques	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
25. Prompting techniques	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
26. Providing a student "home base"	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
27. Providing a list of schedule changes for the school day	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
28. Providing a list of teacher expectations for in-class behavior	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
29. Relationship development intervention (RDI)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
30. Scripts (e.g. cognitive scripts)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
31. Sensory integration (SI)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
32. Social stories	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
33. Structured teaching (TEACCH method)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
34. Token economies	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
35. Van Dijk curricular approach	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
36. Verbal reinforcement/Praise	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
37. Visual activity schedules	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective

If there is another strategy you wish to clarify/elaborate on a response from the choices above, please do so in the space below:

_____

_____

_____

_____

Additional notes or comments: _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Section 6: Future Involvement in Research

Would you be interested in participating in a focus group discussing issues addressed in this Questionnaire?   Yes ☐   No ☐

Phone number _____   Email _____

Appendix B

Autism Inclusion Questionnaire – Teacher Form

Section 1: Demographic Information and Experience

Today's Date: _____

School _____   County _____

Sex: Male ☐   Female ☐   Age _____

Ethnicity: African American   ☐   Asian American   ☐   Caucasian/White   ☐

            Hispanic/Latino   ☐   Native American   ☐   Other ☐ _____

Teacher Title: General Education ☐   Special Education ☐   Specialist ☐

                    Paraprofessional ☐   Resource ☐   Other ☐ _____

What is your highest degree earned?   High School diploma ☐   Associate's degree ☐   Bachelor's degree   ☐

                                        Master's degree   ☐   Specialist's degree ☐   Doctorate degree   ☐

Time in current position: _____ years _____ months

Please list any prior Educator positions held and the length of time in that position.

1_____

2_____

3_____

Are you **certified** in Special Education?   Yes ☐   No ☐

If 'No', have you had **training** in Special Education?   Yes ☐   No ☐

        If 'Yes', please explain. _____

_____

_____

About how many students are in your classroom? _____   How many teachers? _____

Do you currently have any students with an IEP in your classroom?   Yes ☐   No ☐   If 'Yes', how many? _____

Under which IDEA categories of eligibility are your Special Education students being served? Check all that apply:

☐ Autism   ☐ Deaf-Blindness   ☐ Deafness   ☐ Hearing Impairment

☐ Mental Retardation   ☐ Multiple Disabilities   ☐ Orthopedic Impairment   ☐ Other Health Impairment

☐ Serious Emotional Disturbance   ☐ Specific Learning Disability   ☐ Speech or Language Impairment

☐ Traumatic Brain Injury   ☐ Visual Impairment, including blindness

Have you had specific **training** to educate students with an Autism Spectrum Disorder (ASD)? Yes ☐ No ☐

If 'Yes', please explain. _____

_____

_____

_____

Have you had specific **experience** working with or educating students with an Autism Spectrum Disorder (ASD)? Yes ☐ No ☐

If 'Yes', please explain. _____

_____

_____

_____

Section 2: Knowledge of Autism Spectrum Disorders

Circle TRUE or FALSE for the following questions based on your current knowledge of Autism Spectrum Disorders (ASDs).

Please, DO NOT GUESS. If you are unsure of an answer, please circle DON'T KNOW.

1. The diagnostic criteria for Asperger's Syndrome are identical to High Functioning Autism.	True	False	Don't Know
2. ASDs are developmental disorders.	True	False	Don't Know
3. Genetic factors play an important role in the causes of ASDs.	True	False	Don't Know
4. ASDs exist only in childhood.	True	False	Don't Know
5. Behavior therapy is an intervention most likely to be effective for children with ASDs.	True	False	Don't Know
6. Children with ASDs are very similar to one another.	True	False	Don't Know
7. Early intervention demonstrates no additional benefit to children with an ASD.	True	False	Don't Know
8. If an intervention works for one child with an ASD, it will definitely work for another child with an ASD.	True	False	Don't Know
9. Medication can alleviate the core symptoms of ASDs.	True	False	Don't Know
10. Most children with ASDs have cognitive abilities in the intellectually disabled range.	True	False	Don't Know
11. Most children with ASDs have special talents or abilities.	True	False	Don't Know
12. In many cases, the cause of ASDs is unknown.	True	False	Don't Know
13. The core deficits in ASDs are Impaired Social Understanding, Language Abnormalities, and Impaired Sensory Functioning.	True	False	Don't Know
14. Traumatic experience very early in life can cause an ASD.	True	False	Don't Know
15. With proper intervention, most children with an ASD will eventually "outgrow" the disorder.	True	False	Don't Know

Section 3: Opinions about Inclusive Education

Please mark the response that best describes how you feel about the following statements:

	Strongly Agree	Agree	Somewhat Agree	Somewhat Disagree	Disagree	Strongly Disagree	No opinion or Neutral
1. The severity of disability is an important factor in the successful inclusion of a student with **ADHD**.	☐	☐	☐	☐	☐	☐	☐
2. Children with an **ASD** should be integrated in general education settings.	☐	☐	☐	☐	☐	☐	☐
3. The help of an auxiliary teaching professional (i.e. paraprofessional) is an important factor in the successful inclusion of a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
4. The academic ability of the student is an important factor in the successful inclusion of a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
5. The severity of disability is an important factor in the successful inclusion of a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
6. The student's personality is an important factor in the successful inclusion of a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
7. The attitude of the staff is an important factor in the successful inclusion of a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
8. All students with an **ASD** should be included in general education settings.	☐	☐	☐	☐	☐	☐	☐
9. Children with **special educational needs** should be integrated in general education settings.	☐	☐	☐	☐	☐	☐	☐
10. One on one intervention is an important factor in the successful inclusion of a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
11. Encouraging students with an **ASD** to interact with typically developing peers is an important factor in the successful inclusion of a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
12. The use of reinforcement schedules is an important factor in the successful inclusion of a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
13. Medication and drug therapy is an important factor in the successful inclusion of a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
14. Children with **ADHD** should be integrated in general education settings.	☐	☐	☐	☐	☐	☐	☐

