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Seattle Public Schools Educators' Perceptions of the Efficacy of Autism Inclusion Programs

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SEATTLE PUBLIC SCHOOLS EDUCATORS' PERCEPTIONS OF THE
EFFICACY OF AUTISM INCLUSION PROGRAMS

BY

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THESIS SUBMITTED TO SCRIPPS COLLEGE IN PARTIAL
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ABSTRACT

The number of children diagnosed with Autism Spectrum Disorders (ASD) is on the rise, both in the United States and around the world. The Individuals with Disabilities ACT (IDEA 2004) and No Child Left Behind Act (2001) mandate that children with disabilities, including children with ASD, be educated in the Least Restrictive Environment (LRE). The general education classroom is increasingly identified as the LRE. General education teachers are increasingly responsible for educating students with ASD, often with little or no training on ASD or intervention methods. Few previous studies have explored general education teachers' experiences and attitude towards inclusion of learners with ASD. This study examines general education teachers' perceptions of the effectiveness of inclusion in their schools and their experiences teaching in inclusive settings. This study illuminated two areas of interest: first, teachers were supportive of inclusion, and second, teachers identified areas where they felt inclusion policies needed to be improved in order for inclusion practices to be more effective. This paper subsequently analyzes the aforementioned trends and provides recommendations for further study of inclusion of students with ASD in the general education classroom.

INTRODUCTION

Diagnoses of Autism Spectrum Disorders (ASD) are on the rise in the United States and globally. With the passage of The Individuals with Disabilities Education Act (IDEA 2004) and No Child Left Behind Act (2001), public schools are required to educate children with disabilities, including those with ASD, in the Least Restrictive Environment (LRE). The growing trend in education is for children with disabilities to be included in the general education classroom full or part time. The IDEA (2004) and No Child Left Behind (2001) also include the directive that teachers use evidence-based interventions with their students with disabilities. However, teachers are not always well informed about research-based interventions or autism-specific training. There are few studies on general education teachers' perceptions of program effectiveness of inclusion, or their experience teaching in inclusive settings.

Utilizing qualitative research methods, this study will outline the experiences of teachers who teach in inclusion classrooms in Seattle Public Schools. The data gleaned from interviews with teachers will be used to analyze general education teachers' perceptions of the effectiveness of inclusion of learners with ASD in their schools. Overall, teachers' attitude towards inclusion was favorable. However, teachers felt that inclusion policy was lacking in certain areas; it was revealed that teachers feel that they need both training and support in the classroom for inclusion practices to be most effective. This paper concludes with recommendations for areas in need of further research.

LITERATURE REVIEW

Autism Spectrum Disorders

Autism Spectrum Disorders are a range of developmental disorders that can cause difficulties with thinking, feeling, communicating, and the ability to relate to people.¹ People with ASDs often have communication deficits, including misreading nonverbal cues, or having difficulty making age-appropriate friendships.² Individuals with ASDs “may be overly dependent on routines, highly sensitive to changes in their environment, or intensely focused on inappropriate items.”³ ASDs affect each person differently and symptoms can range from very mild to very severe. ASDs are reported in all racial, ethnic and socioeconomic groups.⁴ The Center for Disease Control’s Autism and Developmental Disabilities Monitoring Network reports that approximately 1 in 68 children have been diagnosed with an Autism Spectrum Disorder.⁵ The CDC also reports that ASDs are nearly five times more common in boys than in girls.⁶ People are being diagnosed with ASD in higher numbers than ever before, but it is unclear whether this

¹ American Psychiatric Association, “Autism Spectrum Disorders,” *American Psychiatric Association*, accessed March 20, 2014 <http://www.psychiatry.org/mental-health/autism-spectrum-disorders>.

² American Psychiatric Association, "DSM-5 Autism Spectrum Disorder [Fact Sheet]," <http://www.psychiatry.org/mental-health/autism-spectrum-disorders> (accessed March 20, 2014).

³ Ibid.

⁴ Centers for Disease Control and Prevention, “Autism Spectrum Disorders, Data & Statistics,” *Centers for Disease Control and Prevention*, accessed March 20, 2014, <http://www.cdc.gov/ncbddd/autism/data.html>.

⁵ Ibid.

⁶ Ibid.

increase is due to the recent changes in definition of ASD, improved diagnoses, or a combination of the two factors (CDC).⁷

History of Inclusion

The growing number of children diagnosed with ASD and the trend in education towards inclusion or mainstreaming of children with disabilities in inclusive settings means that general education teachers increasingly find themselves responsible for educating children with ASD. Under The Individuals with Disabilities Education Act (IDEA 2004) and No Child Left Behind Act (2001) schools are required to implement research-based practices in the least restrictive environment (LRE). The LRE is increasingly defined as the general education classroom.

Avramidis et al. (2000) found in their extensive review of the literature that there has been a widespread move in education for students with special needs from “psychomedical” to “interactive” or “organizational.” The earlier, “psychomedical” paradigm emphasized the differences in students as the primary area of concentration, focusing on the characteristics of the “disabled” student. This has been largely replaced by the “interactive” or “organizational” paradigm, which recognizes the interaction of different elements in the educational system, including the student with learning disabilities.⁸ Avramidis et al observed that the new approach acknowledges differences between individual children but does not view these differences alone as “adequately

⁷ Centers for Disease Control and Prevention, “Facts About ASD,” *Centers for Disease Control and Prevention*, accessed March 20, 2014, <http://www.cdc.gov/ncbddd/autism/facts.html>.

⁸ Elias Avramidis, Phil Bayliss, and Robert Burden, “Student Teachers’ Attitudes Towards the Inclusion of Children with Special Education Needs in the Ordinary School,” *Teaching and Teacher Education* 16 (2000): 277.

accounting for the educational failure of children.”⁹ The emphasis in education for students with ASD and other Special Education Needs (SEN) has been toward “integration,” which includes both “inclusion” models in which students with special needs are placed in regular classrooms with some accommodations and hybrids between self-contained classrooms and regular classroom inclusion—for example, a regular classroom where specifically designed modifications for ASD children are a regular part of the curriculum, along with the general classroom experience.¹⁰

Behavioral Challenges

Proponents of inclusion argue that inclusion benefits all children. However, students with ASDs display higher levels of behavioral and emotional challenges than their typically developing classmates. Research suggests that students with ASDs “exhibit significantly higher levels of behavioral and emotional difficulties in school than their typically developing peers in a wide range of areas including attention difficulties (e.g. hyperactivity and inattention), internalizing behaviors (e.g. anxiety, depression, withdrawal and shyness) and externalizing behaviors (e.g. oppositional and aggressive behaviors).”¹¹ In an age-and-gender matched comparison of students with ASDs and typically developing students, Ashburner, et al. (2010) found that students with ASDs had higher levels of emotional difficulties. A high percentage of students with ASDs have attention difficulties. Of Ashburner et al.’s sample, 36% of students with ASDs

⁹ Avramidis et al., “Student Teachers’ Attitudes,” 277.

¹⁰ Ibid, 277.

¹¹ Jill Ashburner, Jenny Ziviani, and Sylvia Rodger, “Surviving in the Mainstream: Capacity of Children with Autism Spectrum Disorders to Perform Academically and Regulate Their Emotions and Behavior at School,” *Research in Autism Spectrum Disorders* 4 (2010): 23.

displayed clinical levels hyperactive symptoms and 36% displayed borderline levels.¹² This study also found that 32% of students with ASDs displayed clinically significant inattentive symptoms and 43% borderline.¹³ Ashburner et al. found that level of academic under-achievement of students with ASDs were much higher than those of typically developing students (54% versus 8%). The discrepancy that Ashburner et al. found suggest that existing mainstream school systems may not be supporting students with ASDs to reach their full academic potential.¹⁴ This finding is worrisome and future studies should examine under-achievement in inclusion students with ASD.

