

Teacher Needs for Educating Children with Autism Spectrum Disorders in the General Education Classroom

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The purpose of this study was to gather information on experiences of general education teachers concerning inclusion practices for children with Autism Spectrum Disorders (ASD). In this case study third, fourth, and fifth grade general education teachers in a rural Southwest Missouri school district provided the data source to keep a narrowed focus on the needs of education teachers for inclusion. The sample accounted for 16 elementary education teachers. Surveys were sent to all third, fourth, and fifth grade general education teachers in the district. Perceptions of general education teachers on proper inclusion training were identified as necessary for the study; comprehensive sampling was utilized as all third, fourth, and fifth grade general education teachers had the opportunity to participate. The surveyed group of teachers had the opportunity to participate in focus groups with their same grade level peers to further elaborate on their experiences. The focus group questions were open-ended and conducted by the researcher. The study found the participants had minimal experience in preservice preparation with minor background knowledge on ASD. Limited knowledge of teaching strategies and experiences in collaboration were also noted. Finally, teacher efficacy was measured through the perceptions of preparedness, confidence, and effectiveness in educating children with ASD. Participants felt low efficacy levels in these areas. An eagerness to increase training for educating children with ASD was widespread.

Keywords: autism spectrum disorder, ASD, inclusion, teacher efficacy, professional development

Background

Schools are seeing an influx of children with Autism Spectrum Disorders (ASD) (Singh, 2007). In 2006, "1 in 110 US children had ASD" (Bower, 2011, p.16). Grant (2010) identified an increase in cases of ASD at approximately 1 million to 1.5

million adults and children in the United States diagnosed with ASD. In 2012, 1 in 88 children in the United States were identified with ASD, which is an increase from 1 in 100 children identified in 2009 (Center for Disease Control and Prevention, 2012). Inclusion requires general education

teachers to provide resources and instruction for students spanning the entire spectrum of learning abilities, which includes children with ASD, in their general education classrooms. Singh (2007) defined inclusion as “physical, social, and instructional integration” (p. 205). Students in this increasing, diverse population need trained and prepared educators, yet current training is lacking (Jung, 2007). Building an understanding and knowledge base in special education law, terminology, and practices are crucial for training all educators while increasing efficacy in teaching. Educators need increased training on inclusion to be prepared for the flood of students with ASD (Forlin, 2007; Jung, 2007; Singh, 2007).

All teachers must be “skilled in collaboration” to meet accountability requirements for special needs students (Conderman & Johnston-Rodriguez, 2009, p. 235). Inclusion training focused on collaboration between general education teachers and special education teachers must be integrated into both preservice and professional development programs, as collaboration between general and special education teachers is crucial (Ali, Mustapha, & Jelas, 2006). Through data-driven research, Moore (2009) found collaboration to be conducive to student learning. A lack of training is a primary barrier to serving students in an inclusive classroom, and successful inclusion requires that personnel from general and special education collaborate as team members (Buelle, Hallam, Gamel-McCormick, & Scheer, 1999). Training needs to also include increasing educator knowledge of special education, specifically in the area of ASD.

Identifying experiences of general education teachers concerning inclusion practices for children with ASD will aid in proper teacher training practices (Buell et al., 1999). Proper training for inclusion can increase educator confidence and knowledge

base to better aid special needs students. Singh (2007) found general educators to not have adequate knowledge in the area of special education. Jung (2007) stated “developing confidence in one's ability to teach special learners is not only important for special educators, but also for general education teachers” (p. 106).

Conceptual Framework for the Study

Current professionals are teaching in inclusion classrooms with little to no inclusion training provided in the form of preservice or professional development opportunities. In one study, “special education teachers rated their efficacy, ability, understanding, and resources higher than general education teachers” in the areas of perception and inservice needs concerning inclusion (Buell et al., 1999, p. 1). Identification of the experiences of general education teachers in the areas of training, current practices, and efficacy will aid in increasing the effectiveness of general education teachers educating students with ASD (Forlin, 2007; Jung, 2007; Singh, 2007). The concepts interwoven within this study include the history of special education, the understanding of ASD, the current understanding of teacher preparation for inclusion practices, and the obvious need for professional development for inclusion practices.

When educators supply students with disabilities with “appropriate supports and services” in the general education classroom, inclusion has been established (Dukes & Lamar-Dukes, 2009, p. 17). Inclusion is full integration into the classroom without discrimination (Singh, 2007). Laws and regulations have required an increase in inclusion practices. This study focuses on the specific inclusion of children with ASD in the general education classroom by addressing the needs of the teachers.

Statement of the Problem

Students in diverse inclusive populations need trained and prepared educators, yet research shows many teachers feel inadequately trained to work with this varied group of students (Singh, 2007). General educators are lacking training for proper inclusion practices (Buelle, et al., 1999). An identification of needs, areas of concern, and proper instructional practices for inclusion of students with ASD is missing from general educator's preservice and professional development education. Research is lacking in the following key areas of inclusion training found to be beneficial: collaboration between general and special education teachers, education to increase educator's knowledge base in the area of special education, and implementation of professional development opportunities. To adequately meet the needs of teachers, inclusion training during preservice programs and during professional development opportunities is required (Jung, 2007).

General education teachers trained to collaborate with special education teachers provide a balanced education and a more positive inclusive environment. Collaboration between general education teachers and special education teachers has been identified as a key to proper inclusion practices (Ali et al., 2006). Collaboration enables general education teachers to understand student expectations and needs (Cahill & Mitra, 2008; Conderman & Johnson-Rodriguez, 2009). Strategies and examples for collaboration between general and special educators can improve inclusive classrooms (Lingo, Barton-Arwood, & Jolivet, 2011; Moore, 2009). Collaboration provides general education teachers with the knowledge background currently provided primarily to their special education cohorts, thus increasing their effectiveness and meeting their educational needs.

General education teachers' attitudes and confidence levels in working with special education students are currently at low levels (Jung, 2007). General education teachers do not appear to have adequate knowledge and skills to educate students with disabilities in their inclusion classrooms (Singh, 2007; Connelly & Rosenberg, 2009). In order to increase the efficacy of general education teachers, their knowledge, confidence, and skill sets need to be increased. An increase in preservice preparation and educational training programs would increase the effectiveness of general education teachers (Conderman & Johnson-Rodriguez, 2009; Jung, 2007).

Teacher training to equip teachers with skills, competencies, and strategies would be beneficial during the initial teacher training processes (Jung, 2007). A proper educator training program to be implemented into preservice training and professional development regimens may be the answer to serve the needs of this diverse population. Students who fall into learning disabled and gifted programs would better be served by classroom teachers trained to provide modified resources (Rice et al., 2007). Research shows many classroom teachers feel inadequately trained to work with this varied group of students (Singh, 2007).

Overall, past studies have identified the needs of increasing inclusion knowledge for general educators. Studies on inclusion have been conducted to properly include special education students within specific content areas (Tam, Nassivera, Rousseau, & Vreeland, 2000). Numerous articles have been written on ASD, teacher training, teacher perceptions; yet the lack of studies devoted to educating general education teachers in properly educating children with ASD is apparent. To meet the needs of an increasing population of children with ASD, studies such as this one must be conducted to benefit educational literature and practice.

Purpose of the Study

The purpose of this study was to gather information on experiences of general education teachers concerning inclusion practices for children with ASD to aid in properly training these educators. By gathering quantitative and qualitative data, the intent of the study was to improve current professional development to increase the learning opportunities provided to teachers of students with ASD.

In the study, a survey was utilized to measure the gap between current training practices and the needs of general educators. Open-ended questions on the survey allowed for educators to provide their own qualitative responses to their experiences with students with ASD in their general education classrooms. At the same time, the perceptions and experiences of ASD of general education teachers were explored during two qualitative focus groups with current third, fourth, and fifth grade educators at a rural Southwest Missouri school district.

Three research questions guided this study. The first identified preservice preparation experiences of general education teachers related to inclusion of students with Autism Spectrum Disorders. The second asked the participants to explain the professional development experiences in the areas of teaching strategies and collaboration pertaining to inclusion of students with Autism Spectrum Disorders. The final research question identified the levels of efficacy experienced by general education teachers in teaching students with Autism Spectrum Disorders.