	Strongly Agree	Agree	Somewhat Agree	Somewhat Disagree	Disagree	Strongly Disagree	No opinion or Neutral
15. Only teachers with extensive special education experience can be expected to deal with students with **special education needs** in a school setting.	☐	☐	☐	☐	☐	☐	☐
16. The attitude of the staff is an important factor in the successful inclusion of a student with **special needs**.	☐	☐	☐	☐	☐	☐	☐
17. Only teachers with extensive special education experience can be expected to deal with students with an **ASD** in a school setting.	☐	☐	☐	☐	☐	☐	☐
18. Inclusive education enhances the learning experience of students with disabilities.	☐	☐	☐	☐	☐	☐	☐
19. The severity of disability is an important factor in the successful inclusion of a student with **special needs**.	☐	☐	☐	☐	☐	☐	☐
20. Only teachers with extensive special education experience can be expected to deal with students with **ADHD** in a school setting.	☐	☐	☐	☐	☐	☐	☐
21. Students with **classic autism** are too impaired to benefit from the activities of a regular school.	☐	☐	☐	☐	☐	☐	☐
22. A good general education teacher can do a lot to help a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
23. No discretionary financial resources should be allocated for the inclusion of students with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
24. The attitude of the staff is an important factor in the successful inclusion of a student with **ADHD**.	☐	☐	☐	☐	☐	☐	☐
25. Students without disabilities can benefit from contact with students with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
26. Special schools specifically designed for their needs are the most appropriate placement for students with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
27. It is important for children with an **ASD** to receive special education services at school.	☐	☐	☐	☐	☐	☐	☐

Section 4: Classroom Behaviors

Please indicate how disruptive the following behaviors might be if exhibited by any student in your classroom:

	Highly Disruptive	Disruptive	Somewhat Disruptive	Slightly Disruptive	Not at all Disruptive
Aggression (to peers or adults).	☐	☐	☐	☐	☐
Aloofness or lack of awareness of what the teacher is doing.	☐	☐	☐	☐	☐
Difficulty in reciprocal conversation.	☐	☐	☐	☐	☐
Eye contact avoidance.	☐	☐	☐	☐	☐
Fear of harmless objects.	☐	☐	☐	☐	☐
High levels of activity.	☐	☐	☐	☐	☐
Inappropriate emotionality (e.g. inappropriate anxiety or inappropriate laughter).	☐	☐	☐	☐	☐
Lack of peer relations.	☐	☐	☐	☐	☐
Non compliance to teacher authority.	☐	☐	☐	☐	☐
Off-task behavior.	☐	☐	☐	☐	☐
Poor peer relations.	☐	☐	☐	☐	☐
Preoccupation with one particular object or toy.	☐	☐	☐	☐	☐
Preoccupation with touching, smelling or tasting objects or people.	☐	☐	☐	☐	☐
Problems with non-verbal behavior (e.g. pointing randomly or using bizarre gestures).	☐	☐	☐	☐	☐
Repetitive, bizarre, or echolalic speech	☐	☐	☐	☐	☐
Resistance and negative reaction to changes in the schedule.	☐	☐	☐	☐	☐
Rudeness in making requests.	☐	☐	☐	☐	☐
Screaming, crying, or tantruming.	☐	☐	☐	☐	☐
Sensitivity to sounds.	☐	☐	☐	☐	☐
Strange or unusual body movements such as finger flicking, spinning, or rocking	☐	☐	☐	☐	☐

Section 5: Classroom Practices

From the following list, please CIRCLE 1) whether you have HEARD OF the strategy, 2) whether you have USED the strategy, and

3) whether you think it is or could be EFFECTIVE **in better including a student with an ASD**:

Strategy	Heard of this?		Used? Choose One			Effective? Choose One			
1. Applied behavior analysis (ABA)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
2. Art therapy	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
3. Assistive technology	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
4. Augmentative and alternative communication (AAC)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
5. Behavior contract	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
6. Choice making	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
7. Direct instruction of social skills	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
8. Discrete trial training (DTT)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
9. Edible reinforcement	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
10. Educating typically developing students about ASD.	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
11. Extra time to complete assignments.	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
12. Facilitated communication (FC)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
13. Floor time	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
14. Functional Behavior Assessment/Analysis (FBA)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
15. Gentle Teaching	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
16. Incidental teaching	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
17. Joint action routines (JARs)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
18. Peer initiation	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
19. Peer tutoring	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
20. Picture exchange communication system (PECS)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective

Strategy	Heard of this?		Used? Choose One			Effective? Choose One			
21. Pivotal response training (PRT)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
22. Play-oriented strategies	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
23. Preferential seating	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
24. Priming techniques	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
25. Prompting techniques	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
26. Providing a student "home base"	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
27. Providing a list of schedule changes for the school day	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
28. Providing a list of teacher expectations for in-class behavior	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
29. Relationship development intervention (RDI)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
30. Scripts (e.g. cognitive scripts)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
31. Sensory integration (SI)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
32. Social stories	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
33. Structured teaching (TEACCH method)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
34. Token economies	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
35. Van Dijk curricular approach	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
36. Verbal reinforcement/Praise	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
37. Visual activity schedules	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective

If there is another strategy you use in your classroom or you wish to clarify/elaborate on a response from the choices above, please

do so in the space below (or on the back of this page): _____

_____

_____

_____

_____

Additional notes or comments: _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Section 6: Future Involvement in Research

Would you be interested in participating in a focus group discussing issues addressed in this Questionnaire?   Yes ☐   No ☐

Phone number _____ ____   Email _____

Appendix C

Autism Inclusion Questionnaire – Psychologist Form

Section 1: Demographic Information and Experience

Today's Date: _____

County _____   State _____

Sex: Male ☐   Female ☐   Age _____

Ethnicity: African American   ☐   Asian American   ☐   Caucasian/White   ☐

           Hispanic/Latino   ☐   Native American   ☐   Other ☐ _____

Professional Title: School Psychologist ☐   Psychometrist ☐   Psychologist ☐

                    Behavioral Interventionist ☐   Graduate Student ☐   Other   ☐ _____

What is your highest degree earned?   High School diploma ☐   Associate's degree ☐   Bachelor's degree ☐

                    Master's degree   ☐   Specialist's degree ☐   Doctorate degree   ☐

Time in current position: _____ years _____ months

Please list any prior Educator positions held and the length of time in that position.

1_____

2_____

3_____

Are you **certified** in Special Education?   Yes ☐   No ☐

If 'No', have you had **training** in Special Education?   Yes ☐   No ☐

     If 'Yes', please explain. _____

_____

_____

Are you a **certified** School Psychologist?   Yes ☐   No ☐

Are you a **licensed** Psychologist?   Yes ☐   No ☐

Have you had specific **training** to educate or assess students with an Autism Spectrum Disorder (ASD)?   Yes ☐   No ☐

     If 'Yes', please explain. _____

_____

_____

Have you had specific **experience** working with or educating students with an Autism Spectrum Disorder (ASD)? Yes ☐   No ☐

     If 'Yes', please explain. _____

_____

_____

Section 2: Knowledge of Autism Spectrum Disorders

Circle TRUE or FALSE for the following questions based on your current knowledge of Autism Spectrum Disorders (ASDs).

Please, DO NOT GUESS. If you are unsure of an answer, please circle DON'T KNOW.

1. The diagnostic criteria for Asperger's Syndrome are identical to High Functioning Autism.	True	False	Don't Know
2. ASDs are developmental disorders.	True	False	Don't Know
3. Genetic factors play an important role in the causes of ASDs.	True	False	Don't Know
4. ASDs exist only in childhood.	True	False	Don't Know
5. Behavior therapy is an intervention most likely to be effective for children with ASDs.	True	False	Don't Know
6. Children with ASDs are very similar to one another.	True	False	Don't Know
7. Early intervention demonstrates no additional benefit to children with an ASD.	True	False	Don't Know
8. If an intervention works for one child with an ASD, it will definitely work for another child with an ASD.	True	False	Don't Know
9. Medication can alleviate the core symptoms of ASDs.	True	False	Don't Know
10. Most children with ASDs have cognitive abilities in the intellectually disabled range.	True	False	Don't Know
11. Most children with ASDs have special talents or abilities.	True	False	Don't Know
12. In many cases, the cause of ASDs is unknown.	True	False	Don't Know
13. The core deficits in ASDs are Impaired Social Understanding, Language Abnormalities, and Impaired Sensory Functioning.	True	False	Don't Know
14. Traumatic experience very early in life can cause an ASD.	True	False	Don't Know
15. With proper intervention, most children with an ASD will eventually "outgrow" the disorder.	True	False	Don't Know

Section 3: Opinions about Inclusive Education

Please mark the response that best describes how you feel about the following statements:

	Strongly Agree	Agree	Somewhat Agree	Somewhat Disagree	Disagree	Strongly Disagree	No opinion or Neutral
1. The severity of disability is an important factor in the successful inclusion of a student with **ADHD**.	☐	☐	☐	☐	☐	☐	☐
2. Children with an **ASD** should be integrated in general education settings.	☐	☐	☐	☐	☐	☐	☐
3. The help of an auxiliary teaching professional (i.e. paraprofessional) is an important factor in the successful inclusion of a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
4. The academic ability of the student is an important factor in the successful inclusion of a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
5. The severity of disability is an important factor in the successful inclusion of a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
6. The student's personality is an important factor in the successful inclusion of a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
7. The attitude of the staff is an important factor in the successful inclusion of a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
8. All students with an **ASD** should be included in general education settings.	☐	☐	☐	☐	☐	☐	☐
9. Children with **special educational needs** should be integrated in general education settings.	☐	☐	☐	☐	☐	☐	☐
10. One on one intervention is an important factor in the successful inclusion of a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
11. Encouraging students with an **ASD** to interact with typically developing peers is an important factor in the successful inclusion of a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
12. The use of reinforcement schedules is an important factor in the successful inclusion of a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
13. Medication and drug therapy is an important factor in the successful inclusion of a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
14. Children with **ADHD** should be integrated in general education settings.	☐	☐	☐	☐	☐	☐	☐