Role of Typically Developing Peers

The typically developing peers of students with ASD play an important role in the quality of inclusion. Few studies have examined the relationship between students with ASD and their typical developing peers “in relation to global friendship networks.”¹⁵ Chamberlain et al. utilized social network clustering methods to investigate the level of social inclusion of students with ASDs in general education classrooms.¹⁶ Students reported on “friendship qualities, peer acceptance, loneliness and classroom social networks.”¹⁷ Students completed the Loneliness and Friendship Qualities Scale. The Loneliness and Friendship Qualities Scale consist of three types of friendship

¹² Ashburner et al., “Surviving in the Mainstream,” 23.

¹³ Ibid, 23.

¹⁴ Ibid, 26.

¹⁵ Suzannah J. Ferraioli and Sandra L. Harris, “Effective Educational Inclusion of Students on the Autism Spectrum,” *Journal of contemporary Psychotherapy* 41 (2011): 21.

¹⁶ Brandt Chamberlain, Connie Kasari, and Erin Rotheram-Fuller, “Involvement or Isolation? The Social Networks of Children with Autism in Regular Classrooms,” *Journal of Autism and Developmental Disorders* 3 (2007): 230.

¹⁷ Ibid, 230.

nominations: “Buddies,” “Top Three Friends,” and “Best Friend.”¹⁸ Peer acceptance was derived from the friendship nomination data.¹⁹ Chamberlain et al. found that “despite involvement in social networks, children with autism experienced lower centrality, acceptance, companionship and reciprocity.”²⁰ However, students with ASDs did not report greater loneliness.²¹ In general, “the average level of social network centrality (SNC) was lower for the children with autism than for their peers, they were less well accepted, and they had fewer reciprocal friendships among their ‘Top 3’ and ‘Best Friend’ nominations.”²²

However, students with ASDs did not report greater loneliness and in fact reported similar levels of closeness security and conflict to their typically developing classmates.²³ Students with ASDs tended to report themselves as more socially involved than the level of social involvement their typically developing peers assigned these students, indicating a difference in how children with ASDs see themselves and how others perceive their social status in the classroom.²⁴ Although students with ASDs’ friendships were less likely to be reciprocated than their typically developing classmates, “these relationships may still meet certain developmental functions of friendship for the children with autism such as providing a setting for trying out various senses of the self in interaction with others, for learning social skills, and for preparing for adult

¹⁸ Chamberlain et al., “Involvement or Isolation?” 233.

¹⁹ Ibid, 233.

²⁰ Ibid, 230.

²¹ Ibid, 230.

²² Ibid, 239.

²³ Ibid, 230.

²⁴ Ibid, 239.

relationships.”²⁵ While students with ASDs’ relationship with their typically developing peers may not look the same as typically developing students’ relationships with each other, these relationships nonetheless provide learning opportunities for students with ASDs and their typically developing classmates. Even when students with ASDs are not seen as a part of the group, classmates may make a substantial effort to include the student with ASD.²⁶ While the results of this study indicate that students with ASDs experience a level of obliviousness regarding their social status, other studies have found that while students with ASDs may at times appear oblivious to peer rejection, they can be aware of and hurt by peers’ scorn.

General education teachers are often “occupied monitoring academic progress and disciplinary transgressions across a range of children,” leaving inclusion practices largely up to typically developing classmates.²⁷ Peers play an important role in facilitating successful inclusion of students with ASDs into general education classrooms. However, it is unreasonable to expect typically developing children to actively include children with ASDs without education and dialogue around disability. Disclosure practices about a student’s condition may play an important role in effective inclusion. Ochs et al. conducted ethnographic research on “familial, institutional, and situational dynamics that impact the social positioning” of high functioning autistic students in general education classrooms in US public schools.²⁸ The study identified two types of inclusion; negative

²⁵ Chamberlain et al., “Involvement or Isolation?” 239.

²⁶ Ibid, 239.

²⁷ Elinor Ochs, Tamar Kremer-Sadlik, Olga Solomon, and Karen Gainer Sirota, “Inclusion as Social Practice: Views of Children with Autism,” *Social Development* 10, no. 3 (2001): 399.

²⁸ Ibid, 401.

inclusion and positive inclusion.²⁹ Negative inclusion in the study was defined as “others’ failure to attempt to include a child with special needs.”³⁰ In situations of negative inclusion high-functioning autistic children were neglected, whether due to oversight and/or overt rejection.³¹ Positive inclusion was defined as “others’ attempts to include a disabled child in the focal activity at hand, regardless of the outcome.”³² Positive inclusion involves efforts by members of the school community to connect with the high-functioning autistic child and may include minimizing differences or correcting atypical behaviors. They may minimize their differences, for example, or correct atypical behaviors in a caring manner.”³³

The results of Ochs et al.’s study suggest that, “positive inclusion may vary in relation to disclosure practices.”³⁴ In their study of 16 high-functioning autistic children, the majority of families (14) chose to inform the district and school of their child’s disorder.³⁵ Seven of the families chose not to disclose their child’s disorder to their classmates, while seven of the families requested a regional special education coordinator to facilitate their child’s entry into the classroom, or informally discussed the child’s disorder with his/her classmates.³⁶ In their observations, Ochs et al. found that the seven “HFA [high-functioning autistic] children whose diagnosis was disclosed to peers as well as to school personnel tended to encounter a more tolerant and affirming peer

²⁹ Ochs et al., “Inclusion as Social Practice,” 401.

³⁰ Ibid, 401.

³¹ Ibid, 401.

³² Ibid, 401.

³³ Ibid, 401.

³⁴ Ibid, 415.

³⁵ Ibid, 403.

³⁶ Ibid, 404.

atmosphere.”³⁷ The two high-functioning autistic children “whose families fully and elaborately disclosed their condition,” enjoyed a mostly/the most positive inclusion environment.³⁸ In contrast, “the child (Erin) whose diagnosis was unknown to school authorities and classmates often encountered negative inclusion by peers.”³⁹ While all high-functioning autistic children in the study were at times “neglected, rejected and scorned in the school setting,” high-functioning autistic children whose disorder was undisclosed “tended to have more of these experiences.”⁴⁰

Moreover, the study found that “among the families who fully disclosed the child’s condition, positive inclusion was enhanced when the child, the parent, or a clinician who knew the child engaged the child’s classmates in a discussion about autism and introduce the HFA child as a whole person.”⁴¹ In classrooms where the high-functioning autistic child’s disorder was a class-wide topic of discussion, classmates worked jointly to include the high-functioning autistic child into school activities.⁴² The findings suggest “positive inclusion experiences appear to be facilitated by peer awareness of the capabilities and impairments of HFA [high-functioning autistic] children.”⁴³ It is unreasonable to expect typically developing students, who may be unfamiliar about the symptoms of ASD to handle the at times eccentric behavior of students with ASDs.

³⁷ Ochs et al., “Inclusion as Social Practice,” 405.

³⁸ Ibid, 412.

³⁹ Ibid, 405.

⁴⁰ Ibid, 412.

⁴¹ Ibid, 415.

⁴² Ibid, 416.

⁴³ Ibid, 415.

Therefore it is important for typically developing students to be educated about ASD and more generally the nature of disabilities in order for students with ASD be successfully included in the general education classroom. The study found that “inclusion practices rest primarily upon unaffected schoolmates rather than teachers, who are often occupied monitoring academic progress & disciplinary transgressions across a range of children. Classroom peers, however, may be poorly informed and, in some cases, uninformed concerning the nature of autism and strategies for handling the idiosyncrasies of children with this disorder.”⁴⁴ The ability of typically developing peers to be able to frame and understand the behavior of a fellow student with ASD has a significant impact on peers’ ability to include a student with ASD when that student’s behavior is challenging.

