LEADERSHIP IMPLICATIONS FOR
TEACHING CHILDREN WITH AUTISM SPECTRUM DISORDERS
IN THE GENERAL EDUCATION CLASSROOM

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By
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dissertation entitled

PERCEPTIONS OF TEACHERS REGARDING

TEACHING CHILDREN WITH AUTISM SPECTRUM DISORDERS

IN THE GENERAL EDUCATION CLASSROOM

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and hereby certify that, in their opinion, it is worthy of acceptance.
DEDICATION

This dissertation is dedicated to my amazing husband, Zach Precise. His constant encouragement and positive attitude were a driving force in the completion of this large endeavor. I also dedicate this dissertation to my beautiful daughter, Ainsley Louise Precise. Her calm demeanor and constant smile made it possible for me to put the time into these pages that I needed.
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ABSTRACT

The purpose of this study was to gather information on experiences of regular education teachers concerning inclusion practices for children with Autism Spectrum Disorders (ASD). Three research questions were addressed in the study. The first research question identified experiences of regular education teachers in the areas of preservice preparation related to inclusion of student with ASD. The second research question identified professional development experiences of regular education teachers in the areas of teaching strategies and collaboration pertaining to inclusion of students with ASD. Finally, the third research question identified levels of efficacy experienced by regular education teachers in teaching students with ASD.

Quantitative data were collected through the Autism Needs Assessment Survey-Revised (ANAS-R). Third, fourth, and fifth grade educators at Logan-Rogersville R-VIII School District in Southwest Missouri completed the survey. Qualitative data were collected on the ANAS-R through the use of open-ended questions as well as through two focus groups. By gathering quantitative and qualitative data, the intent of the study was to improve current professional development to increase the learning opportunities provided to students with ASD.

The study found the participants had minimal experience in preservice preparation with a lack of background knowledge on ASD. Knowledge of teaching strategies and experiences in collaboration were also found to be few. 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.
CHAPTER ONE

INTRODUCTION TO THE STUDY

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 regular education teachers to provide resources and instruction for students spanning the entire spectrum of learning abilities, which includes children with ASD, in their regular 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). Collaborative practices include those involving regular education teachers and special education teachers. Building an understanding and knowledge base in special education law, terminology, and practices are crucial for training all educators while increasing efficacy in teaching. Educational leaders must focus on collaboration of educators and increasing the amount of inclusion training provided to educators as key components to preparing educators 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 regular education teachers and
special education teachers must be integrated into both preservice and professional development programs, as collaboration between regular and special education teachers is crucial (Ali, Mustapha, & Jelas, 2006). Team teaching may allow for an increase in collaboration and cohesion, which are crucial for leaders to establish inclusion programs in any educational setting (Forlin, 2007). Co-instructing is developed when regular education teachers learn to modify teaching styles, and special education teachers increase their content knowledge and the information is shared between the two teacher groups (Rice, Drame, Owens, & Frattura, 2007). 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 regular 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). Educational leaders can take the initiative to educate teachers for inclusion by creating an optimal culture and climate conducive to collaboration and learning.
Conceptual Underpinnings 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; educational leaders need to understand this deficit and implement programs to train these educators. 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 regular education teachers in the areas of training, current practices, and efficacy will aid educational leaders in increasing the effectiveness of regular 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.

The history of special education provided a significant background for this study. Increasing knowledge of special education has been identified as a way to increase confidence in teaching special education learners for regular education teachers (Jung, 2007). Special education reform required children with disabilities to be placed in regular education classrooms (Ferguson, 1996; Kavale, Spaulding, & Beam, 2009).

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 regular education classroom.

Autism was first coined in 1948 and was used to describe children who were socially withdrawn and focused on routine (Al-Shammari, 2006; Baker, 2008; Vernon & Rhodes, 2009). Engaging these students in the inclusion setting became a challenge for educators (Kleinert, Miracle, & Shepperd-Jones, 2007). The deciphering between special education versus inclusive education primarily for children with ASD is very controversial due to the wide range of academic abilities found in children with ASD (Panerai, Zingale, & Trubia, et al., 2009). Laws require students with ASD to be placed in the classroom, yet regular education teachers are not fully prepared (Yell, Drasgow, & Lowrey, 2005).