	Strongly Agree	Agree	Somewhat Agree	Somewhat Disagree	Disagree	Strongly Disagree	No opinion or Neutral
15. Only teachers with extensive special education experience can be expected to deal with students with **special education needs** in a school setting.	☐	☐	☐	☐	☐	☐	☐
16. The attitude of the staff is an important factor in the successful inclusion of a student with **special needs**.	☐	☐	☐	☐	☐	☐	☐
17. Only teachers with extensive special education experience can be expected to deal with students with an **ASD** in a school setting.	☐	☐	☐	☐	☐	☐	☐
18. Inclusive education enhances the learning experience of students with disabilities.	☐	☐	☐	☐	☐	☐	☐
19. The severity of disability is an important factor in the successful inclusion of a student with **special needs**.	☐	☐	☐	☐	☐	☐	☐
20. Only teachers with extensive special education experience can be expected to deal with students with **ADHD** in a school setting.	☐	☐	☐	☐	☐	☐	☐
21. Students with **classic autism** are too impaired to benefit from the activities of a regular school.	☐	☐	☐	☐	☐	☐	☐
22. A good general education teacher can do a lot to help a student with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
23. No discretionary financial resources should be allocated for the inclusion of students with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
24. The attitude of the staff is an important factor in the successful inclusion of a student with **ADHD**.	☐	☐	☐	☐	☐	☐	☐
25. Students without disabilities can benefit from contact with students with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
26. Special schools specifically designed for their needs are the most appropriate placement for students with an **ASD**.	☐	☐	☐	☐	☐	☐	☐
27. It is important for children with an **ASD** to receive special education services at school.	☐	☐	☐	☐	☐	☐	☐

Section 4: Classroom Behaviors

Please indicate how disruptive the following behaviors might be if exhibited by any student in a classroom:

	Highly Disruptive	Disruptive	Somewhat Disruptive	Slightly Disruptive	Not at all Disruptive
Aggression (to peers or adults).	☐	☐	☐	☐	☐
Aloofness or lack of awareness of what the teacher is doing.	☐	☐	☐	☐	☐
Difficulty in reciprocal conversation.	☐	☐	☐	☐	☐
Eye contact avoidance.	☐	☐	☐	☐	☐
Fear of harmless objects.	☐	☐	☐	☐	☐
High levels of activity.	☐	☐	☐	☐	☐
Inappropriate emotionality (e.g. inappropriate anxiety or inappropriate laughter).	☐	☐	☐	☐	☐
Lack of peer relations.	☐	☐	☐	☐	☐
Non compliance to teacher authority.	☐	☐	☐	☐	☐
Off-task behavior.	☐	☐	☐	☐	☐
Poor peer relations.	☐	☐	☐	☐	☐
Preoccupation with one particular object or toy.	☐	☐	☐	☐	☐
Preoccupation with touching, smelling or tasting objects or people.	☐	☐	☐	☐	☐
Problems with non-verbal behavior (e.g. pointing randomly or using bizarre gestures).	☐	☐	☐	☐	☐
Repetitive, bizarre, or echolalic speech	☐	☐	☐	☐	☐
Resistance and negative reaction to changes in the schedule.	☐	☐	☐	☐	☐
Rudeness in making requests.	☐	☐	☐	☐	☐
Screaming, crying, or tantruming.	☐	☐	☐	☐	☐
Sensitivity to sounds.	☐	☐	☐	☐	☐
Strange or unusual body movements such as finger flicking, spinning, or rocking	☐	☐	☐	☐	☐

Section 5: Classroom Practices

From the following list, please CIRCLE 1) whether you have HEARD OF the strategy, 2) whether you have USED the strategy, and

3) whether you think it is or could be EFFECTIVE **in better including a student with an ASD**:

Strategy	Heard of this?		Used? Choose One			Effective? Choose One			
1. Applied behavior analysis (ABA)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
2. Art therapy	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
3. Assistive technology	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
4. Augmentative and alternative communication (AAC)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
5. Behavior contract	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
6. Choice making	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
7. Direct instruction of social skills	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
8. Discrete trial training (DTT)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
9. Edible reinforcement	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
10. Educating typically developing students about ASD.	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
11. Extra time to complete assignments.	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
12. Facilitated communication (FC)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
13. Floor time	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
14. Functional Behavior Assessment/Analysis (FBA)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
15. Gentle Teaching	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
16. Incidental teaching	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
17. Joint action routines (JARs)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
18. Peer initiation	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
19. Peer tutoring	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
20. Picture exchange communication system (PECS)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective

Strategy	Heard of this?		Used? Choose One			Effective? Choose One			
21. Pivotal response training (PRT)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
22. Play-oriented strategies	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
23. Preferential seating	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
24. Priming techniques	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
25. Prompting techniques	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
26. Providing a student "home base"	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
27. Providing a list of schedule changes for the school day	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
28. Providing a list of teacher expectations for in-class behavior	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
29. Relationship development intervention (RDI)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
30. Scripts (e.g. cognitive scripts)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
31. Sensory integration (SI)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
32. Social stories	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
33. Structured teaching (TEACCH method)	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
34. Token economies	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
35. Van Dijk curricular approach	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
36. Verbal reinforcement/Praise	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective
37. Visual activity schedules	Yes	No	Currently using	Used in the past	Never used	Very Effective	Effective	Somewhat Effective	Not Effective

If there is another strategy you use or you wish to clarify/elaborate on a response from the choices above, please do so in the space

below (or on the back of this page): _____

_____

_____

_____

_____

Additional notes or comments: _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Section 6: Future Involvement in Research

Would you be interested in participating in a focus group discussing issues addressed in this Questionnaire?   Yes ☐   No ☐

Phone number _____ ____   Email _____

Appendix D

Vignettes

Condition A: Low cognitive ability, no label.