There is growing recognition that typically peers play an important role in teaching students with ASD social skills. In the past, research on social skills interventions for students with ASD have focused on teacher transmitted social skills interventions. However recently a growing number of studies have focused on peer-mediated social skills interventions.⁴⁵ Ferraioli and Harris reviewed peer-mediated social skills interventions and found several promising interventions. Kamps et al. (2002) created social skills groups of typically developing students and students with ASD. After training children with ASD showed increased initiation of social interaction and typically developing peers showed increased responsiveness.⁴⁶ Two studies, one by Dugan et al. (1995) and another by Hunt et al. (1994), found that cooperative learning

⁴⁴ Ochs et al., “Inclusion as Social Practice,” 399.

⁴⁵ Ferraioli and Harris, “Effective Educational Inclusion,” 23.

⁴⁶ Ibid, 24.

groups with both typically developing students and students with ASD have shown increase in academic engagement, knowledge of subject material and scores on weekly pretests and posttests.⁴⁷ Kamps et al. (1994) found peer tutoring to be an effective intervention. Tutor peers were paired with learner peers, and tutor-learner pairs read together improved the reading skills of both the tutor and the learner.⁴⁸

Studies have shown that typically developing children tend to have positive attitudes toward their included peers. Moreover, Raab et al. (1986) found that typically developing children in inclusive classrooms did not have negative attitudes towards classmates with ASD and that typically developing children who participated in an education program about children with disabilities perceived greater competence in peers with autism than the control group.⁴⁹ Peer-mediated interventions not only benefit students with ASD, but also benefit typically developing students. An illustrative example of such an intervention is the burnout prevention program created by Vitani and Reiter (2007) for fourth graders in inclusive classes. After completing the program typical peers reported better attitudes towards students with ASDs, and more positive interactions with the child in the class with ASD. Typical peers also reported less school related burnout.⁵⁰

Research-based Interventions

Children with ASD can display challenging and disruptive behaviors. Much of the research on intervention methods for students with ASDs focuses on understanding the environmental conditions most commonly associated with challenging behaviors.

⁴⁷ Ferraioli and Harris, "Effective Educational Inclusion," 24.

⁴⁸ Ibid, 24.

⁴⁹ Ibid, 22.

⁵⁰ Ibid, 22.

Koegal, Matos-Freden, Lang, and Koegel offer a two-stepped approach to reduce challenging behavior. The first step of the process is the Functional Behavioral Assessment. Teachers collect the preliminary data for the FBA by observing the environmental changes that lead to challenging behavior, or antecedents, and the ensuing consequences of the challenging behavior.⁵¹ By combining teacher observations and input from stakeholders who work with the student, such as instructional aids, teachers can develop a function-based intervention to address the challenging behavior. Function-based interventions include “differential reinforcement, modified instructional schedules or demands, and teaching communication to reinforce challenging behavior.”⁵² Differential reinforcement is the practice of reinforcing (i.e. rewarding) the desired behavior and withholding the reinforcement after challenging behavior.⁵³ Modified instructions or assignments may decrease challenging behavior when the purpose of the behavior is to escape the classroom.⁵⁴ Teaching children with ASD self-management techniques is an effective way to reduce challenging behavior and in improve socialization, although teaching self-management techniques requires upfront time and preparation.⁵⁵ Interventions to improve socialization of children with ASDs include “priming, self-management, script-fading, peer-mediated interventions and organizing social activities involving the interests of the student with ASD.”⁵⁶

⁵¹ Lynn Koegel, Rosy Matos-Freden, Russell Lang, and Robert Koegel, “Interventions for Children with Autism Spectrum Disorders in Inclusive School Settings,” *Cognitive and Behavioral Practice* 19 (2012): 402.

⁵² Ibid, 402.

⁵³ Ibid, 402.

⁵⁴ Ibid, 403.

⁵⁵ Ibid, 404.

⁵⁶ Ibid, 404.

A study by Banda et al. found that prompting was an effective intervention to improve social skills in students with ASDs. The study tested an intervention with two kindergarten boys, one five years old and one six years old, both with ASD and in regular classrooms of 15-20 students, using verbal peer-to-peer interactions with simple board games involving dice. Small groups of three to five students and crafts, arts two to three days per week in ten minute sessions of activities.⁵⁷ Adult prompted students to ask their peers questions (e.g. ‘May I use the glue?’ or ‘May I use a red crayon?’) and respond to such questions. Teachers gave affirmations such as “Good asking” or “Good answer” to students with ASDs.⁵⁸ Of the two students, one student was successful 81% of the time in inviting another student to play or share when prompted by an adult and was successful 93% of the time in responding to another student’s invitation to play or share. The other student was successful 73% of the time in issuing invitations and 76% in responding to invitations.⁵⁹ Banda et al. concluded that to gain the maximum benefit from typical peers, candidates for prompting intervention should be placed in general education or “inclusion” settings. They found that the outcomes are positive, with significant social skills gains for students.⁶⁰

Adcock and Cuvo noted similar gains for participants aged seven, eight and ten who benefitted from instructional modifications within general education classrooms, with a behavioral package that included prompting, transfer of stimulus control activities, and peer interaction supports—interspersed with regular classroom activities and

⁵⁷ Devender R. Banda, Stephanie L. Hart, and Lan Liu-Gitz, “Impact of Training Peers and Children with Autism on Social Skills During Center Time Activities in Inclusive Classrooms,” *Research in Autism Spectrum Disorders* 4 (2010): 621.

⁵⁸ Ibid, 622.

⁵⁹ Ibid, 623.

⁶⁰ Ibid, 623.

academic subjects.⁶¹ The program used a combination of maintenance tasks students already knew and acquisition tasks they were learning, in session of 20 minutes three to five times a week, with therapy, and motivational materials like toys, beanbag chair, trampoline and computer. These modifications in the general education classroom with help from instructional aids and the intermittent involvement of peers made this “modified inclusion” program effective for the students it served.⁶²

Machalicek et al. reviewed the instruction research carried out in classroom settings identifying promising interventions to teach social, communication and academic skills to students with ASD.⁶³ The review found that the most effective interventions for students with ASD involve early intervention education to address social, communication, play, life, and academic skills.⁶⁴ Machalicek et al. reviewed 45 school-based studies to teach the above adaptive skills.⁶⁵ Positive effects were reported for 94% of participants in the reviewed studies.⁶⁶ Machalicek et al.’s review found that the most effective programs involve close connection and communication between the “stake holders” (i.e. students, parents, specialists and general education teachers).⁶⁷ Several of the programs that were successful included features such as a planning board with play

⁶¹ Julie Andcock and Anthony J. Cuvo, “Enhancing Learning for Children with Autism Spectrum Disorders in Regular Education by Instructional Modifications,” *Research in Autism Spectrum Disorders* 3 (2009): 320.

⁶² Ibid, 321.

⁶³ Wendy Machalicek, Mark F. O’Reilly, Natasha Beretvas, Jeff Sigafos, Guilio Lanconi, Audrey Sorrells, Russel Lang and Mandy Rispoli, “A Review of School-based Instructional Interventions for Students with Autism Spectrum Disorders,” *Research in Autism Spectrum Disorders* 2 (2008): 396.

⁶⁴ Ibid, 396.

⁶⁵ Ibid, 411.

⁶⁶ Ibid, 411.

⁶⁷ Ibid, 413.

choices, photos, verbal prompts and the teaching of appropriate hand gestures to go along with phrases such as “Look” and “No way.”⁶⁸

Idol conducted a similar review of interventions for ASD students in general education classrooms, evaluating inclusion programs in eight different schools. The program evaluation included four elementary schools and four secondary schools (two middle schools, two high schools) in a large metropolitan area. Along with the value of communication between “stake holders” and the importance of principals holding supportive attitudes toward inclusion programs, the three primary supports found to be most effective across programs were: 1) a consulting teacher model (Special Ed. teacher and classroom teacher co-teach), 2) Resource Room pull out programs to give students with ASD breaks, and 3) Instructional Assistants to support students with ASD within the general education classroom (para-professional I.A.’s support student in classroom all or part of the day).⁶⁹

Despite the trend in education towards inclusion, and the large body of research on intervention methods, there are few models or procedures for successful inclusion. Educators are often left to make up their own design for inclusion.⁷⁰ Simpson et al. offer a revised model of the Autism Inclusion Collaboration model.⁷¹ The model has five main components for successful inclusion.⁷² First component is “environmental and curricular

⁶⁸ Machalicek et al., “A Review of School-based,” 405-406.