History of Autism Spectrum Disorders

Autism Spectrum Disorders (ASD) covers a wide range of disorders associated with social withdraw, communication delays, and varying behavior disorders (Ryan, Hughes, Katsiyannis, McDaniel, & Sprinkle, 2011). This study focuses on the inclusion of children with ASD in the

general education classroom, thus requiring a proper understanding of the disorder. Explaining the history of ASD, breaking down ASD into the varying disorder categories, identifying the characteristics of ASD, relating special education laws and regulations, and expanding on teaching strategies and educational practices provide an understanding of ASD crucial to the study. Each of these sections will be elaborated upon using relevant and recent literature. The term autism was coined in 1943 by Leo Kanner. Kanner, a child psychologist, detected symptoms of the disorder through observations (Vernon & Rhodes, 2009). Prior to the labeling of autism, children with the characteristics noted by Kanner were “misdiagnosed as childhood schizophrenia, mental retardation, organic brain syndrome, or some other disorder” (Vernon & Rhodes, 2009, p. 5). In 1948, the word autism was increasingly used to describe children who were socially withdrawn and focused on routine (Al-Shammari, 2006; Baker, 2008). In 1964, an award-winning book on autism and its implications was published by the author Bernard Rimland followed by the treatment method, applied behavior analysis (ABA) by Ivan Lovass in 1987. The work of these two pioneers in the field of autism proved to be milestones for understanding these disorders (Vernon & Rhodes, 2009). In the 1970’s and earlier, “refrigerator parents” was a term used to define the cause of autism, blaming autism on the parents of children with ASD; however, this was later discredited and the cause remains unknown (Vernon & Rhodes, 2009, p. 6). ASD “range from classic autism to Asperger’s syndrome” and have set distinguishing factors (Saunders, Page, & Wood, 2011, p. 21).

Categories of Autism Spectrum Disorders

ASDs include “Autistic Disorder, Asperger’s Disorder, and Pervasive Developmental Disorders - Not Otherwise Spec-

ified (PDD-NOS) (Gerdtts & Bernier, 2011, p. 1). Each of these disorders has their own set of characteristics, yet they tend to overlap and are grouped into the ASD title. Autistic Disorder is characterized by social, communication, and behavior restrictions. Asperger's Disorder is a form of autism in which children display the characteristics of Autistic Disorder, yet lack the cognitive and speech delays. Children labeled with PDD-NOS have Autistic characteristics, but they do not fit under a specific labeling or disorder. Rett Syndrome and Childhood Disintegrative Disorder (CDD) can also be classified under the ASD umbrella (Ryan et al., 2011).

Autistic Disorder. Autistic Disorder, also known as classic autism, is characterized by impairments in "social interaction, communication, and behavior with restricted and stereotyped interests" (Tonge & Brereton, 2001, p. 672). Autistic Disorder can be clearly diagnosed by "30-36 months," yet symptoms are more commonly noticed "during the second year of life" (Tonge & Brereton, 2011, p. 672). The cognitive ability of children with Autistic Disorder can range from severe to moderate disabilities. However, usually a cognitive assessment "reveals a scatter of abilities with more difficulty in verbal and language skills" and this is coupled with a "better performance in visual motor activities" (Tonge & Brereton, 2011, p. 673). Children with Autistic Disorder also fail to make eye contact and lack facial expression while they also "tend to follow their impulses regardless of the situation" (Vernon & Rhodes, 2009, p. 6). Roughly one third of children with Autistic Disorder are nonverbal. The majority of children with Autism Disorder have IQ scores described labeling them with an "intellectual disability;" however, one third have an IQ score of average or above average (Ryan et al., 2011, p.57). Children who have social

impairments and the ability to communicate fall under the ASD category of Asperger's Disorder.

Asperger's Disorder. Asperger's Disorder is a mild PDD-NOS characterized by a "qualitative impairment in social interactions" with repetitive actions which are not coupled with cognitive or speech delays (Koyama & Kurita, 2008, p. 691). The lack of cognitive and speech delays is the main difference between Autistic Disorder and Asperger's Disorder. These social impairments are made apparent by their "restricted, repetitive and stereotype patterns of behavior and interests" (Tonge & Brereton, 2001, p. 673). Children with Asperger's Disorder may not be properly identified until they are in preschool or a school setting when these repetitive social delays are more prevalently noticed (Tonge & Brereton, 2001; Vernon & Rhodes, 2009). Another characteristic includes "all-consuming interests" which are prevalent in children with Asperger's Disorder, and these interests can be taken to the extreme (Vernon & Rhodes, 2009, p. 6). Speech delays are not a huge impairment for these children, yet language delays are noted. The vocabulary of these children is not always delayed; in fact "large vocabularies" are often developed by these children (Ryan et al., 2011, p. 57). However, for children with Asperger's Disorder, "understanding nonverbal" and the "pragmatics of language" can be a difficulty, thus contributing to their social impairments (Ryan et al., 2011, p. 57). Two children with Asperger's Disorder may be completely different as the characteristics of Asperger's are wide and varying from child to child (Chandler-Olcott & Kluth, 2009). Characteristics of children with Autism vary greatly, which brought about the need for the label PDD-NOS.

Pervasive Development Disorders-Not Otherwise Specified. Children who exhibit characteristics of Autism, but do not

fit all the characteristics of a specific disorder, fall into the PDD-NOS category (Ryan et al., 2011). Children in this category have milder Autistic symptoms, and their symptoms are not severe enough for them to be labeled as Autistic or with Asperger's Disorder (Koyama & Kurita, 2008). These children will have Autistic characteristics, but some symptoms will be mild, not present, or only one key symptom will be present. Diagnosing children labeled with PDD-NOS can be difficult, and a thorough investigation of symptoms must be done to evaluate the child (Autism Speaks, 2012; Vernon & Rhodes, 2009). Two other disorders fall into the ASD category, Rett Syndrome and CDD.

Rett Syndrome and Childhood Disintegrative Disorder. Rett Syndrome and CDD are two other disorders often listed under ASD. Rett Syndrome is a genetic disorder with similar Autism-related symptoms including "regression in mental and social development, loss of language, seizures, and loss of hand skills" (Ryan et al., 2011, p. 57). This syndrome is found only in females (Vernon & Rhodes, 2009). It is distinguished by a normal development period with an onset after six months of age (Ryan et al., 2011). By the age of ten, losses of "expressive or receptive, social skills or adaptive behaviors, bowel or bladder control, and play or motor skills" are inevitable (Vernon & Rhodes, 2009, p. 6). CDD also follows a normal development period and the onset of Autistic-related symptoms. However, in children with CDD, the symptoms show up around two years of age with all symptoms developed by four years of age. The symptoms include "marked losses of motor, language, and social skills" (Ryan et al., 2011, p. 57). The loss of these developmentally appropriate skills is the distinguishing factor for CDD (Vernon & Rhodes, 2009).

Characteristics of Children with Autism Spectrum Disorders

ASDs are characterized by students "being impaired in the ability to communicate, understand language, play, develop social skills, and relate to others" (Raymond, 2008, p. 197). In 1943, Kanner first created a set of seven features of individuals with autism. These seven features were: (a) inability to relate themselves to people and situations, (b) poor language development, (c) echolalia, (d) excellent rote memory, (e) perseveration and repetitive behavior, (f) anxiously obsessive with sameness, (g) good cognitive potentialities and generally normal appearance (Vernon & Rhodes, 2009, p. 6). In diagnosing autism, children must portray features in three distinct areas including impairment in communication or social skills, stereotypical behaviors like rocking and finger movements, and finally, there must be a delay in skill development before age three. Social interactions are affected by autism and characterized by minimal to no eye contact and unawareness to social circumstances. Communication overall was minimal and included repetition with almost robotic speech. Children with ASD are also characterized by set routines and gross and fine motor skills being very repetitive. Cognitively, children with ASD may have mental retardation or have characteristics of a savant (Vaughn et al., 2006; Vernon & Rhodes, 2009). Children with ASD are also very impulsive and lack control "regardless of the situation" (Vernon & Rhodes, 2009, p. 8). Children with ASD are being diagnosed at an increasing rate (Singh, 2007). In 2008, Szymanski & Brice stated one in every 150 children situated in the United States has autism. Almost 1.5 million adults and children in the United States have been diagnosed (Grant, 2010; Saunders et al., 2011). Due to the increase of children labeled with ASD, special education laws

have been forced to include this diagnosis in their guidelines.