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

Professional development in the area of inclusion is lacking for regular educators. A barrier to learning is created when a lack of proper training is present in the teacher of an inclusive classroom (Buell et al., 1999). Educational leaders can aid in preparing educators during initial training with in-service programs and professional development opportunities which equip teachers with skills, competencies, and strategies for catering
to diverse learning settings may be the answer to increasing regular education teachers’
confidence levels in working with children with ASD (Kleinert et al., 2007; Copland,
2003).

Needs assessments “provide guidance for improvement” for established programs
to meet the “current needs of the target participants” (Rossi, Lipsey, & Freeman, 2004, p.
54). A needs assessment in the areas of level of preparation, effective classroom
strategies, and a sense of competence was coupled with a qualitative analysis of feelings,
frustrations, and experiences to lay the groundwork for this research (Rossi et al., 2004).
A descriptive investigation of current realities in the educational world in the area of
inclusion was a necessary link in the current study as well. Educational leaders need to
know experiences of regular education teachers when educating children with ASD and
how they can utilize the information to plan for better professional development.

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). Regular 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 regular
educator’s preservice and professional development education. Research is lacking in the
following key areas of inclusion training found to be beneficial: collaboration between
regular and special education teachers, education to increase educator’s knowledge base
in the area of special education, and implementation of professional development
opportunities. Educational leaders need to offer inclusion training not only during preservice training, but for seasoned teachers as well (Jung, 2007).

Regular education teachers trained to collaborate with special education teachers provide a balanced education and a more positive inclusive environment. Team teaching builds credibility and increases teacher-student interaction (Rice et al., 2007). Collaboration between regular education teachers and special education teachers has been identified as a key to proper inclusion practices (Ali et al., 2006). Collaboration enables regular education teachers to understand student expectations and needs (Cahill & Mitra, 2008; Conderman & Johnson-Rodriquez, 2009). Training focused on 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, Barton-Arwood, & Jolivette, 2011; Moore, 2009). Collaboration provides regular education teachers with the knowledge background currently provided primarily to their special education cohorts, thus increasing their effectiveness.

Regular education teacher attitudes and confidence levels in working with special education students are currently at low levels (Jung, 2007). Regular 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 regular 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 regular 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 other classroom teachers also 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 regular 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 regular education teachers in properly educating children with ASD for leadership implications 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 concurrent mixed methods study was to gather information on experiences of regular education teachers concerning inclusion practices for children with ASD to aid educational leaders in properly training these educators. Concurrent mixed method studies focus on quantitative data and qualitative data collections, yet combines the results through analysis and interpretation (Creswell, 2007). By gathering quantitative
and qualitative data, the intent of the study was to improve current professional development to increase the learning opportunities provided to students with ASD.

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

**Research Questions**

The research questions guiding this study are:

1. What are the experiences of regular education teachers in the areas of preservice preparation related to inclusion of students with Autism Spectrum Disorders?

2. What are the professional development experiences of regular education teachers in the areas of teaching strategies and collaboration pertaining to inclusion of students with Autism Spectrum Disorders?

3. What are the levels of efficacy experienced by regular education teachers in teaching students with Autism Spectrum Disorders?

**Limitations, Assumptions, and Design Controls**

This concurrent mixed method study was intended to identify the current experiences and perceptions of regular education teachers in terms of educating students
with ASD in their regular education classrooms (Creswell, 2009). Limitations and assumptions were identified within this study and considered when drawing conclusions and generalizing the findings across varied educational settings.

**Limitations**

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 regular education teachers in the Logan-Rogersville R-VIII School District in Southwest Missouri 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. Convenience sampling was utilized as the researcher is situated within the school district (Mertens, 2005). Overall, the findings from the qualitative focus groups can be interpreted in various ways (Krueger & Casey, 2009).

The study was designed to provide useful information for the benefit of educational research and strategies. Validity and reliability were considered as the researcher gained permission to modify a previously created, piloted, and administered survey to gather quantitative data (Mertens, 2005). The researcher is a regular education classroom teacher who was required to take only one special education college course. A personal feeling of inadequacy to serve the needs of students with ASD while following the guidelines set out through the inclusion laws was noted. As data were gathered, this researcher identified these bias feelings and allowed them to drive the purpose of the
study but not become a focal point during surveying and the focus group (Creswell, 2009; Krueger & Casey, 2009; Mertens, 2005).

**Assumptions**

The researcher had prior experiences with children with ASD in her regular education classroom. The researcher had prior experience researching and gathering teaching resources and strategies to educate children with ASD in her regular education classroom. The researcher was the conductor of the focus group studies (Mertens, 2005). The researcher assumed the focus group responses and survey answers were honest. The researcher strove to be objective and unbiased during the study.