⁶⁹ Lorna Idol, “Toward Inclusion of Special Education Students in General Education,” *Remedial and Special Education* 27, no. 2 (2006), 78.

⁷⁰ Richard L. Simpson, Sonja R. de boer-Ott, and Brenda Smith-Myles, “Inclusion of Learners with Autism Spectrum Disorders in General Education Settings,” *Topics in Language Disorders* 23, no. 2 (2003): 117.

⁷¹ Ibid, 117.

⁷² Ibid, 117.

modifications, general education classroom support and instructional methods.”⁷³ The second component in the model is “attitudinal and social support.”⁷⁴ The third component is “coordinated team support.”⁷⁵ The fourth component is “recurrent evaluation of inclusion procedures.”⁷⁶ The final component is “home-school collaboration.”⁷⁷ For children with ASDs support is particularly important.⁷⁸ Therefore, it is important that para-educators be trained to work with students with ASDs.⁷⁹ Class size is also an important factor in successful inclusion of students with ASDs. Simpson et al. recommend that class sizes be reduced, because smaller class sizes allow teachers to better individualize instruction.⁸⁰ The need for better support and reduced class sizes seems obvious, but may not be easy to implement given many public school district’s budget cuts.

In a review of research on interventions for early childhood educators, Vakil et al. note the importance of visual aids for children with ASDs. Children with ASDs “tend to have stronger visual processing as compared to auditory processing skills.”⁸¹ Citing previous studies by Friend (2008) and Rao and Gagie (2006), Vakil et al. argue, “providing visual supports in the classroom capitalizes on the child’s strengths rather than

⁷³ Simpson et al., “Inclusion of Learners,” 117.

⁷⁴ Ibid, 117.

⁷⁵ Ibid, 117.

⁷⁶ Ibid, 117.

⁷⁷ Ibid, 117.

⁷⁸ Ibid, 118.

⁷⁹ Ibid, 118.

⁸⁰ Ibid, 120.

⁸¹ Shernavaz Vakil, Evonn Welton, Barbar O’Connor, and Lynn S. Kline, “Inclusion Means Everyone! The Role of the Early Childhood Educator when Including Young Children with Autism in the Classroom,” *Early Childhood Education Journal* 36 (2009): 324.

the child's deficits."⁸² Teachers can play to students with ASDs' strong visual processing by displaying a visual schedule in the classroom.⁸³ Another area in which visual aids can be useful is in the classroom is during transition times. Children with ASD often have difficulty with transitions, so teachers can visually alert student with ASD during transitions to make the process easier.⁸⁴

Interestingly, Boardman et al "surveyed teachers to examine their perceptions of research-based interventions" and their findings suggested that teachers did not find whether an intervention was research-based important.⁸⁵ Boardman et al., found that teachers generally "choose interventions based on ease of implementation in the classroom, their own personal beliefs concerning pedagogy" etc. rather than whether they were research-based.⁸⁶ Teachers are less concerned with the reviews given to various interventions and more concerned with what makes sense and seems appropriate within the realities of their classrooms.

While there is a growing body of research on intervention methods, there is the need for further research. Crosland and Dunlap note that, "there continues to be a need for more research in typical settings and contexts that students contact across the school day."⁸⁷ Few of these "studies have been conducted in the classroom during typical daily routines and activities with the teacher serving as the behavior change agent," leading to a "lack of generalizability of interventions conducted in less relevant contexts (clinic,

⁸² Vakil et al., "Inclusion Means Everyone!" 324.

⁸³ Ibid, 324.

⁸⁴ Ibid, 324.

⁸⁵ Machalicek et al., "A Review of School-based," 406.

⁸⁶ Ibid, 406.

⁸⁷ Kimberly Crosland, and Glen Dunlap, "Effective Strategies for the Inclusion of Children with Autism in General Education Classrooms," *Behavior Modification* 36, no. 3 (2012): 262.

classroom pull out).”⁸⁸ Another limitation of current studies is the lack of diversity in study samples. Crosland and Dunlap note the need for “researchers to include greater diversity of students with ASD, including diversity of behavioral and intellectual challenges.”⁸⁹ Additionally, a wider age range needs to be studied, including middle and high school; most studies focus on elementary age in order to determine if strategies are effective or feasible for students of all ages and grades.⁹⁰

While “inclusion” has largely become regarded as “best practice” in providing public school education for children with Autism Spectrum Disorders, there are studies that are critical of the inclusion of model for various reasons. Reed et al summarized various studies that raised questions re: the effectiveness of inclusion in their article “A comparative study of the impact of mainstream and special school placement on the behavior of children with Autism Spectrum Disorder.” Reed et al noted that while there has been “a drive to place children in mainstream schools, fueled by a ‘rights agenda,’ “ empirical evidence is scarce on whether placement in mainstream school classrooms is the most effective placement for students with ASD.⁹¹ Nearly 60% of children with ASD are placed in mainstream school classrooms, without a large body of evidence that this is better for students than “self-contained” classrooms. That said, general education placement clearly does show results when the teaching practices of the special school or self-contained classroom were imported into the general aid classrooms.⁹²

⁸⁸ Crosland and Dunlap, “Effective Strategies,” 262.

⁸⁹ Ibid, 262.

⁹⁰ Ibid, 262.

⁹¹ Phil Reed, Lisa A. Osborne, and Emma M. Waddington, “A Comparative Study of the Impact of Mainstream and Special School Placement on the Behavior of Children with Autism Disorders,” *British Educational Research Journal* 38, no. 5 (2012): 750.

⁹² Ibid, 750.

Patty Douglas was wary of the “problematizing” of students with ADS that can happen in general education classrooms that serve children who need the services, especially the “gifted/autism” programs which serve children with ASD who are high functioning. Douglas is concerned about declining classroom support, with children having to function in regular education classrooms with less Instructional Aid help. While the resources are not in place to provide as much support as would be optimal for children with ASD, the expectations are high for compliant behavior for children with ASD in autism/gifted classrooms. “For those students and families who do not yet or indeed cannot fit (raced, classed, gendered, abled) educational forms, such authoritarian modes of power operate to coerce and punish, ore more threateningly, to push students and families out of the normative project of citizenship.”⁹³ Douglas notes the pressures in general education classrooms and mainstream culture for students with ASD to conform in ways that are challenging for them. She notes that the “disability studies” pioneer Tichkosky (2007) has observed that, “citizens are persons who can conform to society ‘such as it is.’”⁹⁴

Teacher Attitudes

Successful inclusion of students with ASDs into the general education classroom cannot rely solely on recommending research-based intervention methods. Studies show that inclusion practices are affected by many factors including teacher attitude (Robertson et al.), disclosure practices (Jordan et al.). Robertson et al.’s (2003) study suggests a relationship between the quality of included students with ASDs’ relationship with their

⁹³ Patty Douglas, “Problematizing Inclusion: Education and the Question of Autism,” *Pedagogy, Culture and Society* 18, no. 2 (2010): 108.