Special Education Laws and Regulations Affecting Autism Spectrum Disorders

Special education laws and regulations have also been established for children with ASD. The *Individuals with Disabilities Education Act (IDEA)*, The *Americans with Disabilities Act (ADA)*, and *No Child Left Behind (NCLB)* all have identified and made provisions for children with ASD. *IDEA* has established a definition of autism stating autism is “a developmental disability significantly affecting verbal and non-verbal communication and social interaction, usually evident before age 3, that adversely affects a child’s educational performance” (Raymond, 2008, p. 197). Since *IDEA* defined autism as a learning disability, children with ASD are guaranteed a Free Appropriate Public Education (FAPE) and are allowed this right from “preschool through high school or until age 21 years” (Vernon & Rhodes, 2009, p. 10). *ADA* causes an overlap in coverage for students under *IDEA* and *Section 504*, allowing more students, including students with ASD, to receive special services (Zirkel, 2009). The guidelines of *NCLB* affect children with ASD in many ways. Under *NCLB*, all students, including students with learning disabilities, must participate in district and state assessments. Teachers are also affected by *NCLB*, one regulation included requiring “highly qualified teachers” to teach core subject areas to all children in the public school setting (Yell et al., 2005, p. 134). These laws require students with ASD to be included in the general education classroom as much as possible and for teachers to be qualified to properly teach them; however, the strategies needed for general education teachers to teach these students are minimal (Kleinert et al., 2007).

Teaching Strategies and Educational Practices

Many teaching strategies have been identified to aid teachers in properly educating children with ASD. Some of the most common research-based effective strategies include Applied Behavior Analysis (ABA); Developmental, Individual-Difference, Relationship-Based Model (DIR); Discrete Trial Teaching (DTT); Picture Exchange Communication System (PECS); Social Stories; and Treatment and Education of Autistic and Communication Related Handicapped Children (TEACCH). Each of these methodologies has proven effective for teaching students with ASD.

Applied Behavior Analysis (ABA). ABA, also called the Lovass Method, was developed in 1987 by Ivan Lovass as a behavioral psychology based practice utilizing both positive and negative reinforcement to achieve targeted skills. ABA is the most commonly used teaching strategy for children with ASD. This strategy requires teachers to reinforce behaviors in the classroom when necessary (Vernon & Rhodes, 2009). In this teaching style, a set of lessons are used to achieve a desired behavior. Skills are portrayed in a simple form and taught using reinforcement of proper behaviors. Overall, a “manipulation of conditions that are likely to lead to change in the desired direction” are paramount (Cohen, 2011, p. 326). This method increases adaptive, cognitive, compliance, language, IQ, and social functioning (Ryan et al., 2011).

Developmental, Individual-Difference, Relationship-Based Model (DIR). Another model currently being utilized to teach children with ASD is the DIR model. Educators and parents utilize this model to learn about the “strengths and limitations of the child,” thus identifying ways to create interventions for the child to establish emotional and social development (Ryan et

al., 2011, p. 59). This model focuses on the emotional development of the child while being concerned with the feelings, relationships, and interactions of the child. Autism Speaks (2012) identified floortime as a useful DIR technique. Floortime aids in emotional development of the child through communication, thinking, and idea sharing. DIR increases social and emotional functioning as well as information gathering (Ryan et al., 2011).

Discrete Trial Teaching (DTT). Discrete Trial Teaching is another commonly used teaching strategy. DTT was used to teach “language and communication skills to children with autism” (Kurt, 2011, p. 1437). Five elements are included in the DTT process: (a) discriminative stimulus, (b) prompt, (c) response, (d) consequence, and (e) inter-trial interval (Kurt, 2011, p. 1437). In this process, teachers present “graduated guidance” by providing prompts which the student can respond correctly to and then following the response with a similar correct response (Kurt, 2011, p. 1437). In this intervention, specific tasks are taught in a manageable way until mastery is achieved (Ryan et al., 2011). The consequences involved in the DTT process include “positive reinforcement for correct response or corrective action for an incorrect response” (Cohen, 2011, p. 326). The DTT process was helpful for children with ASD due to the focus on communication skill building (Kurt, 2011; Yell et al., 2005). This method also increases cognitive, language, adaptive, and compliance skills (Ryan et al., 2011).

Picture Exchange Communication System (PECS). PECS is a “communication system developed to assist students in building fundamental language skills” with the end result of “spontaneous communication” (Ryan et al., 2011, p. 59). PECS is beneficial for children with little to no verbal capabilities. This system incorp-

orates pictures to aid children in expressing feelings and needs. In the beginning of the program, children learn to exchange pictures for actual objects and to use these items in communication. Pictures and objects are utilized, yet the end result of PECS is verbal communication (Autism Speaks, 2012). PECS increases speech and language development as well as social-communicative behaviors (Ryan et al., 2011).

Social Stories. Social Stories are stories personalized to individual children to explain socially acceptable behaviors to given situations. The stories show the child how to positively react in specific situations (Ryan et al., 2011). The goal of Social Stories is “to share accurate information about situations or concepts in meaningful and supportive ways so as to improve understanding of expectations and events” (Cohen, 2011, p.327). Social Stories increase prosocial behaviors (Ryan et al., 2011).

Treatment and Education of Autistic and Communication Related Handicapped Children (TEACCH). TEACCH focuses on intervention for task development. This method “supports task completion by providing explicit instruction and visual supports” specifically designed for each individual child in their own environment (Ryan et al., 2011, p. 59). TEACCH, also known as Structured Teaching, was developed in the 1970s to provide an understanding of the difficulties children with Autism face (Autism Speaks, 2012). TEACCH was specifically created for Autism as it “takes into account the disorder’s features and tries to minimize the child’s difficulties using structured and continuous interventions, environmental adaptations, and alternative-augmentative communication” (Panerai et al., 2009, p. 875). TEACCH increases “imitation, perception, gross motor skills, hand-eye

coordination, and cognitive performance” (Ryan et al., 2011, p. 59). Along with teaching strategies, specific teaching elements have also been identified to aid teachers in educating children with ASD.

The most popularly used elements for educational practices for teachers were established by Iovannone, Dunlap, Huber, and Kincaid in 2003. These six elements included individual services, systematic instruction, structured educational environments, curricular content, functional approach to behavior, and involvement of family (Iovannone et al., 2003). Individualizing services requires services to be “tailored to meet the unique individual needs and family characteristics of each student” (Yell et al., 2005, p. 136). Systematic instruction consists of tailoring teaching strategies to specific learning outcomes and goals. Structured educational environments consist of predictable daily routines; these routines aid children with ASD to react appropriately to different activities throughout the day. Communication needs and social interactions are emphasized through specific curriculum content to aid children with ASD in their everyday interactions (Yell et al., 2005). Using the functional approach to behavior allows teachers to focus on skill development and not focus so intently on “punishment-based approaches” (Yell et al., 2005, p. 136). Finally, teachers seeking family involvement as an element of educating children with ASD has proven helpful as “family members know their child best,” while meeting regulations for parent involvement sent out by reauthorization of IDEA in 2004 (Yell et al., 2005, p. 136; Raymond, 2008).

Children with ASD have been identified since 1943 (Vernon & Rhodes, 2009). Defining ASD, explaining the various disorders under the ASD label, and providing the characteristics of ASD are the first steps in educating educators on ASD.

Regulations and changes have taken place over the years due to special education laws including *IDEA*, *ADAA*, and *NCLB* regulations to improve inclusion for children with ASD (Peterson, and challenge for general educators (Kleinert et al., 2007). Teaching strategies are currently in place to aid general education educators in completing this endeavor; however, gaps in the process still exist. The deciphering between special education versus inclusive education primarily for children with Autism Spectrum Disorder is very controversial (Panerai et al., 2009). Laws require students with ASD to be placed in the classroom, yet general education teachers are not fully prepared (Yell et al., 2005).