**Design Controls**

The overall limitations of the study include time constraints, narrowed and convenience sampling, and interpretation bias. Together these limitations were addressed and identified to eliminate overshadowing of the final results of the study. Each limitation was researched and defined for the researcher to keep proper design controls.

Time played a vital role in the overall planning, implementation, and research gathering for this study. The quantitative survey and qualitative focus groups were administered during the same time line. Organizing the focus groups in terms of participants, timing, and resources was a focal point of the completion of the study (Krueger & Casey, 2009). The researcher took into account a time line for completion while paying close attention to detail and research results without marring the overall significance of the study.

The sample size was determined through the researcher’s location and allotted time for completion of the study (Creswell, 2007). Convenience sampling is consistent of
a “naturally formed group” and must be used with caution, or it may reduce the ability to have a true random sample (Creswell, 2007, p. 164). The sample in this study was comprised of individuals from the researcher’s own Logan-Rogersville R-VIII School District to meet the time constraints of gathering data in a shortened amount of time. Overall, attention was paid to this limitation, and the researcher used this convenience sample as a way of collecting data from a like-group instead of merely for convenience purposes.

Interpreting the results of the focus groups without biasing the information required the researcher to utilize field notes and transcriptions. During the focus group processes, the researcher sought to keep “research commitments somewhat separate from personal attachments” while maintaining an outsider’s perspective (Emerson, Fretz, & Shaw, 1995, p. 36). Focus groups chosen through convenience cause a lack of randomizing of participants and can increase bias; therefore, the researcher had to be aware of these conditions and work accordingly (Krueger & Casey, 2009).

**Definition of Key Terms**

The key terms in this study reflected the study’s research questions and purpose. Vital terms in the study range from explicit definitions of disorders to defining more commonly understood terms. Each definition was specific to the usage in this research project. Terms were divided under two categories including regular education teachers and special education due to the integration of these two concepts within the study.

**Regular Education Teacher**

Regular education teachers are educators in the PK-12 educational setting who hold an education degree, which does not include a special education emphasis (Jung,
2007). These are teachers who are in the educational setting all day engaging in collaboration and professional development. They have received preservice training in an education specific program and received proper certification. They utilize research-based teaching strategies in efforts to be effective educators.

*Collaboration.* Collaboration in this study refers to special education teachers and regular education teachers working together to educate children with ASD. Collaboration includes sharing ideas, knowledge, and strategies for the benefit of the students (Ali et al., 2006).

*Preservice preparation.* Preservice preparation refers to teacher training before the teacher is in 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 regular education teacher's 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 regular education teachers (Conderman & Johnson-Rodriguez, 2009; Jung, 2007).

*Professional development.* When proper training is lacking, a barrier to learning is created for the students in an inclusive classroom (Buell et al., 1999). 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 were identified as effective. Educational leaders must offer professional development which includes these elements as well as best practices for inclusion to benefit regular education teachers in providing resources and
instruction for students spanning the entire spectrum of learning abilities (Forlin, 2007; Robinson & Timperley, 2007).

Teacher efficacy. Efficacy in this study refers to how effective regular education teachers perceive their teaching engages children with ASD (Jung, 2007). Regular education teachers' attitudes and confidence levels in working with special education students are currently at low levels (Jung, 2007). Regular 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). In order to increase the efficacy of regular education teachers, their knowledge, confidence, and skill sets need to be increased.

Teaching strategies. Teaching strategies are researched-based teaching practices teachers use within their classrooms to reach the educational needs of their students (Loreman, 2007).

Special Education

Special education reform required children with disabilities to be placed in regular education classrooms (Ferguson, 1996; Kavale et al., 2009). Increasing knowledge of special education has been identified as a way to increase confidence in teaching special education learners for regular education teachers (Jung, 2007). ASD, inclusion, and the least restricted environment are only three concepts included in the entire gamut of special education.

Autism Spectrum Disorders. Autism was first coined in 1948 and was used to describe children who were socially withdrawn and focused on routine (Al-Shammari, 2006; Baker, 2008; Vernon & Rhodes, 2009). When broken down, ASD include students
diagnosed with “autistic disorders, Asperger's syndrome, and Pervasive Developmental Disorder-Not Otherwise Specified” (Roberts, Keane, & Clark, 2008). Engaging these students in the inclusion setting became a challenge for educators (Kleinert et al., 2007). The deciphering between special education versus inclusive education primarily for children with Autism Spectrum Disorder is very controversial (Panerai et al., 2009).