⁹⁴ *Ibid*, 106.

general education teachers and the quality of their inclusion experience. Robertson et al found a wide variability in teachers' reports on their relationship with students with ASDs, students with ASDs level of behavioral problems, level of social inclusion and associations between these factors.⁹⁵ In the study general education teachers were asked to complete the Student-Teacher relationship Scale and SNAP-IV Rating Scale to determine the student high-functioning autistic child's behavioral characteristics and students, including high-functioning autistic students, completed a "free-recall measure of social inclusion."⁹⁶ Student's level of inclusion was rated on a scale from 0 to 3, with 0 being isolated and 3 being the highest level of social inclusion.⁹⁷ None of the high-functioning autistic children were rated as having a social inclusion score of 0 and 25% had a social inclusion score of 3.⁹⁸

The researchers found that teachers largely reported positive relationships with included students with ASDs. That being said, higher ratings of behavior problems did decrease the quality of the teacher-student relationship.⁹⁹ Students' social status among peers was associated with the quality of student-teacher relationship. Students with ASD "who were rated by their teachers to have a more conflictual and/or dependent relationship were also rate by their peers to possess a lower level of social inclusion within their class."¹⁰⁰ Interestingly, Robertson et al. did not find any relationship

⁹⁵ Kristen Robertson, Brandt Chamberlain, and Connie Kasari, "General Education Teachers' Relationships with Included Students with Autism," *Journal of Autism and Developmental Disorders* 33, no. 2 (2003): 126.

⁹⁶ Ibid, 124-125.

⁹⁷ Ibid, 125.

⁹⁸ Ibid, 125.

⁹⁹ Ibid, 128.

¹⁰⁰ Ibid, 128.

between students with ASDs' level of social inclusion, teacher-student relationship and the presence of instructional aids in the classroom.¹⁰¹

In the UK, Jordan et al. argue that teacher attitudes about disability and the nature of knowledge may affect not only general educators' effectiveness at teaching inclusion students, but the effectiveness of their teaching in general. Jordan et al.'s study used the Classroom Observation Scale (COS) to observe teaching practices of K-8 teachers.¹⁰² Jordan et al. found that the most effective teachers are more efficient with all of their students. Teacher beliefs about disability and their response to their students with disabilities are related to effective teaching. The study measured teachers' beliefs about student disability and their responsibility to students with disabilities using the Pathognomic-Interventionist (P-I) interview. Teachers with more Pathognomic perspectives tend to attribute to their students with special needs "internal, fixed and unreachable characteristics," beyond their help.¹⁰³

The findings of Jordan et al. suggest that teachers who believe their students with special needs are their responsibility are overall more effective teachers overall.¹⁰⁴ Teachers with pathognomic perspectives also tended to blame students and their families for students' failure to learn.¹⁰⁵ Teachers with Interventionist beliefs express the view that they are responsible for all students' learning and are "responsible for reducing barriers to access for those students with special needs."¹⁰⁶ Interventionist teachers also

¹⁰¹ Robertson et al., "General Education Teachers' Relationship," 128.

¹⁰² Anne Jordan, Eileen Schwartz, and Donna McGhie-Richmond, "Preparing Teachers for Inclusive Classrooms," *Cognitive and Behavioral Practice* 19 (2012): 537.

¹⁰³ *Ibid*, 538.

¹⁰⁴ *Ibid*, 538.

¹⁰⁵ *Ibid*, 538.

¹⁰⁶ *Ibid*, 538.

reach out more to parents and colleagues, and work more collaboratively with Teaching Aides and resource teachers and “are more systematic about keeping track of student progress.”¹⁰⁷ The findings of the study suggest that teachers who see students with special needs as their responsibility are more effective overall and also more effective working one on one with students with special needs.¹⁰⁸ Teachers’ attitudes about disability and their responsibilities to their students with special needs, reflected a wider set of epistemological beliefs.¹⁰⁹ Researchers made correlations between the E-I (find what it stand for) and P-I suggest that, “the more teachers viewed ability as an incrementally-acquired characteristic rather than as a fixed entity or trait, the less they favored teacher controlled, transmissive methods of instruction.”¹¹⁰ In exploring the effectiveness of teachers with ASD students, Jordan et al. observed that, “what may be needed in both teacher education and in service preparation is to challenge teachers’ beliefs about ability and disability as immune to learning, and their resulting beliefs about their roles and responsibilities, as well as their epistemological beliefs about the nature of knowing knowledge and the process of acquiring knowledge.”¹¹¹ Jordan et al further observed that, “Opportunities for reflection and discussion of the implications and corollaries of one’s perspectives, conducted in a supportive context, may demonstrate for teachers how change in beliefs and attitudes can lead to more effective teaching practices with all their students.”¹¹²

¹⁰⁷ Jordan et al., “Preparing Teachers,” 538.

¹⁰⁸ Ibid, 538.

¹⁰⁹ Ibid, 539.

¹¹⁰ Ibid, 539.

¹¹¹ Ibid, 541.

¹¹² Ibid, 541.

Avramidis et al. noted that a recurring finding in the literature was that the primary barrier to educational success for students with ASD is teacher attitude, and that teachers with more receptive and positive attitudes about inclusion for ASD students are more likely to be successful with these students.¹¹³ Teachers are more likely to have positive attitudes about “inclusion” if they have experience with inclusion/integration programs, and also if they have greater confidence as a result of more substantial training and support in serving students with ASD.¹¹⁴ Teachers are also more likely to have positive attitudes and results if the “integration” programs happened programmatically and with discussion within the school(s) rather than ad hoc.¹¹⁵

Parent and teacher efforts play an important role in effective inclusion practices, and particularly when parents and teachers work in concert. Chamberlain et al found that when parents and teachers make concerted effort it can dramatically improve the social involvement of students with ASDs.¹¹⁶ Similarly Ochs et al. found in their study that the two students with ASDs whose families made an effort to personalize their children’s disorders, experienced higher levels of social inclusion. In contrast, the students whose parents refused to allow their child’s disorder to be discussed with fellow students were more socially on the margins than their counterparts whose families were more forthcoming.¹¹⁷

Principals’ and other school staff members’ attitudes also play a role in successful inclusion. Principals are often charged with placement decisions for students

¹¹³ Avramidis et al., “Student Teachers’ Attitudes,” 278.

¹¹⁴ Ibid, 278-279.

¹¹⁵ Ibid, 278.

¹¹⁶ Chamberlain et al., “Involvement or Isolation?” 239.

¹¹⁷ Ochs et al., “Inclusion as Social Practice,” 401.

with disabilities, including students with ASDs. In a study of principals' attitudes towards inclusion of students with ASDs in Pennsylvania Public Schools, Horrocks et al. examined the relationship between specific demographic factors and attitudes towards inclusion and placement.¹¹⁸ The variables studied included "principals' school level, gender, years as principal, years in district, formal training, experience with autism, belief that autism could be included, personal experience, and overall experience with inclusion for students with disabilities."¹¹⁹ Horrocks et al. found that one factor superseded all others: principal's belief that children with autism could be included in regular education classes.¹²⁰ The study found that, "this positive belief correlated with principals' attitudes toward inclusion and higher levels of recommendations for placement, including children with social detachment, as well as children with strong academic performance."¹²¹ Horrocks et al. conclude their study by suggesting need for educating principals about ASD.¹²² Principals' attitudes, and their ability to work with families, are like teacher attitudes an essential part of program effectiveness.

Research Limitations

The current body of research on inclusion of students with ASD in the general education classroom has limitations. Despite the fact that ASDs occur in every racial, ethnic, and socioeconomic group, studies on the efficacy of autism inclusion programs have focused on the curriculum and intervention strategies, largely ignoring how factors

¹¹⁸ Judy L. Horrocks, George White, and Laura Roberts, "Principals' Attitudes Regarding Inclusion of Children with Autism in Pennsylvania Public Schools," *Journal of Autism and Developmental Disorders* 38 (2008): 1462.

¹¹⁹ Ibid, 1472.

¹²⁰ Ibid, 1472.

¹²¹ Ibid, 1472.