Teacher Preparation

Preservice preparation refers to teacher training before the teacher entered the classroom, for example, during required college curriculum. Preparing educators during initial training with in-service programs which equip teachers with skills, competencies, and strategies for catering to diverse learning settings may be the answer to increasing general education teachers’ confidence levels in working with children with ASD (Kleinert et al., 2007; Copland, 2003). An increase in preservice preparation and educational training programs would increase the effectiveness of general education teachers (Conderman & Johnson-Rodriguez, 2009; Jung, 2007).

The requirement of special education knowledge has been known since the early twentieth century. At this time, special education was recognized as a field of study within the teaching occupation. The International Council for the Education of Exceptional Children was created in 1922 by Elizabeth Farrell to fully establish the special education profession (Raymond, 2008). In 1933, the organization’s name was changed to the Council for Exceptional Children (CEC). This organization brought

forth the importance of including special education coursework within the preservice preparation of educators. Finally, in 2004 with the reauthorization of *IDEA*, “preservice special education was finally forced to respond to the academic and pedagogical content preparation of its graduates” and special education courses were added to the course requirements of college and university graduates going into the field of teaching (Pugach et al., 2011, p. 192).

Access to education, minimal discrimination, parents’ rights and participation, and all eligible children receiving services lay the foundation for the “legal and ethical bases for special education practices;” however, the major task is getting all educators onboard to fully implement special education for every eligible child (Keogh, 2007, p. 67). Preservice teachers require training to meet these demands. The reauthorization of *IDEA* required general education teachers to have a more participative role in teaching students with disabilities within their general education classrooms (Pugach et al., 2011). Colleges and universities had to increase training opportunities for preservice teachers to meet the requirements of *IDEA*; they wanted teachers to be effective to work with a “broad range of students” within the general education classroom (Keogh, 2007, p. 67). Along with *IDEA*, the requirement of a FAPE laid the responsibility on teachers in general education to provide accommodations within the general education classroom for students with disabilities (Zirkel, 2009). *NCLB* also had a role in increasing preservice teacher preparation by stating when the “general education classroom becomes more responsive to the needs of diverse learners, they will become more effective for all students” (Raymond, 2008, p. 197). *NCLB* required all teachers to be highly qualified to teach their core subject areas to all students, including

students with disabilities, in the public school setting (Pugach et al., 2011; Yell et al., 2005). This provision mandated new hires to be highly qualified by 2002-2003, and all teachers in the public school setting to be highly qualified by the 2005-2006 school year (Yell et al., 2005). The special education laws and regulations increased the prevalence of inclusion within the general education classroom and thus required an increase of preservice training in the area of inclusion.

The “lack of role clarification” once inclusion was enforced caused confusion among general education teachers (Rothstein, 1990, p. 45). With the increase of students with ASD in the general education classroom, the need to educate general education teachers became apparent (Raymond, 2008). Teacher preparation concerning inclusion of children with ASD was divided into two distinct categories in literature. These categories include collaboration and efficacy. Collaboration refers to special education teachers and general education teachers working together to educate children with ASD (Ali et al., 2006). Efficacy refers to how effective general education teachers perceive their teaching engages children with ASD (Jung, 2007).

Cahill and Mitra (2008) stated, “when the school culture provides opportunities for staff to develop relationships, individuals feel supported and are more likely to experiment with new ways to reach students” (p. 150). Collaboration between general education teachers and special education teachers has been identified as a key to proper inclusion practices (Ali et al., 2006). The Cooperative Teacher Model is one such model created to meet this demand and established to increase collaboration. In this model, teachers and special education teachers co-teach in one classroom to meet the educational needs of all students (Idol, 2006). Collaboration

enables general education teachers to understand student expectations and needs (Cahill & Mitra, 2008; Conderman & Johnson-Rodriguez, 2009). FAPE required general education teachers to accommodate for students with disabilities; this should be done with “close coordination and consultation” with special education educators (Zirkel, 2009, p. 69). Training focused on how team teaching may increase collaboration and cohesion which are crucial for leaders to establish inclusion programs in any school setting (Forlin, 2007; Rice et al., 2007). Strategies and examples for collaboration between general and special educators can improve inclusive classrooms (Lingo et al., 2011; Moore, 2009). Collaboration provides general education teachers with the knowledge background currently provided primarily to their special education cohorts, thus increasing their effectiveness.

General education teacher attitudes and confidence levels in working with special education students are currently at low levels (Jung, 2007). General education teachers do not appear to have adequate knowledge and skills to educate students with disabilities in their inclusion classroom (Singh, 2007; Connelly & Rosenberg, 2009). Jung (2007) identified the importance of increasing the confidence of general education teachers in teaching special learners. In order to increase the efficacy of general education teachers, their knowledge, confidence, and skill sets need to be increased. An increase in preservice preparation and educational training programs would increase the effectiveness of general education teachers (Conderman & Johnson-Rodriguez, 2009; Jung, 2007).

Through identification of a lack of preservice training in regards to properly education children with ASD and the increase of students with ASD, colleges and universities are trying to meet this demand (Conderman & Johnson-Rodriguez, 2009;

Raymond, 2008; Jung, 2007). Special education changes over the years have increased the need for training preservice teachers to be fully prepared to meet the needs of a wide range of student abilities (Raymond, 2008). Special education laws, including *IDEA* and *NCLB*, have increased the need for preservice teacher training as well (Keogh, 2007). Inclusion laws have required an increase in collaboration and efficacy within general education teachers as they tackle the challenge of teaching students with wide ranges of abilities in their general education classrooms (Cahill & Mitra, 2008; Singh, 2007). These laws and regulations are aimed at helping future teachers before they enter the classroom; however, help was needed for veteran teachers who are already in the classroom. This type of aid can be presented as professional development opportunities within current school settings.

Teacher preparation for this study includes understanding special education knowledge and laws, proper inclusion practices broken down into collaboration and efficacy of teachers, and an identification of the lack of proper training. Understanding the preparation of teachers is crucial for teachers before they enter the profession, yet for teachers already in the classroom proper professional development is mandatory.

Professional Development

Professional development in this study is defined as teacher training provided by educational leaders within the current classroom setting for teachers who are already placed in general education classrooms having completed required preservice training from a college or university. As the number of children with ASD increases, the confidence level of general education teachers in educating these students decreases (Singh, 2007). Efficacy is the term used in this study to refer to this

confidence level. Efficacy must be addressed in the form of professional development opportunities so general education teachers have the confidence they need to educate children with ASD (Jung, 2007). A large part of the lack of confidence experienced by general education teachers is due to the lack of knowledge of special education and ASD (Jung, 2007). Professional development was changed by educational laws and regulations which have shaped requirements for teachers within the general education classroom. Special education laws have played multiple roles in increasing requirements for general education teachers, especially in the area of inclusion (Buell et al., 1999). These regulations are identifying who is required to teach students with disabilities (Simon & Black, 2011). Administrators are becoming aware of the growing need for professional development so general education teachers meet the influx of special education students, and in this study, specifically students with ASD (Raymond, 2008). Strengthening teacher efficacy and increasing knowledge of special education and ASD provide sound professional development for general education teachers striving to educate children with ASD in their general education classrooms.

Teacher Efficacy

A barrier to learning was created when a lack of proper training was present in the teacher of an inclusive classroom (Buell et al., 1999). Raising the confidence levels of general education teachers was another strategy for improving inclusion practices. Preparing educators during initial training with in-service programs which equip teachers with skills, competencies, and strategies for catering to diverse learning settings may be the answer to increasing general education teachers' confidence levels in working with children

with ASD (Kleiner et al., 2007; Copland, 2003).

In Loreman's 2007 study, educator training for inclusion based on positive attitude, supporting policy and leadership, research-based practices, flexible curriculum, community involvement, reflection practices, and proper resources was identified as effective. Including these elements as well as best practices for inclusion can benefit general education teachers in providing resources and instruction for students spanning the entire spectrum of learning abilities (Forlin, 2007; Robinson & Timperley, 2007).