*Inclusion.* Inclusion refers to “the process by which educators provide appropriate supports and services to students with disabilities in the least restricted environment, namely the general education classroom” (Dukes & Lamar-Dukes, 2009, p. 17). Comparatively, Singh (2007) defines inclusion as “physical, social, and instructional integration” (p. 205).

*Least Restricted Environment.* The least restricted environment refers to the environment in which student barriers are minimized. Students are provided an environment safe of discrimination without being singled out and are allowed to learn alongside their peers. The regular education classroom primarily provides this environment (Dukes & Lamar-Dukes, 2009).

**Summary**

Inclusion requires regular education teachers to be collaborative, prepared, and effective. Students diagnosed with ASD deserve teachers properly educated to meet their individualized needs. The intent of the study was to identify perceptions and experiences of regular education teachers with the purpose of increasing the learning opportunities provided to teachers of students with ASD by educational leaders.

The overarching concepts identified by the needs assessment included training, current practices, and efficacy of regular education teachers. Time constraints, sample
size, and sample identification were noted as limitations to the study while personal experiences and bias were identified as assumptions. Defining key terms specific to the research questions provided a common understanding of concepts throughout the study. This study positively contributed to literature, practice, and educational institutions for the benefit of regular education teachers, children with ASD, and the educational community as a whole.

In Chapter Two, relevant literature will be identified and streamlined to cover the history of special education, ASD, teacher preparation, and professional development. Readings will be synthesized and analyzed to respond to the research questions of the study. In Chapter Three, the research design and methodology of the study will be presented, followed by the interpretation of the results of the study in Chapter Four, and finally, the overall discussion of the significance of the study and plans for future research will be covered in Chapter Five.
CHAPTER TWO

REVIEW OF RELATED LITERATURE

Introduction

Regular education teachers are required to provide resources and instruction for students spanning the entire spectrum of learning abilities. A lack of training was identified as a primary barrier to serving students in an inclusion classroom. Successful inclusion requires personnel from general and special education collaborate as team members (Buell et al., 1999). A proper understanding of the history of special education, inclusion, Autism Spectrum Disorder (ASD), teacher preparation, and professional development were essential for completing this task. Relevant literature was identified and streamlined to cover these topics with the utmost focus on regular education teacher preparation.

Chapter Two was organized to cover the five topics of: history of special education, inclusion, ASD, teacher preparation, and professional development. The history of special education included a definition of special education as well as a timeline of events with specific events elaborated upon. The elaborated events chosen align with the purpose of the research project and include least restricted environment (LRE) and the passing of several special education specific laws and regulations. Following the history of special education, inclusion was defined and explained. Thirdly, ASD were defined and explained including a description of each disorder in the spectrum, a timeline of identification of these disorders, and current methodologies utilized to educate children with ASD. Next, teacher preparation was discussed as properly training teachers was the focal point of this study and was further defined using
concepts of collaboration and preservice education. Finally, professional development was defined and exemplified in terms of building teacher efficacy and understanding of special education and ASD.

**History of Special Education**

Since conception in the early 1800’s, special education has changed and evolved. The understanding of special education is crucial for educators required to meet the needs of students with special needs in their classrooms (Raymond, 2008). Defining special education and identifying the changes in laws and regulations are the foundation for this study.

Vaughn and Boss (2009) defined special education as being “goal-directed and guided by student performance” (p. 4). Specifically, special education classrooms have been developed to provide “specialized, individualized, and intensive instruction to meet students’ needs” (Vaughn, Bos, & Schumm, 2006). The education provided in the resource classrooms spans a wide spectrum of learning disabilities. “Modern special education” was incepted in 1975 and has evolved and changed over the past several decades, yet special education was discussed and implemented much earlier (Pugach, Blanton, & Correa, 2011, 183).

Special education classrooms were established as early as the 1800’s in the United States. In 1871, in New Haven, Connecticut, a classroom was established for children seen as “difficult or recalcitrant” in order for the regular education classrooms to proceed without distraction (Raymond, 2008, p. 33). Classrooms at this time were springing up all over the United States continuing into the early 1900’s. Special education was coined in the 1880s by the National Education Association and Alexander Graham Bell, however
both “failed to establish an organization of special education professionals” at that time (Raymond, 2008, p. 39). Intelligence testing began in the United States in 1916 with the translation of the Binet-Simon intelligence scale into English, which was later revised in 1937 to the Stanford-Binet Intelligence Test still in use today (Raymond, 2008). The combination of these early special education classrooms and the introduction of intelligence testing propel the movement into special education reform.