¹²² Ibid, 1472.

such as socioeconomic status, race and/or ethnicity, and gender play into the success of inclusion programs. In their review of school-based instructional interventions for students with ASD, Machalicek et al. found that only 10 out of 45 studies reported the cultural and/or linguistic background of the participants. An assessment of these variables could help researchers determine the ways in which such variables factor into the effectiveness of research-based interventions for students with ASD from culturally and linguistically diverse backgrounds.¹²³ Machalicek et al. suggest that future research should examine the affects of intervention on students with ASD from culturally diverse backgrounds as well as families' attitudes towards these interventions.¹²⁴

Additionally few studies reported the socioeconomic background of participants. Future research should also explore the effects of interventions on students with ASD from socioeconomically diverse backgrounds. Another limitation in the current body of research is the lack of research on middle and secondary school inclusion programs. The majority of studies focus on preschool and elementary school inclusion programs. These focus areas for research can expand our understanding of the effectiveness of general education inclusion programs for students with ASD of various ages and cultural backgrounds. This kind of specific demographic information could enhance inclusion program effectiveness.

¹²³ Machalicek et al., "A Review of School-based," 410.

¹²⁴ Ibid, 410.

METHODOLOGY

The data for this qualitative study was collected through semi-structured interviews. The semi-structured interviews lasted approximately one hour. All of the data was collected between February and March 2014. All participants were given the guidelines of the study in order to obtain informed consent. The researcher read the script for informed consent and participants then gave oral consent. Participants were gathered via snowball sampling methods. The researcher's mother is a teacher in the Seattle Public Schools and initial contacts were made through her. Once initial contacts were made via the researcher's mother, one participant referred the researcher to two other participants. A total of eight general education teachers from two urban predominately white, predominately middle class schools were interviewed for the present study. Participants taught kindergarten to eighth grade. The majority of participants (five participants) had a Masters in Education, or a similar field, two participants had Bachelor of Arts degrees in Special Education, and History and Biochemistry, and one participant had a Ph.D. in Social-Psycholinguistics. All participants were white. The participants' ages ranged from 38 to 59. Six of the participants were women, and two were men. The names of all the participants in this study have been changed in order to protect their identities.

Each participant was interviewed with the goal of discovering his or her experience as general education teacher in an inclusive classroom and their perceptions of the effectiveness of the current manifestation of inclusion in their school. A series of questions were asked with the intent to uncover the perceptions of general education teachers of the effectiveness of inclusion practices at their current school and their

experience as an inclusive teacher. The interviews lasted about an hour on average. Most interviews took place in the classrooms of the participants after school. All eight interviews were digitally recorded with the permission of participants. All recorded interviews were destroyed once they had been transcribed.

The data was analyzed following the period of data collection to uncover trends and patterns. Based on the trends that surfaced, conclusions were drawn regarding general education teachers' perceptions of the effectiveness of inclusion of learners with ASD in the general education classroom. The findings are reported in the results section, and the significance of the findings is considered in the discussion section. A close evaluation of the interviews gives insight into the experiences of general education teachers working in inclusive classrooms and their perceptions of the effectiveness of inclusion practices at their places of work.

Most of the informants needed little prompting and had a lot they wanted to share. While most participants seemed at ease during the interview process, one participant was very nervous throughout the interview process. This informant expressed concern that she was not answering the interviewer's questions "correctly." The researcher assured this informant that there was no "correct" answer to any of the questions, and that the purpose of the interview was to gain insight into the informant's experience as an inclusion teacher.

One of the strengths of in-depth interviews is that they allow participants to describe their experiences and perspectives in their own words and in depth. One of the drawbacks of qualitative research is that it is smaller in scale, and therefore not generalizable to a wider population. The tradeoff of qualitative research is "breadth" for

“depth.” Snowball sampling is convenient and allowed the researcher to capitalize on her existing connections via her mother. However, snowball sampling does not provide a random sample population, and therefore may not fully reflect the attitudes and beliefs of the target population.

RESULTS

Positive Attitude Towards Inclusion

All of the participants had positive attitudes toward inclusion. One of the recurring opinions expressed by participants was that inclusion benefitted typically developing peers, teaching them about difference and helping them develop empathy. To this point, one participant said: “It’s so easy for kids whether they manage that respectfully or not, to see differences that are external; the perceived gender, the skin color of someone, that kind of stuff. It’s a more complex thing for human beings, both kids and adults to understand that brains are different; learning differences, mental disability, mental illness, all kinds of things...and I think if a teacher is doing it well, kids get to learn ways of being empathetic and thoughtful and respectful and understanding difference.”¹²⁵ Participants expressed the view that inclusion prepared all children for the diversity they would encounter as adults and that inclusion helps children develop empathy and appreciation of difference. Another participant put it this way, “The thing that I think that’s the best about it is not for the inclusion kid, but for everybody else. ...I think it’s good for them [students with ASD] because they have really good role models, but I think for the rest of the kids it just makes them more compassionate, and more understanding, and then people don’t seem so different.”¹²⁶ In their responses, the majority of participants stressed the benefit of inclusion for typically developing children as exemplified in the above quote. Participants also noted the benefit of typical peers’ modeling to children with ASD, as demonstrated in the above quote.

¹²⁵ Nathan, interview by author, Seattle, WA, February 28, 2014.

¹²⁶ Elizabeth, interview by author, March 18, 2014.

Challenges of Inclusion

When asked about the greatest challenge(s) in working with children with ASDs, participants gave varied responses. However, a few trends ran through the responses. First, the majority of participants said that the greatest challenge in working with students with ASDs is the huge range of abilities, limitations and behavioral characteristics children present within the Autism Spectrum Disorder. A participant, Nathan, responded: “I don’t know if I can quantify that in one thing. One thing that’s really important to me is that I’ve realized working with six to ten kids over the years is that they’re all very, very different, so that there’s not one set thing that works with them, or that makes them challenging. So, I’ve taught kids...In fact, right now the two kids that I have are really different from each other.”¹²⁷ The majority of participants stressed the individuality of each child and their unique needs as a challenge. The wide range in behavior and needs of students with ASD can be difficult for teachers to know what to do with individual children with ASD. Another participant, Elaine, expressed this difficulty, saying; “I think it’s that there’s this idea that if it’s a student with autism you have these things you can do. One, two, three, four, five, do all these things, but it’s never like that. They’re just like any other kid, where they all have their own strengths and weaknesses and you still need to figure them out and get to know them before you can decide what sort of modifications or how you’re going to support them in the classroom.”¹²⁸ Because of the wide range of symptoms of students with ASD, participants’ believed that generalizations have limited value in discussions with ASD.

¹²⁷ Nathan, interview by author, Seattle, WA, February 28, 2014.

¹²⁸ Elaine, interview by author, Seattle, WA, February 21, 2014.

Lack of Support

Every participant said that more support was needed to improve inclusion. Most participants reported that their students with ASD received tutoring, pull out services, and/or an Instructional Aid (IA). However, the participants reported that IAs were infrequently available and present in the classroom. Only one participant reported regularly having IA support in the classroom. One participant, Aaron, summed up participants' desire for greater support in the classroom: "Teachers just need some help, and it's not necessarily to tutor them [students with ASD]. Like, to just help them be part of the class, to keep them in line, because some of these kids just can't control themselves, their impulses."¹²⁹ The majority of participants said they would like IA support in their classrooms more regularly. One participant said that she thought IAs should be required as we get more and more of these kids."¹³⁰ Participants also remarked on the need for more support staff, such as counselors and IEP teachers.

Training

The majority of participants reported that they had received inadequate or no training at all on ASD. Unsurprisingly, one of the most common responses when asked how inclusion practices could be improved was better training and education for teachers and support staff about ASD. One participant expressed this feeling, saying, "I think teachers need more information, and they need to know what they're supposed to do. I don't know how you find the time to do this, but teachers need to know 'if he's doing this, what do I need to do?' And also, just have more information, because I don't really know...I have an autistic child at home and I still don't totally know what I do with my

¹²⁹ Aaron, interview by author, Seattle, WA, March 3, 2014.