Professional development for proper inclusion practices has been identified to be most effective when teachers have first-hand knowledge with inclusion in their classrooms, thus being able to provide strategies which appeared to work for their students (Simon & Black, 2011). Increasing collaboration between special education teachers and general education teachers has been found to be beneficial when providing professional development for inclusion to properly be implemented (Cahill & Mitra, 2008; Conderman & Johnson-Rodriguez, 2009). General education teachers must provide accommodations for students with disabilities, and they are asked to coordinate with special education teachers to accomplish this task (Zirkel, 2009).

General education teachers feel inadequately trained to teach children with ASD in their classrooms (Singh, 2007). Educational institutions must properly educate general education teachers in order to increase their efficacy in educating children with ASD. Identifying specific areas in which general education teachers lack confidence is the primary goal of this study. Relevant literature has identified a lack of knowledge and skills as the most common reason teachers do not feel

confident to teach all children in the inclusive setting (Jung, 2007).

Understanding of Special Education and Autism Spectrum Disorders

Special education laws including *IDEA* and *NCLB* legislation are responsible for an increase in professional development needs for general education teachers (Peterson, 2007). *IDEA* made known that all United States students are granted FAPE; therefore, teachers should be prepared to teach students with all learning abilities within their general education classrooms (Raymond, 2008). General education teachers were also responsible for providing accommodations to children with IEPs, and this regulation came about with limited training for current teachers (Keogh, 2007). *NCLB* brought about a multitude of requirements for preservice and general education teachers. Teachers were required to be highly qualified within their academic content area(s) to teach all students in their public school classrooms (Pugach et al., 2011). Being highly qualified meant teachers must at minimum hold a bachelor's degree from a college or university, have a state certification in their academic areas, and "demonstrate subject matter competency in the core academic subjects that they teach" to properly instruct "all students in public schools" (Yell et al., 2005, p. 134). These laws required inclusion of students with a spectrum of learning abilities to be placed in the general education classrooms, and current teachers were in need of training to properly implement these regulations.

Increasing professional development for current general education teachers was identified as crucial for meeting inclusion laws and regulations to meet the educational needs of students with ASD (Kleiner et al., 2007). Special education laws have identified who was responsible for educating students with a FAPE by requiring students with disabilities, namely students with ASD,

to be placed in the general education classroom as much as possible (Buell et al., 1999). *NCLB* has required teachers to be highly qualified to teach content knowledge to all students on the learning spectrum, which has forced administrators to increase professional development opportunities to keep educators up-to-date on current and relevant teaching strategies (Yell et al., 2005). Inclusion laws have increased the need for current general education teachers to be properly trained to educate children with ASD (Buell et al., 1999). Increasing collaboration and teacher efficacy have been found to increase the likelihood of success for proper inclusion practices (Cahill & Mitra, 2008; Conderman & Johnson-Rodriguez, 2009). Strategies are currently in place to educate teachers for the task of educating all children in their classrooms; however, research continually adds to the strategies teachers are trying (Simon & Black, 2011).

Professional development provides educators the opportunity to learn and keep up-to-date in proper educational practices. Confidence levels increase as professional development opportunities allow general education teachers to better understand their students' needs. Defining professional development in terms of special education laws was important for this study as well as identifying a lack of training for inclusion practices. Overall, increasing teacher efficacy in educating children with ASD and a need for increasing the knowledge of special education and inclusion, namely for children with ASD, is the driving force behind requiring increased preservice education and professional development opportunities.

Methods

Participants

In this case study third, fourth, and fifth grade general education teachers in a rural Southwest Missouri school district

provided the data source to keep a narrowed focus on the needs of education teachers for inclusion. The sample accounted for 16 elementary education teachers. Surveys were sent to all third, fourth, and fifth grade education teachers in the district.

The specification of third, fourth, and fifth grade education teachers for the sample provided a focus on teachers having self-contained classrooms and larger experiences with inclusion during the entire school day. Departmentalized grade levels generally start in the sixth grade; therefore, third, fourth, and fifth grades were chosen for the most daily interactions between the general education teachers and the children with ASD. Perceptions of general education teachers on proper inclusion training were identified as necessary for the study; comprehensive sampling was utilized as all third, fourth, and fifth grade general education teachers had the opportunity to participate (Fink, 2009). The surveyed group of teachers had the opportunity to participate in focus groups with their same grade level peers to further elaborate on their experiences. The focus group questions were open-ended and conducted by the researcher (Krueger & Casey, 2009; Mertens, 2005).

This case study was situated within a typical rural Southwest Missouri school district to provide generalizable findings. The Department of Education and Secondary Education (2012) calculated the K-12 enrollment at the school to be approximately 2,000 students. The similarity of the size of this district to other districts across Missouri allows this district to be considered a typical school for this state.

Data Collection and Instrumentation

Data collection and instrumentation included utilizing a survey and conducting two focus groups. The survey consisted of demographic information and teacher perception questions. The survey also included four open-ended questions to allow

participants to provide details on their experiences. The focus group questions were created from an elaboration of the survey questions. Survey and focus group questions were created to answer the three specific research questions for the study. The questions were presented after opening questions were utilized to set a positive tone for the participants (Krueger & Casey, 2009). These data collection methods allowed for both quantitative and qualitative data to be accumulated. Mixed methods of data collection provided the data necessary for this descriptive study. The following sections explain the survey instrument, focus group protocol, sensitivity of human subject protection, data collection procedures for both quantitative and qualitative methods, and the focus group procedures.

Survey: Autism Needs Assessment Survey-Revised (ANAS-R)

The use of a survey was the best choice for the researcher to conduct a simple descriptive study of the given educators at one particular point in time (Mertens, 2005). The survey was the best choice as it was aimed at setting policy needs and program planning (Fink, 2009). Limitations to survey collections were noted by the researcher as human error or bias may have played a role in swaying responses. Quantitative data collection was chosen due to the nominal scales of measurement for demographic information gathered through the survey, as well as coding of open-ended responses. Qualitative data were collected through open-ended questions provided on the survey. Overall, the survey provided a mixed method data collection for the study.

The survey, Autism Needs Assessment Survey-Revised (ANAS-R), was adapted from a current survey which was formally used to identify training practices of special education teachers in Missouri public schools working with students with ASD in their classrooms (Tam

et al., 2000). Project ACCESS was the original conductor of this survey, and they have used it for several years for their annual survey for special education directors and in-district autism consultants. The researcher utilized questions from the original survey with minor revisions to meet the needs of the study and research questions. Revisions included adding extra response choices when only two options were currently present. Questions twelve, thirteen, and fourteen were added to answer research question three on teacher efficacy. These questions focused on the confidence level of the participants in educating children with ASD. The researcher also changed question eighteen to include current and relevant teaching strategies identified in the literature review of the study. Question twenty-five was added to gain anecdotal data for the qualitative analysis on actual experiences of the participants. Other changes were minor changes in word choice. The survey consisted of twenty-five questions covering educator demographics and perceptions. The initial eleven questions covered demographics and experiences, the following six questions focused on teacher efficacy, the next four questions focused on current teacher strategies, while the final four questions were open-ended questions focused on teacher perceptions and experiences on inclusion and ASD. The responses were coded and categorized into like responses. Each survey took approximately fifteen minutes for each participant to complete, and the results were stored electronically through Survey Monkey.

The purpose of the survey was to identify teacher perceptions on current student inclusion training techniques to identify current needs of teachers in educating children with ASD. The information gathered was useful in understanding the importance of collab-

oration and team teaching for inclusion to be a success in the general education classroom. The results obtained also identified effective collaborative practices beneficial to the educational community and aided in improving teacher training for inclusion purposes.