Next year, Robby will be a student at your school. He is six years old and will be starting the first grade. When he talks, he sometimes repeats what was said to him instead of answering the question. And sometimes it seems like he can't hear or isn't paying attention, even though his hearing is normal. He almost never looks a person in the eye. Sometimes Robby waves his hands around or bounces up and down in his chair. Robby has a hard time changing activities, going from one thing to doing something else. Often, it seems like Robby does not want to play with other children and when he does, it seems like he does not know what to do. A recent individually administered test of intelligence indicated that Robby's intelligence was in the range for Moderate Intellectual Disability (IQ = 50). Your district's School Psychologist suggests that Robby will learn to read slower than other children and has not mastered age-appropriate daily living skills, such as independently putting his shoes on the correct feet.

Condition B: Low cognitive ability, labeled autism.

Next year, Robby will be a student at your school. He is six years old and will be starting the first grade. When he talks, he sometimes repeats what was said to him instead of answering the question. And sometimes it seems like he can't hear or isn't paying attention, even though his hearing is normal. He almost never looks a person in the eye. Sometimes Robby waves his hands around or bounces up and down in his chair. Robby has a hard time changing activities, going from one thing to doing something else. Often, it seems like Robby does not want to play with other children and when he does, it seems like he does not know what to do. A recent individually administered test of intelligence indicated that Robby's intelligence was in the range for Moderate Intellectual Disability (IQ = 50). Your district's School Psychologist suggests that Robby will learn to read slower than other children and has not mastered age-appropriate daily living skills, such as independently putting his shoes on the correct feet. Robby is diagnosed with autism.

Condition C: Low cognitive ability, labeled intellectual disability.

Next year, Robby will be a student at your school. He is six years old and will be starting the first grade. When he talks, he sometimes repeats what was said to him instead of answering the question. And sometimes it seems like he can't hear or isn't paying attention, even though his hearing is normal. He almost never looks a person in the eye. Sometimes Robby waves his hands around or bounces up and down in his chair. Robby has a hard time changing activities, going from one thing to doing something else. Often, it seems like Robby does not want to play with other children and when he does, it seems like he does not know what to do. A recent individually administered test of intelligence indicated that Robby's intelligence was in the range for Moderate Intellectual Disability (IQ = 50). Your district's School Psychologist suggests that Robby will learn to read slower than other children and has not mastered age-appropriate daily living skills, such as independently putting his shoes on the correct feet. Robby is diagnosed with intellectual disability.

Condition D: Average cognitive ability, no label.

Next year, Robby will be a student at your school. He is six years old and will be starting the first grade. When he talks, he sometimes repeats what was said to him instead of answering the question. And sometimes it seems like he can't hear or isn't paying attention, even though his hearing is normal. He almost never looks a person in the eye. Sometimes Robby waves his hands around or bounces up and down in his chair. Robby has a hard time changing activities, going from one thing to doing something else. Often, it seems like Robby does not want to play with other children and when he does, it seems like he does not know what to do. A recent individually administered test of intelligence indicated that Robby's intelligence was in the Average range (IQ = 100). Your district's School Psychologist suggests that Robby will learn to read at a pace similar to other children and has mastered age-appropriate daily living skills, such as independently putting his shoes on the correct feet.

Condition E: Average cognitive ability, labeled autism.

Next year, Robby will be a student at your school. He is six years old and will be starting the first grade. When he talks, he sometimes repeats what was said to him instead of answering the question. And sometimes it seems like he can't hear or isn't paying attention, even though his hearing is normal. He almost never looks a person in the eye. Sometimes Robby waves his hands around or bounces up and down in his chair. Robby has a hard time changing activities, going from one thing to doing something else. Often, it seems like Robby does not want to play with other children and when he does, it seems like he does not know what to do. A recent individually administered test of intelligence indicated that Robby's intelligence was in the Average range (IQ = 100). Your district's School Psychologist suggests that Robby will learn to read at a pace similar to other children and has mastered age-appropriate daily living skills, such as independently putting his shoes on the correct feet. Robby is diagnosed with autism.

Condition F: Average cognitive ability, labeled Asperger's syndrome.

Next year, Robby will be a student at your school. He is six years old and will be starting the first grade. When he talks, he sometimes repeats what was said to him instead of answering the question. And sometimes it seems like he can't hear or isn't paying attention, even though his hearing is normal. He almost never looks a person in the eye. Sometimes Robby waves his hands around or bounces up and down in his chair. Robby has a hard time changing activities, going from one thing to doing something else. Often, it seems like Robby does not want to play with other children and when he does, it seems like he does not know what to do. A recent individually administered test of intelligence indicated that Robby's intelligence was in the Average range (IQ = 100). Your district's School Psychologist suggests that Robby will learn to read at a pace similar to other children and has mastered age-appropriate daily living skills, such as independently putting his shoes on the correct feet. Robby is diagnosed with Asperger's syndrome.