¹³⁰ Elizabeth, interview by author, Seattle, WA, March 25, 2014.

own child or what I do with a child in my classroom depending on their behavior.”¹³¹

The majority of participants reported that their main source of training had been their years of teaching experience. One participant stated: “I think my best training has been my years of experience. There’s such a push on the curriculum and there’s such a push on the common core standards. There’s such a push on academics right now, that no there hasn’t been an emphasis on professional development.”¹³² Many participants expressed a similar view that the district trainings they received focused on academic standards at the expense of training on ASD.

Social Integration of Students with ASD

The majority of participants believed that their students with ASD were felt to be a part of the classroom by their typically developing peers. Nearly every participant felt that their students with ASD were fully included in the class. In general, the participants felt that their typically developing students looked out for students with ASD in the class. Several participants gave examples of their typically developing students making accommodations for students for students with ASD. One participant gave an illustrative example:

I have a kid who is building that T-Rex model because he’s obsessed with dinosaurs. In fact, another student gave it to him, who had that at home and he didn’t want it anymore and they were talking about what to do with it and he thought of this kid on the spectrum in my classroom. So, his mom emailed me and we decided it was a great idea and he gave it to the kid and he’s building that T-Rex model skeleton and he’s going to use it for the science fair. Today we were all playing chess except for him, he was building his T-Rex and everyone else was happy playing chess and everyone’s fine with that; that he’s going to be doing something a little bit different sometimes.¹³³

¹³¹ Elizabeth, interview by author, Seattle, WA, March 18, 2014.

¹³² Anne, interview by author, Seattle, WA, February 21, 2014

¹³³ Nathan, interview by author, February 28, 2014.

One participant had a more ambivalent view of their students with ASD's level of inclusion with their peers. This participant said, "I think that [for] same age peers it's not easy. I guess the more I think, it depends on how much they can keep themselves reined in. But then again that's only in class. I don't think that they're good friends outside of school."¹³⁴ However, Theresa's opinion was the minority. Overall the participants felt their students with ASD to be for the most part included in the social web of the classroom.

Teacher Support and Collaboration

The majority of participants felt like they were a part of their school 'team.' A representative response is "Absolutely. I think we do the best we can with the staffing we have to support each other and the kids."¹³⁵ There were a couple exceptions to participants' general feeling to be part of a team. One participant felt like the work environment of her school was unsupportive. The other participant felt like with the demands of her and her colleagues' job, there was not enough time for collaboration. This participant said she only felt "a little bit," to be a part of the school team, but stressed that: "I don't think it's anyone's fault, it's just a matter of time. When does everyone meet? And when does everyone sit down and talk? Because that's a lot of people to coordinate, because there's usually a special ed teacher, and an IA involved, and then there's you, and it's like, 'How do you get all those people together to have a conversation regularly?'"¹³⁶ While busy schedules may make it difficult for teachers to collaborate with their colleagues, the majority of participants felt to be a part of the

¹³⁴ Theresa, interview by author, Seattle, WA, February 21, 2014.

¹³⁵ Nathan, interview by author, Seattle, WA, February 28, 2014.

¹³⁶ Elizabeth, interview by author, Seattle, WA, March 18, 2014.

school team. As they navigated teaching in inclusive settings, many participants expressed a feeling of camaraderie with their coworkers.

Gender and Inclusion

All participants believed that inclusion adequately addressed the needs of both boys and girls with ASD, and that one group did not benefit more. However, it is worth noting that most participants admitted to having little experience working with girls with ASD, and several participants said that they had never taught a girl with ASD. One participant said, “It’s interesting because I have never had a girl with autism, I’ve always had boys, so I don’t really know. It doesn’t seem to stand out to me either way.”¹³⁷ The majority of participants felt that gender did not have an impact on successful inclusion. One participant who taught middle school spoke to the sometimes different needs of girls with ASD, while stressing the uniqueness of each child with ASD: “I think the bigger issue there is diagnosis. It may look different both because of hormonal changes or social issues. So I think the potential is there to serve them equally. ...It needs to look a little different just because of physical and hormonal changes girls go through in middle school. So much of it is going to come down to individual needs. The girls that we’ve had have been so different from each other and from other girls.”¹³⁸ Ultimately, like all the other participants she saw inclusion practices as meeting the needs of boys and girls on the autism spectrum equally, with the caveat that sometimes those needs are different.

Socioeconomic Background and Inclusion

The majority of participants believed that inclusion of students with ASD in the general education classroom adequately addressed the needs of students with ASD from

¹³⁷ Elizabeth, interview by author, Seattle, WA, March 18, 2014.

¹³⁸ Emma, interview by author, Seattle, WA, March 20, 2014.

differing socioeconomic backgrounds. Most participants felt that the needs of their students with ASD were met, regardless of students' socioeconomic background. However, there were a few exceptions to this perception. One participant said that she felt that it was not an issue in the context of her school because her school had a scholarship fund for students but that, "across the whole school district, I really don't know how it works," but she "would be concerned."¹³⁹ Another participant spoke from personal experience as a parent of a child with ASD, saying:

I'm guessing that it probably isn't always equitable just because this is Seattle Schools specific, but with my son I've had to do a lot, a lot of advocacy for him. ...I can't imagine if I was working two jobs and I didn't have childcare, or English was my second language, I could ever navigate any of this and really be like 'No, I want this program for my kid.' And the other thing that happens with [participant's son] is that we've gotten him a lot of extra help, privately, which has made an inclusion program more doable for him. But I don't think if you have a lot of struggles going on in your life, you're not going to have the time or energy to do all that. So I'm guessing it's probably not equitable, just because the system isn't set up to be easy.¹⁴⁰

Another participant thought that the current manifestation of inclusion was probably not equitable "because there's just not enough support."¹⁴¹ Aaron noted that the parents of one of his students with ASD had hired an outside behavioral therapist to help facilitate their child's inclusion, something that would not be available to families with fewer resources.

Cultural Background and Inclusion

The majority of participants believed that inclusion adequately addressed the needs of students with ASD from diverse cultural backgrounds. One participant's response represents a typical response, "It doesn't really matter. It's all sort of learning

¹³⁹ Emma, interview by author, Seattle, WA, March 20, 2014.

¹⁴⁰ Elizabeth, interview by author, Seattle, WA, March 18, 2014.

¹⁴¹ Aaron, interview by author, Seattle, WA, March 3, 2014

to get along.”¹⁴² This belief was almost unanimous with the exception of one participant, who thought that her school had a greater problem with cultural competence in general, saying, “I think cultural diversity at [school] in general isn’t as well understood as it has been at some of the schools I’ve been at.”¹⁴³

Teacher Intervention Strategies

Most of the participants reported that they did not use research-based methods in their classrooms, and many participants reported that they were not knowledgeable about research-based methods. A few participants said that they used research-based methods that an IA, special education teacher, or other support staff had shared with them, but that they did not. Several participants stated that they would like to receive training on research-based methods. Interestingly, a few of the participants that said they did not utilize research-based methods when asked to describe the methods that they used with their students with ASD. They often said they didn’t know what the research-based methods were per se but instead used methods that they devised themselves through experience or techniques that the special education teachers or IAs suggested that they try. Many of the methods they described were, in fact, research-based interventions methods, or very similar to certain interventions.

Several participants reported actively worked to involve the class in the interests of their students with ASD. One participant spoke about her efforts to involve a student with ASD who loved chess, “He’s teaching everyone in the class chess. We actually have an afterschool chess club and a lot of kids from this class have joined him in the

¹⁴² Elaine, interview by author, Seattle, WA, February 21, 2014.