Focus Group Protocol

Focus group participants were selected through availability and openness for participation. Questions were open-ended and derived from an elaboration of the survey questions. The forty-five minute focus groups were conducted on location with the researcher leading the discussion while voice recording the responses and taking field notes. Proper preparation guidelines were taken into account for the focus groups. Consent letters were signed at the beginning of each focus group, and procedures were explained to the participants. Opening questions were utilized to get the participants talking and interacting and to set a comfortable tone for the focus groups (Krueger & Casey, 2009). Question routing included key questions being asked during the focus group study aimed at answering the study's research questions (Krueger & Casey, 2009). Following the focus groups, the researcher transcribed the voice recording and consulted field notes to code responses according to coding procedures conducted from the survey responses. The researcher checked for consistency and similarity in responses.

Results

Research Question One

Research question one asked to identify experiences of general education teachers in the areas of preservice preparation related to inclusion of students with ASD. Quantitative and qualitative data were collected to answer this question. The study found most participants determined less than nine credits were accumulated in

the area of special education to receive their teaching certificate with only a few teachers having ten or more credits. The results identified about three-fourths of participants finding collaboration as the main source of support for educating children with ASD, not preservice or preparatory courses.

Most participants identified their formal level of ASD training as “introductory/awareness.” No participants chose “advanced” to describe their training levels. Finally, the largest location that participants had received training on methodologies for educating children with ASD was preparatory programs.

Focus group questions were also aimed at identifying experiences of general education teachers in the area of preservice preparation. Participants replied they had not received formal training, or what they did receive was limited. Participants were open to receiving training and even offered suggestions in the areas of strategies, methodologies, discipline, and overall education on ASD.

In conclusion, these results show a limited number of preservice courses completed for training of general education teachers educating children with ASD. However, preparatory programs were identified as the top source of ASD training. Collaboration with peers was concluded as the main source of resources for educating children with ASD.

Research Question Two

Research question two focused on professional development experiences of general education teachers in the areas of teaching strategies and collaboration pertaining to inclusion of students with ASD. Survey questions and focus group questions allowed this research question to be answered both quantitatively and qualitatively. Out of the surveyed teachers, most had three or less students with ASD in their teaching careers, and three responded

with four to nine total students with ASD. Comparatively, all of participants had three or less students in their classrooms on a yearly basis. These numbers indicated a deficiency of personal experience and created a limitation to the study.

Current and relevant teaching strategies identified through the literature review were presented as options to indicate methodologies the participants had received training on to use in their classrooms. Only a few participants chose to answer this question which portrayed a deficiency of knowledge and training in the relevant methodologies. Only a minimal number of participants recalled receiving training in any of these research based methodologies with Developmental, Individual-Difference, Relationship-Based Model, and Social Stories being the only chosen methodologies.

Open-ended survey questions also allowed for qualitative findings for research question two. Survey questions together with several focus group questions supplied the qualitative analysis of the data. Several focus group questions asked for training experiences, collaboration practices, successful strategies, and unsuccessful strategies used by the participants.

Participants identified several collaborative practices and experiences utilized for the educational benefit of children with ASD. Most responses on the survey and during the focus group referred to working with special education teachers to modify curriculum or in aiding students with ASD in transitioning. General education teachers had worked closely with special education teachers to aid students with ASD to adjust socially into the inclusive classroom. They also worked together to modify lessons and create a learning experience within the limits of the general education classroom.

Table 1

Collaborative Strategies for Educating Students with ASD

Collaborative Strategy	Examples
Collaboration with Special Education Teachers	Modify subject curriculum Create meaningful work Refocus attention Social transitions Life skills and adaptations
Collaboration with Others	Meeting individual needs One-on-one help Participation in hands-on activities

Participants were asked to identify strategies which were successful in their classrooms to educate students with ASD. Participants were also asked for successful and unsuccessful teaching strategies they had experienced. Overall, educators had identified communication, positive environment, and scheduling to be the overarching concepts for proper teaching strategies in the general education classroom to engage students with ASD. Communication referred to open communication between the teacher

and the student in setting clear objectives and expectations. Setting a positive environment included avoiding overstimulation, making the student comfortable, and offering genuine praise to the student. Finally, scheduling referred to the day to day activities within the classroom. Participants referred to keeping students with ASD informed of scheduling changes to not surprise them with variances from their normal routine.

Table 2

Teaching Strategies for Educating Students with ASD

Teaching Strategy	Examples
Communication	Listening, implementing, and reflecting State expectations Calm demeanor
Positive Environment	Avoiding overstimulation Making the student(s) comfortable Offering praise
Scheduling	Daily schedules Firm, caring, safe guidelines Limited variations from schedules

In conclusion, research question two was answered through multiple survey and focus group questions. The participants have a multitude of experiences in collaboration and teaching strategies. Having minimal formal training, participants used a trial and

error approach to educating students with ASD.

Research Question Three

Research question three identified levels of efficacy experienced by general education teachers in successfully teaching students with ASD. Research question three

was answered primarily through survey questions; however, focus group responses referred to a deficiency of training and a feeling of ineffectiveness.

Participants were questioned on the sufficiency of available resources for educating students with ASD. Approximately two-thirds of the participants felt the support, training, resources, and assistance for children with ASD they received met their needs “most of the time.” Two respondents chose “yes, all of the time” while two others chose “no, or not consistently.” Therefore, the majority feel their needs are being met most of the time, while a small amount of participants feel available resources are not sufficient, or at least are not consistently sufficient.

In the study, the qualification of the participants was referred to as the preparedness. Overall, one-fifth of participants responded that they felt they were only “moderately qualified.” Comparatively, two-thirds felt “minimally qualified” with the remainder of participants feeling “not qualified.” Overall, a low level of efficacy viewed by the participants in the areas of qualification and preparedness for educating students with ASD was noted.

The confidence levels in educating children with ASD of participants were also measured. Similarly, a little over half of participants felt “moderately confident” or “adequately confident,” and the remaining participants felt “minimally confident” or “not confident.” Participants were also questioned on their effectiveness in educating students with ASD. All respondents chose “moderately effective” or “minimally effective.” Overall, the efficacy measured in this study demonstrated an overall shortage of efficacy within the participants in educating children with ASD.

In measuring teacher efficacy, the participants were asked if they would be willing to participate in an online course or

in a district professional development opportunity to gather education on ASD. Over half of the respondents answered “yes.” The necessity of an increase of knowledge was made evident when questioned on six common and relevant teaching strategies identified in the literature review. Only a few participants had knowledge of these strategies. Preparatory training was noted as the most common source of ASD training with nearly half of participants finding this training “satisfactory.”

Finally, areas of the school district where additional programming and training are needed were identified. Of those surveyed, nearly half chose the “elementary” as a location for needed training. The participants are all a part of the elementary school in their district which could be the reason for this high percentage. In conclusion, the quantitative data gathered for research question three portrayed a need for increasing knowledge for the general education teachers to thus increase the efficacy perceptions within these educators.

The qualitative findings for research question three were limited. The overall consensus on efficacy was measured qualitatively through the multiple conversations and open-ended questions portraying the needs of general education teachers to properly educate students with ASD. Specifically, the needs identified fall in the two categories of additional resources and need for further training opportunities.

In conclusion, research question three was answered in most part quantitatively with qualitative findings supplementing the overall findings from the survey. Participating general education teachers have low feelings of preparedness, confidence, and effectiveness. They are eager and enthusiastic to receive training either via online sources or in their current

district professional development opportunities.

The findings for the study were observed through both quantitative and qualitative data sources. Each research question was answered through quantitative and qualitative findings. Table 3 provides an overall explanation of the quantitative findings. Survey questions were utilized to identify preservice preparation, professional development experiences, and efficacy levels of general education teachers in educating students with ASD in order to

answer the study's research questions. Overall, minimal special education hours were recorded as participants identified with low levels of preservice preparation for educating students with ASD. Limited personal experiences with students with ASD and limited knowledge of current best practices for educating students with ASD as identified in the literature review were noted. Finally, low levels of feelings of qualification, confidence, and effectiveness were portrayed.