Appendix E

Placement and Services Survey

Section 1: Educational Placement

For the following items, please indicate your opinion on the appropriateness of each educational placement for Robby:

	Very Inappropriate	Inappropriate	Slightly Inappropriate	Slightly appropriate	Appropriate	Very appropriate
1. Residential facility	☐	☐	☐	☐	☐	☐
2. Special school for students like Robby	☐	☐	☐	☐	☐	☐
3. Separate (self-contained) classroom for the entire school day	☐	☐	☐	☐	☐	☐
4. Separate (self-contained) classroom, but portions of the day (e.g., lunch, recess, art, PE) may be with regular education students	☐	☐	☐	☐	☐	☐
5. General education classroom for at least 50% of the day	☐	☐	☐	☐	☐	☐
6. General education classroom for at least 80% of the day	☐	☐	☐	☐	☐	☐
7. General education classroom for 100% of the day	☐	☐	☐	☐	☐	☐
8. My classroom	☐	☐	☐	☐	☐	☐

Which educational setting is **most appropriate** for Robby? (Please <u>select only one</u> option)

Residential Facility	Special School	Self-contained all day	Self-contained partial	General education (>50%)	General education (>80%)	General education entire day
☐	☐	☐	☐	☐	☐	☐

Under which IDEIA category of special education eligibility, do you think Robby could be served? <u>Check only one</u>:

☐ None. Robby does not need special education services.

☐ Autism	☐ Deaf-Blindness	☐ Deafness
☐ Hearing Impairment	☐ Mental Retardation	☐ Multiple Disabilities
☐ Orthopedic Impairment	☐ Other Health Impairment	☐ Serious Emotional Disturbance
☐ Significant Developmental Delay	☐ Specific Learning Disability	☐ Speech or Language Impairment
☐ Traumatic Brain Injury	☐ Visual Impairment, including blindness	

Section 2: Successful Inclusion

For the following items, <u>assume that Robby is indeed eligible for special education services, and his special education needs will be met, at least partially, in the general education setting</u>. When the needs of students with disabilities are met in this way, it is often referred to as "inclusion". The term, "successful inclusion", however, is often undefined. Please **think about what "successful inclusion" means to you**.

Please take a moment to describe your personal definition of "successful inclusion" for Robby. _____

_____

_____

_____

_____ _____

Please, rate the following items in terms of **how important they are to YOUR definition** of "successful inclusion" for Robby.

Successful inclusion means that . . .	Very Unimportant	Unimportant	Slightly Unimportant	Slightly Important	Important	Very Important
Robby improves his communication skills	☐	☐	☐	☐	☐	☐
Robby improves his social skills	☐	☐	☐	☐	☐	☐
Robby improves his academic abilities	☐	☐	☐	☐	☐	☐
Robby decreases his disruptive behaviors	☐	☐	☐	☐	☐	☐
Robby's teacher has a positive attitude towards Robby	☐	☐	☐	☐	☐	☐
Robby's classmates have a positive attitude toward Robby	☐	☐	☐	☐	☐	☐
Robby passes the first grade	☐	☐	☐	☐	☐	☐
The following year, Robby is placed in an environment that is as or less restrictive than his current placement	☐	☐	☐	☐	☐	☐
Robby makes at least one friend in his class	☐	☐	☐	☐	☐	☐
Robby is in attendance at least 85% of the school year	☐	☐	☐	☐	☐	☐
Robby increases his self-esteem	☐	☐	☐	☐	☐	☐

Section 3: Factors for Successful Inclusion of Robby

Based on your definition of "successful inclusion" for Section 2, please indicate your level of agreement with the following statements. Again, please assume that Robby is indeed eligible for special education services, and his special education needs will be met, at least partially, in the general education setting.

	Strongly Agree	Agree	Somewhat Agree	Somewhat Disagree	Disagree	Strongly Disagree
The help of an auxiliary teaching professional (i.e. paraprofessional) is an important factor in the successful inclusion of Robby.	☐	☐	☐	☐	☐	☐
The academic ability of Robby is an important factor in his successful inclusion	☐	☐	☐	☐	☐	☐
The severity of Robby's disability is an important factor in his successful inclusion.	☐	☐	☐	☐	☐	☐
Robby's personality is an important factor in his successful inclusion.	☐	☐	☐	☐	☐	☐
The attitude of the staff working with Robby is an important factor in his successful inclusion.	☐	☐	☐	☐	☐	☐
One-on-one intervention is an important factor in the successful inclusion of Robby.	☐	☐	☐	☐	☐	☐
Encouraging Robby to interact with typically developing peers is an important factor in his successful inclusion.	☐	☐	☐	☐	☐	☐
The use of reinforcement schedules with Robby is an important factor in his successful inclusion.	☐	☐	☐	☐	☐	☐
Medication is an important factor in the successful inclusion of Robby.	☐	☐	☐	☐	☐	☐
Extensive special education experience for Robby's classroom teacher(s) is an important factor in the successful inclusion of Robby.	☐	☐	☐	☐	☐	☐

Section 4: How you feel about Robby

Please mark the response that best describes **how you feel** about the following statements:

	Strongly Agree	Agree	Somewhat Agree	Somewhat Disagree	Disagree	Strongly Disagree
I would be pleased if Robby was a student in my class.	☐	☐	☐	☐	☐	☐
I would feel comfortable talking to Robby, even if I didn't know him.	☐	☐	☐	☐	☐	☐
I would be afraid to have Robby in my classroom.	☐	☐	☐	☐	☐	☐
I would be embarrassed if Robby had a birthday party in my classroom.	☐	☐	☐	☐	☐	☐
I would feel upset when I see Robby.	☐	☐	☐	☐	☐	☐
Children like Robby should be included in general education settings.	☐	☐	☐	☐	☐	☐
Inclusive education enhances the learning experience of students like Robby.	☐	☐	☐	☐	☐	☐
Students like Robby are too impaired to benefit from the activities of a regular school.	☐	☐	☐	☐	☐	☐
Students without disabilities can benefit from contact with students like Robby.	☐	☐	☐	☐	☐	☐
It is important for children like Robby to receive special education services at school.	☐	☐	☐	☐	☐	☐
Robby will expect lots of attention from adults.	☐	☐	☐	☐	☐	☐
Robby will want to do many things for himself.	☐	☐	☐	☐	☐	☐
Robby will be able to do many things for himself.	☐	☐	☐	☐	☐	☐
Robby will be able to make new friends.	☐	☐	☐	☐	☐	☐
Robby will enjoy playing with other students.	☐	☐	☐	☐	☐	☐
I would not take Robby on a field trip with the rest of my class.	☐	☐	☐	☐	☐	☐
I would not know what to say to Robby if he were in my classroom.	☐	☐	☐	☐	☐	☐
I would try and stay away from Robby if he were a student in my school.	☐	☐	☐	☐	☐	☐
I would try not to look at Robby if he were at my school.	☐	☐	☐	☐	☐	☐
I would adapt Robby's assignments to meet his unique needs if he were a student in my class.	☐	☐	☐	☐	☐	☐
I would encourage other students in my class to interact with Robby.	☐	☐	☐	☐	☐	☐
I know how to educate a student like Robby.	☐	☐	☐	☐	☐	☐

Section 4: How you feel about Robby, continued

	Strongly Agree	Agree	Somewhat Agree	Somewhat Disagree	Disagree	Strongly Disagree
I am confident in my abilities to manage Robby's behavior.	☐	☐	☐	☐	☐	☐
I am aware of resources that can help me educate Robby.	☐	☐	☐	☐	☐	☐
I am a competent teacher.	☐	☐	☐	☐	☐	☐
I am well-trained in early childhood education.	☐	☐	☐	☐	☐	☐
I am confident in my abilities to manage my classroom's behavior.	☐	☐	☐	☐	☐	☐
My principal would want Robby placed in a general education setting.	☐	☐	☐	☐	☐	☐
I value my principal's opinions on placement decisions for students at our school.	☐	☐	☐	☐	☐	☐
The director of special education in my county would want Robby placed in a general education setting.	☐	☐	☐	☐	☐	☐
Other general education teachers at my school would want Robby placed in a general education setting.	☐	☐	☐	☐	☐	☐
The parents of typically developing students in my classroom would want Robby placed in their child's classroom.	☐	☐	☐	☐	☐	☐

Section 5: Classroom Behaviors

Please indicate how disruptive the following behaviors might be if exhibited by **any student** in your classroom:

	Highly Disruptive	Disruptive	Somewhat Disruptive	Slightly Disruptive	Not at all Disruptive
Eye contact avoidance.	☐	☐	☐	☐	☐
High levels of activity.	☐	☐	☐	☐	☐
Inattention	☐	☐	☐	☐	☐
Poor peer relations.	☐	☐	☐	☐	☐
Repetitive, bizarre, or echolalic speech	☐	☐	☐	☐	☐
Resistance and negative reaction to changes in the schedule.	☐	☐	☐	☐	☐
Strange or unusual body movements such as finger flicking, spinning, or rocking	☐	☐	☐	☐	☐

Section 6: Service and Practice Options

Read each of the classroom practices and service options below and **indicate if you have heard of this practice AND believe you know what it is**. *If you have heard of the practice, but are not sure what it is, please select NO*. Next, based on the placement you chose for Robby in Section 1, please **select the practice(s) you believe would be helpful for his education** next year. For the options you select, please also **rate how effective** you think it will be. Please **circle** your responses.