¹⁴³ Theresa, interview by author, Seattle, WA, February 21, 2014.

chess club afterschool, so that's cool. He also likes basketball, so we work on those opportunities at recess to get him to engage with kids that way.”¹⁴⁴ Several participants mentioned that they used forms of peer-mediated interventions like, peer mentors and pair tutors (e.g. reading “buddies”). One participant remarked on the effectiveness of peer mentors to teach students with ASD social skills, saying “peer mentors work really well and having autistic kids hear from their peers what the issue is versus hearing from yet another adult.”¹⁴⁵

Several participants stated that they used research-based interventions. One participant reported that, “I've used some social skills programs.”¹⁴⁶ Several participants stated that they used visuals including visual schedules. One participant reported that she used self-management interventions with one of her students with ASD, saying:

We also have a card that we put on his desk sometimes that gives him a list of sensory breaks he can do on his own. There's gum for him, he can go sit on a bouncy ball, there are some fidgets in that container next to the computer. So, he has some strategies when he needs to release some energy. There's some Velcro under the table he usually sits at. He likes to fidget with those.¹⁴⁷

Sensory breaks and objects are in place for children like this student to be able to choose for themselves. In this way, sensory needs are met and independence is fostered at the same time in the list of choices provided.

The majority of participants reported that they modified assignments for their students with ASD or made accommodations for them. The participants recognized the abilities and limitations of their students with ASD and modified assignments to be

¹⁴⁴ Anne, interview by author, Seattle, WA, February 21, 2014.

¹⁴⁵ Emma, interview by author, Seattle, WA, March 20, 2014.

¹⁴⁶ Roberta, interview by author, Seattle, WA, March 25, 2014.

¹⁴⁷ Anne, interview by author, Seattle, WA, February 21, 2014.

meaningful for these students. One participant discussed the modifications she made for one of her students with ASD who struggled with reading comprehension, saying:

For reading, like I said he's very visual. He can read anything but he can't always comprehend it. He can read every word you give him but he's not putting together sense of his reading. So I have nonfiction readers for him. That's what he prefers. And I'll create a series of questions for him. He'll read a whole thing and not be able to answer any of the questions and I'll say 'go back to the book. It's in the book.' ...He can look for like on piece of information at a time. So it's a piecing things together. And he's a well-behaved child so that helps things too. Sometimes he just has to sit and be in his own world because I don't have another person in here to engage him or help him be engaged.¹⁴⁸

This above quote is exemplary of this type of method. Several participants remarked on the success of the modification/accommodation method with their students with ASD.

This study revealed several points of consensus among the participants, including an overall positive attitude towards inclusion of students with ASD, as well as the belief that inclusion was particularly beneficial to typically developing students. The study also revealed several areas where participants believed current inclusion policy is inadequate. These areas include in school supports and teacher education. The subsequent section will speak to the relevance of these findings.

¹⁴⁸ Anne, interview by author, Seattle, WA, February 21, 2014.

DISCUSSION

The results of this study suggest that teachers in the Seattle Public Schools system generally hold favorable attitudes towards inclusion of students with ASD in general education classrooms. The study also suggests that the benefit of inclusion to typically developing students is one of the main reasons teachers support inclusion. While the study suggests that teachers hold favorable views of inclusion, it also suggests that teachers have concerns about the effectiveness of current inclusion policies. The study identified several areas in which teachers believe inclusion is lacking. These areas are in teacher education and training about ASD and support in the classroom.

All of the teachers said they were almost entirely without training in overview and specifics of Autism Spectrum Disorders and ways to support ASD children in the classroom. Rather than devoting significant teacher training time equipping teachers to feel prepared and confident as educators for student with ASD, the district emphasis has been almost exclusively on academic subjects. Teachers are managing to respond to the needs of students with ASD based on what they are learning through trial and error practice—or by quick, informal conversations they manage to have with one another in passing. While teachers note that there is no “one size fits all” checklist of what to do for and how best to support students with ASD, an opportunity to discuss and share ideas in a more regular and systemic way would be very helpful. Teachers have noted that they are working in isolation; not only without training but also without workshop and team time for classroom teachers, special education teachers and Instructional Aids to share ideas around ASD students in general and around case management of specific ASD students they share in common.

Interestingly, teachers consistently report that their strongest allies in supporting the learning and positive experiences of students with ASD are their typically developing students. They report their typically developing students to be generous and innovative in the way they make room in the classroom community for students with ASD.

Benefitting strongly from their experiences as classmates of students with ASD and bringing real benefits to students with ASD, the typically developing students emerge as one of the most consistent and important resources for classroom teachers' efforts to support ASD students. Like their teachers they are in the process of discovering what works for making students with ASD an integral part of the classroom community.

RECOMMENDATIONS FOR FUTURE RESEARCH

Due to the limited number of participants in this study, and time constriction, there are several areas that could be further pursued. The limited sample size means that the data collections are not generalizable. Another limitation of the study was its reliance on in-depth, semi-structured interviews as its only source of data. Similar studies in the future would benefit by adding data from classroom observations. Multiple research methods would provide a more nuanced view of the effectiveness of inclusion policies. Further studies should also examine a broader sample of teachers from multiple districts and regions with different student populations. A larger and more diverse sample size would allow the findings to be more generalizable.

The interviews with participants raised interesting questions about the role socioeconomic background and cultural background play into the quality of students with ASD's inclusion. Several participants said that the current inclusion policies at their school created inequities, particularly socioeconomic inequities. Several participants cited lack of school district support for students with ASD as a problem. The participants said that some parents pay for outside support to facilitate their children's inclusion—something that not all families can afford. Future research should examine these questions. There is a lack of research on how socioeconomic status effects inclusion and quality of inclusion. This study attempted to explore this and found some concerning questions. Future studies should explore the relationship between socioeconomic status and inclusion.

Another area that deserves more attention is the benefit of inclusion to typically developing peers. The clearest result of this study was the teachers' belief that typically

developing students benefited from inclusion, specifically that they learned empathy and appreciation of difference. Future studies should explore this in more depth. Teachers in this study reported that their typically developing children played an important role in facilitating successful inclusion practices. This role should be further examined, as well as ways to educate typically developing peers to be intervention agents for students with ASD. The powerful educational impact of students with ASD upon typically developing students and vice versa has emerged from this study as the most important success of inclusion programs in public schools and seems a key area for greater research and understanding.

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Appendix A: In-Depth Interview Guide

1. When did you begin working at this school?
2. What grade(s) do you teach?
3. How many children are in your class? How many children with ASD do you work with?
4. What do you find is your greatest challenge working with children on the autism spectrum?
5. What parts of inclusion work well?
6. What parts of inclusion need to be improved?
7. Does autism inclusion serve boys and girls on the autism spectrum equally? Is one group benefitting more?
8. What are the effects on typically developing children in inclusion classrooms?
9. Do you think that inclusion adequately addresses the needs of with ASD from differing socioeconomic backgrounds? Why/why not?
10. Do you think that inclusion adequately addresses the needs of students on the autism spectrum from diverse cultural backgrounds? Why/why not?
11. What is the role of parent involvement for parents of children with ASD? What factors' effect parent's abilities to be involved?
12. Do you feel your students with ASD are felt by typically developing students to be part of the class, part of the team? Why/why not?
13. Do you as an inclusion teacher feel part of the school team? And can you give examples of why or why not?
14. Do you feel like you have received adequate training to work with children with ASD? Why/why not? If, yes, what kind of training?
15. What methods do you use with your students with autism? Do you employ research- based intervention methods? If so, what do you think of them?
16. What is your highest level of education? What did you get your degree in?

Appendix B: List of Informants

Name of Participant	Grade Participant Teaches
Anne	Kindergarten/1 st grade
Elaine	Kindergarten/1 st grade
Theresa	4 th /5 th grade
Nathan	4 th /5 th grade
Aaron	6 th grade
Elizabeth	Kindergarten/1 st grade
Emma	7 th /8 th grade
Roberta	7 th /8 th grade