Table 3

Summary of Quantitative Findings for the Study

Research Question	Findings
What are the experiences of regular education teachers in the areas of preservice preparation related to inclusion of students with ASD?	<p>Majority of participants identified nine or less credits in special education</p> <p>Three-fourths of participants identified collaboration as their main source of ASD support</p> <p>Majority of participants selected "introductory/awareness" as their formal level of ASD training</p>
What are the professional development experiences of regular education teachers in the areas of teaching strategies and collaboration pertaining to inclusion of students with ASD?	<p>Majority of participants stated they had educated three or less students with ASD in their teaching careers</p> <p>Three participants had knowledge of current best practices for educating children with ASD</p>
What are the levels of efficacy experienced by regular education teachers in teaching students with ASD?	<p>Participants felt the supports received for educating students with ASD met their needs "most of the time"</p> <p>Majority of participants felt "minimally qualified" or "not qualified"</p> <p>Almost half of participants felt "minimally confident" to "not confident"</p>

Three-fourths of participants felt “adequately effective” to “minimally effective”

Table 4 illustrates the qualitative findings in the study. The research questions focused on preservice preparation, professional development in the areas of teaching strategies and collaboration, and in levels of efficacy experienced by general education teachers in educating children with ASD. Overall, low levels of preservice training were identified with a need for

future training. Collaboration was recognized as a main source of help for general education teachers and successful teaching strategies were identified. Finally, additional needs were acknowledged for general education teachers to properly educate students with ASD.

Table 4
Summary of Qualitative Findings for the Study

Research Question	Findings
What are the experiences of regular education teachers in the areas of preservice preparation related to inclusion of students with ASD? handling behavioral and academic situations	Deficiency of preservice training Need for future training in the areas of teaching methods, information on ASD, and
What are the professional development experiences of regular education teachers in the areas of teaching strategies and collaboration pertaining to inclusion of students with ASD?	Collaboration with special educators and others is paramount Successful teaching strategies include communication, a positive environment, and scheduling
What are the levels of efficacy experienced by regular education teachers in teaching students with ASD?	Identified needs in the areas of additional resources and further training opportunities

Conclusion, Discussion, and Recommendations

The purpose of this study was to identify the perceptions of needs of general education teachers in regards to educating children with ASD. Information was gathered on experiences of general education teachers in the areas of preservice preparation, professional development, and efficacy concerning inclusion practices for children with ASD. The overall intent of the study was to improve current professional development to increase the learning

opportunities provided to students with ASD.

Research question one presented a shortage of preservice preparation by the participants. The results can be generalized to other general education teachers as certification requirements are similar for their degree programs. Educators are entering the classroom lacking practical and helpful knowledge on ASD (Buelle et al., 1999). This minimal amount of background knowledge will prove unbeneficial to the increasing number of students with ASD in

the general education classrooms. Preparatory courses were noted as the top location for training on ASD, yet the low number of credits received in the special education curricula contradict the ability to fully understand this range of disorders. Administrators can use this information to prepare professional development opportunities within their school systems to meet the needs of teachers to educate this population.

Research question two focused on an overall need for general education teachers to collaborate with special education teachers and other school personnel to educate children with ASD. This collaboration was noted as general educators do not have the background knowledge on their own to educate students with ASD without seeking outside supports (Forlin, 2007). Common teaching strategies have been identified through recent research, yet educators are not being adequately educated in these methodologies (Kurt, 2011; Ryan et al., 2011; Vernon & Rhodes, 2009). General educators have made strides in identifying open communication between teachers and students, creating a positive learning environment, and cohering to set schedules for daily routines to engage students with ASD in their classrooms. Participating general educators resounded with an echoing “yes” when asked if they would participate in further professional development opportunities to increase their knowledge and understanding of ASD. This eagerness to learn is encouraging to administrators to provide the needed resources to these educators.

Finally, research question three portrayed low levels of feelings by general education teachers in the areas of quality, confidence, and efficacy. These same teachers explained their need for increased resources and training, as well as their open earnestness to engage in professional

development opportunities to equip themselves. The overall deficiency of knowledge provided to general education teachers to properly educate students with ASD was evident in the findings for research question three (Buelle et al., 1999). Administrators can provide learning opportunities for general education teachers on ASD and expect an openness to learn and engage in finding ways to provide educational benefits to this growing population of students.

Overall, districts can use this gathered data to increase the training provided to their teachers in the area of ASD. The teachers need training and are eager to learn. Professional development opportunities would be warmly accepted by those surveyed, which can be generalized to educators in similar districts.

Limitations of the Study

Time constraints created an overall limitation for the design of the study as the researcher gained permission and modified a previously utilized survey and conducted a focus group to gather both quantitative and qualitative data to fit the allotted time schedule. The sample for the study was narrowed to third, fourth, and fifth grade general education teachers in a rural Southwest Missouri school district decreasing the generalization of the findings. Another limitation includes the size of the sample as the number of children with ASD the sampled teachers have experience with is unknown. Overall, the findings from the qualitative focus group can be interpreted in various ways.

Implications for Future Practice

The role of the educational leader was paramount to this study. The study aimed at identifying ways educational leaders can utilize teacher perceptions for educating children with ASD to provide an increase in professional development opportunities. The research questions were

each answered with the findings through quantitative and qualitative data collections.

Research question one identified preservice preparation as experienced by general education teachers in the area of special education and ASD. This study found nine or less credits in the area of special education to be the majority of preservice preparation completed by the participants. This lack of background knowledge acquired by general education teachers can be supplemented by educational leaders through increased professional development opportunities within the schools to educate general education teachers on ASD. The participants in the study identified specific areas in which increased knowledge is needed. Participants felt increased education on teaching methods for educating children with ASD would be beneficial. Participants also agreed information on each disorder within the ASD would be helpful. Finally, educational leaders can provide professional development on how educators can handle situations with ASD students, specifically in the areas of academia and behavior.

Research question two focused on experiences of general education teachers in current professional development received in the areas of teaching strategies and collaboration. Overall, educators had a lack of personal experience with students with ASD and were also unaware of the current best practices for educating the students with ASD they did encounter. Educational leaders can provide relevant and current professional development opportunities for teachers on educating students with ASD.

Participants identified communication, a positive environment, and scheduling to be three areas of successful teaching strategies currently experienced. Educational leaders can build on these three areas as a foundation for increasing knowledge for the proper educating of students with ASD.

Research question three focused on participants' levels of efficacy. Educational leaders can use these findings to better understand the feelings of qualification, confidence, and effectiveness experienced by the educators within their buildings in educating students with ASD. The findings from research question three identified low levels of preparedness, confidence, and effectiveness within the participants. The participants also shared that the resources for ASD they did receive aided them within the classroom only "most of the time." These findings can create a springboard for educational leaders to understand the need to increase learning opportunities for teachers in educating students with ASD to ultimately increase their efficacy.

Overall, the implications for educational leaders identified within this study are specific and useful. Educational leaders know their educators are entering the classroom with limited preservice preparation. General education teachers are in need of professional development opportunities to increase their repertoire of teaching strategies and to increase their understanding of all ASD. Finally, leaders can be aware of the importance of increasing the preparedness, confidence, and effectiveness of general educators to create an environment conducive of learning for students with ASD.

References

- Al-Shammari, Z. (2006). Special education teachers' attitudes toward Autistic students in the Autism school in the state of Kuwait: A case study. *Journal of Instructional Psychology, 33*(3), 170-8.
- Ali, M. M., Mustapha, R., & Jelas, Z. M. (2006). An empirical study on teachers' perceptions towards inclusive education in Malaysia. *International Journal of Special Education, 21*(3), 36-44.