Practice	Heard of this?		Helpful for Robby		Effective? Choose One			
Assistive technology, including augmentative and alternative communication (e.g., PECS, sign language	Yes	No	Yes	No	Very Effective	Effective	Somewhat Effective	Not Effective
Discrete trial training (DTT)	Yes	No	Yes	No	Very Effective	Effective	Somewhat Effective	Not Effective
Educating typically developing students about Robby.	Yes	No	Yes	No	Very Effective	Effective	Somewhat Effective	Not Effective
Modifications to class assignments.	Yes	No	Yes	No	Very Effective	Effective	Somewhat Effective	Not Effective
Functional Behavior Assessment/Analysis (FBA)	Yes	No	Yes	No	Very Effective	Effective	Somewhat Effective	Not Effective
Naturalistic prompting procedures (e.g., Pivotal response training, Incidental teaching, etc.)	Yes	No	Yes	No	Very Effective	Effective	Somewhat Effective	Not Effective
Sensory integration (SI)	Yes	No	Yes	No	Very Effective	Effective	Somewhat Effective	Not Effective
Visual activity schedules	Yes	No	Yes	No	Very Effective	Effective	Somewhat Effective	Not Effective
Peer mediated social skills interventions	Yes	No	Yes	No	Very Effective	Effective	Somewhat Effective	Not Effective
Social skills instruction without the use of typically developing peers	Yes	No	Yes	No	Very Effective	Effective	Somewhat Effective	Not Effective
Reinforcement contingencies for appropriate behavior	Yes	No	Yes	No	Very Effective	Effective	Somewhat Effective	Not Effective
Speech-language pathologist services	Yes	No	Yes	No	Very Effective	Effective	Somewhat Effective	Not Effective
Occupational therapist services	Yes	No	Yes	No	Very Effective	Effective	Somewhat Effective	Not Effective
Paraprofessional who works with Robby.	Yes	No	Yes	No	Very Effective	Effective	Somewhat Effective	Not Effective
Adaptations to the classroom environment to meet Robby's sensory needs	Yes	No	Yes	No	Very Effective	Effective	Somewhat Effective	Not Effective

Section 7: Experience with Autism Spectrum Disorders

The following questions ask about your training and experience in working with children with Autism Spectrum Disorders (ASDs). Please answer each question to the best of your recollection.

I have worked with students with ASD in the past.   Yes ☐   No ☐   If so, approximately how many? _____

      If yes, in what capacity? Check all that apply:

☐ General Education Teacher   ☐ Paraprofessional   ☐ Occupational Therapist

☐ Speech/Language Pathologist   ☐ Camp Counselor   ☐ Care worker (e.g., babysitter)

☐ Academic Tutor   ☐ Researcher   ☐ Social skills group

☐ Special Education Teacher   ☐ Behavior Therapist   ☐ Other

      If "Other", please describe: _____

_____

I have taken at least one course in which the main topic was ASD.   Yes ☐   No ☐

I have received specific training in the area of ASD.   Yes ☐   No ☐

      If yes, what type of training? Check all that apply:

☐ In-school workshop   ☐ County-wide training   ☐ Conference   ☐ Video training

☐ Read books on the subject   ☐ Information on the Internet   ☐ Peer mentoring   ☐ Observations

☐ Private consultation   ☐ Read research on the subject   ☐ Other

      If "Other", please explain: _____

_____

I am certified in special education.   Yes ☐   No ☐

I am familiar with behavioral techniques to classroom behavior management.   Yes ☐   No ☐

Section 8: Knowledge of Autism Spectrum Disorders

Circle TRUE or FALSE for the following questions based on your current knowledge of Autism Spectrum Disorders (ASDs). Please, DO NOT GUESS. If you are unsure of an answer, please circle DON'T KNOW.

The diagnostic criteria for Asperger's Syndrome are identical to High Functioning Autism.	True	False	Don't Know
ASDs are developmental disorders.	True	False	Don't Know
Behavior therapy is an intervention most likely to be effective for children with ASDs.	True	False	Don't Know
Children with ASDs are very similar to one another.	True	False	Don't Know
Early intervention demonstrates no additional benefit to children with an ASD.	True	False	Don't Know
Medication can alleviate the core symptoms of ASDs.	True	False	Don't Know
Most children with ASDs have special talents or abilities.	True	False	Don't Know
In many cases, the cause of ASDs is unknown.	True	False	Don't Know
Traumatic experience very early in life can cause an ASD.	True	False	Don't Know
With proper intervention, most children with an ASD will eventually "outgrow" the disorder.	True	False	Don't Know

Section 9: Demographic Information

Today's Date: _____

School _____   County _____

Sex: Male ☐   Female ☐   Age _____

Ethnicity: African American   ☐   Asian American   ☐   Caucasian/White   ☐

Hispanic/Latino   ☐   Native American   ☐   Other ☐ _____

Teacher Title: General Education ☐   Special Education ☐   Specialist ☐

Paraprofessional ☐   Resource ☐   Other ☐ _____

What grade do you teach?   _____

What is your highest degree earned?   High School diploma ☐   Associate's degree ☐   Bachelor's degree ☐

Master's degree   ☐   Specialist's degree ☐   Doctorate degree   ☐

Time in current position: _____ years _____ months

Please list any prior Educator positions held and the length of time in that position.

1_____

2_____

3_____

About how many students are in your classroom? _____   How many teachers? _____

Do you currently have any students with an IEP in your classroom?   Yes ☐   No ☐   If 'Yes', how many? _____

Under which IDEA categories of eligibility are your Special Education students being served? Check all that apply:

☐ Autism   ☐ Deaf-Blindness   ☐ Deafness

☐ Hearing Impairment   ☐ Mental Retardation   ☐ Multiple Disabilities

☐ Orthopedic Impairment   ☐ Other Health Impairment   ☐ Serious Emotional Disturbance

☐ Significant Developmental Delay   ☐ Specific Learning Disability   ☐ Speech or Language Impairment

☐ Traumatic Brain Injury   ☐ Visual Impairment, including blindness

----

Section 10: Contact information

So that you may be contacted to receive a monetary incentive for your participation, please provide your name and email contact below:

Name _____   Email _____

Would you be interested in participating in a focus group discussing issues addressed in this Questionnaire?   Yes ☐   No ☐