- Autism Speaks. (2012). *What is Autism?* Retrieved February 24, 2012, from <http://www.autismspeaks.org/what-autism>
- Baker, J. P. (2008). Mercury, vaccines, and Autism: One controversy, three histories. *American Journal of Public Health, 98*(2), 244-53.
- Bower, B. (2011). Autism numbers surprisingly high. *Science News, 179*(12), 16.
- Buell, M. J., Hallam, R. H., Gamel-McCormick, M., & Scheer, S. (1999). A survey of general and special education teachers' perceptions and inservice needs concerning inclusion. *International Journal of Disability, Development, and Education, 46*(2), 143-56.
- Cahill, S. M., & Mitra, S. (2008). Forging collaborative relationships to meet the demands of inclusion. *Kappa Delta Pi Record, 44*(4), 149-151.
- Centers for Disease Control and Prevention. (2012). *CDC estimates 1 in 88 children in the United States has been identified as having Autism Spectrum Disorder*. Retrieved April 1, 2012, from http://www.cdc.gov/media/releases/2012/p0329_autism_disorder.html
- Chandler-Olcott, K., & Kluth, P. (2009). Why everyone benefits from including students with Autism in literacy classrooms. *Reading Teacher, 63*(7), 548-557.
- Cohen, S. (2011). Commentary on providing services to students with autism spectrum disorders. *Journal of Visual Impairment & Blindness, 105*(6), 325-329.
- Conderman, G., & Johnston-Rodriguez S. (2009). Beginning teachers' views of their collaborative roles. *Preventing School Failure, 53*(4), 235-44.
- Connelly, V. J., & Rosenberg, M. S. (2009). Special education teaching as a profession: Lessons learned from occupations that have achieved full professional standing. *Teacher Education and Special Education, 32*(3), 201-14.
- Copland, M. A. (2003). Leadership of inquiry: Building and sustaining capacity for school improvement. *Educational Evaluation & Policy Analysis, 25*(4), 375-95.
- Dukes, C., & Lamar-Dukes, P. (2009). Inclusion by design: Engineering inclusive practices in secondary schools. *Teaching Exceptional Children, 41*, 16-24.
- Ferguson, D. L. (1996). Is it inclusion yet: bursting the bubbles. In M. S. Berres, D. L. Ferguson, P. Knoblock, & C. Woods (Eds.), *Creating tomorrow's schools today: Stories of inclusion, change, and renewal* (pp. 16-37). New York, NY: Teachers College Press.
- Fink, A. (2009). *How to conduct surveys: A step-by-step guide*. (4th ed.). Los Angeles, CA: Sage.
- Forlin, C. (2007). A collaborative, collegial and more cohesive approach to supporting educational reform for inclusion in Hong Kong. *Asia Pacific Education Review, 8*, 276-870.
- Gerdts, J., & Bernier, R. (2011). The broader Autism phenotype and its implications on the etiology and treatment of Autism Spectrum Disorders. *Autism Research & Treatment, 19*, 1-19.
- Grant, A. (2010). Vaccine phobia becomes a public health threat. *Discover, 31*(1), 18-19.
- Idol, L. (2006). Toward inclusion of special education students in general education. *Remedial & Special Education, 27*(2), 77-94.
- Iovannone, R., Dunlap, G., Huber, H., & Kincaid, D. (2003). Effective educational practices for students with

- Autism Spectrum Disorders. *Focus on Autism and Other Developmental Disabilities*, 18, 150-165.
- Jung, W. S. (2007). Preservice teacher training for successful inclusion. *Education*, 128(1), 106-13.
- Kavale, K. A., Spaulding, L. S., & Beam, A. P. (2009). A time to define: Making the specific learning disability definition prescribe specific learning disability. *Learning Disability Quarterly*, 32(1), 39-48.
- Keogh, B. K. (2007). Celebrating PL 94-142: The Education of All Handicapped Children Act of 1975. *Issues in Teacher Education*, 16(2), 65-69.
- Kleinert, H. L., Miracle, S. A., & Sheppard-Jones, K. (2007). Including students with moderate and severe disabilities in extracurricular and community recreation activities. *Teaching Exceptional Children*, 39(6), 33-8.
- Koyama, T., & Kurita, H. (2008). Cognitive profile difference between normally intelligent children with Asperger's disorder and those with pervasive development disorder not otherwise specified. *Psychiatry and Clinical Neurosciences*, 62, 691-696.
- Krueger, R. A., & Casey, M. A. (2009). *Focus Groups: A practical guide for applied research*. (4th ed.). Thousand Oaks, CA: Sage.
- Kurt, O. (2011). A comparison of Discrete Trial Teaching with and without gestures/signs in teaching receptive language skills to children with autism. *Educational Sciences, Theory, & Practice*, 11(3), 1436-1444.
- Lingo, A. S., Barton-Arwood, S. M., Jolivet, K. (2011). Teachers working together: Improving learning outcomes in the inclusive classroom: Practical strategies and examples. *Teaching Exceptional Children*, 43(4), 6-13.
- Loreman, T. (2007). Seven pillars of support for inclusive education: Moving from "why?" to "how?" *International Journal of Whole Schooling*, 3(2), 22-38.
- Mertens, D. M. (2005). *Research and evaluation in education and psychology: Integrating diversity with quantitative, qualitative, and mixed methods*. (2nd ed.). Thousand Oaks, CA: Sage.
- Moore, E. (2009). Decision making processes to promote inclusive environments for students with disabilities. *Catalyst for Change*, 36(1), 13-22.
- Panerai, S., Zingale, M., Trubia, G., Finocchiaro, M., Zuccarello, R., & Ferri, R. (2009). Special education versus inclusive education: The role of the TEACCH program. *Journal of Autism and Developmental Disorders*, 39(6), 874-882.
- Peterson, J. P. (2007). *A timeline of special education history*. Retrieved on December 2, 2011 from <http://admin.fortschools.org/PupilServices/StaffInfo/A%20TIMELINE%20OF%20SPECIAL%20EDUCATION%20HISTORY.htm>
- Pugach, M. C., Blanton, L. P., & Correa, V. I. (2011). A historical perspective on the role of collaboration in teacher education reform: Making good on the promise of teaching all students. *Teacher Education and Special Education*, 34(3), 183-200.
- Raymond, E. B. (2008). *Learners with mild disabilities: A characteristics approach*. (3rd ed.). Boston, MA: Pearson Education.
- Rice, N., Drame, E., Owens, L., & Frattura, E. M. (2007). Co-instructing at the secondary level: Strategies for success. *Teaching Exceptional Children*, 39, 12-18.
- Roberts, J., Keane, E., & Clark, T. R. (2008). Making inclusion work: Autism Spectrum Australia's satellite class

- project. *Teaching Exceptional Children*, 41(2), 22-27.
- Robinson, V. M. J., & Timperley, H. S. (2007). The leadership of the improvement of teaching and learning: Lessons from initiatives with positive outcomes for students. *Australian Journal of Education*, 51(3), 247-62.
- Rothstein, L. F. (1990). *Special education law*. White Plains, NY: Longman.
- Ryan, J. B., Hughes, E. M., Katsiyannis, A., McDaniel, M., & Sprinkle, C. (2011). Research-based educational practices for students with Autism Spectrum Disorders. *Teaching Exceptional Children*, 43(3), 56-64.
- Saunders, G., Page, H., & Wood, G. (2011). Great science for autistic students. *Science Scope*, 35(3), 20-23.
- Simon, M., & Black, W. R. (2011). Differentiated accountability policy and school improvement plans: A look at professional development and inclusive practices for exceptional students. *International Journal of Special Education*, 26(2), 160-184.
- Singh, D. K. (2007). General education teachers and students with physical disabilities. *The International Journal of Learning*, 14(7), 205-210.
- Szymanski, C., & Brice, R. J. (2008). When autism and deafness coexist in children: what we know now. *Odyssey: New Directions in Deaf Education*, 9(1), 10-15.
- Tam, K. Y., Nassivera J. W., Rousseau, M. K., & Vreeland, P. (2000). More than just a field trip: Using the museum as a resource for inclusive secondary science classrooms. *Teaching Exceptional Children*, 33(1), 70-78.
- Tonge, B., & Brereton, A. (2001). Autism Spectrum Disorders. *Australian Family Physician*, 40(9), 672-677.
- Vaughn, S., Bos, C. S., & Schumm, J. S. (2006). *Teaching exceptional, diverse, and at-risk students in the general education classroom*. (3rd ed.). Boston, MA: Pearson Education.
- Vernon, M., & Rhodes, A. (2009). Deafness and autism spectrum disorders. *American Annals of the Deaf*, 154(1), 5-14.
- 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(3), 130-139.
- Zirkel, P. A. (2009). What does the law say?: New Section 504 student eligibility standards. *Teaching Exceptional Children*, 41(4), 68-71.