In 1975, the Education for All Handicapped Children Act (EAHCA), also known as PL 94-142, was established (Vaughn et al., 2006). The EAHCA assured “access to public education for all children, without regard for disabling condition” (Keogh, 2007, p. 67). This new legislation required schools to adapt to the needs of the students, unlike prior beliefs that the students must adapt to the school setting. Under PL 94-142, all “school-age children with a disability in the United States” were granted a free and appropriate public education (FAPE) (Raymond, 2008, p. 42). PL 94-142 provided not only a free and public education, but also due process, nondiscriminatory assessment, Individual Education Plans (IEP), and the idea of LRE (Keogh, 2007).

An IEP is defined as a “plan developed to meet the special learning needs of each student with disabilities” requiring the plan to be “written, implemented, and reviewed” (Vaughn et al., 2006, p. 4). Early on, IEPs were established mainly for special education services and included special education goals. However, after 1997, the reauthorization of IDEA, IEPs began to include “consideration of the general education curriculum” (Raymond, 2008, p. 70). IEPs were now required to be created with the general educator’s input and in following the state’s learning standards (Raymond, 2008). The implementation of Individuals with Disabilities Education Act (IDEA) led to the
requirement of each student’s IEP to “address how a student with a disability will access
the general education curriculum;” thus tying in the LRE (Singh, 2007, p. 205).

While increasing access to the regular education curriculum, students with
disabilities are required to learn in the LRE (Yell et al., 2005). The LRE in the
educational setting is defined as the “setting most like that of nondisabled students that
also meets each child’s educational needs” (Vaughn et al., 2006, p. 4). The Education for
All Handicapped Children Act (EAHCA) first established the idea of LRE in 1975
requiring that “as much as possible educational services should be provided” in this
environment (Keogh, 2007, p. 67). The LRE is met when all students learn in an
environment typical of their peers (Raymond, 2008).

In 1990, PL 94-142 was revised and renamed IDEA (Peterson, 2007). The IDEA
reauthorization took place in 1997 placing a “critical focus” on general education
curriculum for students with disabilities (Pugach et al., 2011, p. 192). Other significant
changes took place with the reauthorization of IDEA, including requiring IEPs to be
created through acknowledgment of strengths and needs of the individual child with the
school and parents involved in the process (Raymond, 2008). With similar goals as
established in 1975, IDEA has continued to be revised with the most recent revision in
2004 (Vaughn et al., 2006). The latest 2004 revision called for “more accountability at
the state and local levels” with a focus on outcomes (Peterson, 2007, p. 2). Instruction
and intervention also became a higher priority as the revision aimed at keeping students
in the general education classroom as much as possible (Peterson, 2007). Simplifying the
processes for IEPs was also a goal in the 2004 revision as regulations were clarified and
strengthened (Raymond, 2008). Another educational act which played a role in establishing FAPE for all also came about in 1990.

The Americans with Disabilities Act (ADA) was enacted in 1990 (Peterson, 2007). Along with ADA came a renewed understanding of Section 504, first established in 1973, which included plans for children with disabilities. Section 504 provided protection for individuals with disabilities yet was not fully understood when first implemented (Peterson, 2007). Overall, this act was primarily for the private sectors of education; however, Section 504 plans are now used in public schools as well. Students in grades K-12 are covered under ADA, and the eligibility for a 504 are broader than those for an IEP. Revisited in 2008, the Americans with Disabilities Act Amendments (ADAA) were established and were effective January 1, 2009 (Zirkel, 2009). Under the ADAA, individuals must have a “mental or physical impairment that limits a major life activity to a substantial extent” (Zirkel, 2009, p. 68). Another piece of legislation played its role in education following the ADAA; No Child Left Behind (NCLB) was established in 2001 (Peterson, 2007).

The passing of NCLB effected students with disabilities; it required all students, including students with disabilities, to be proficient in reading and mathematics by 2014 (Peterson, 2007; Yell et al., 2005). NCLB and IDEA work together to accommodate students with disabilities and increase the inclusion of these students in the general education classroom (Simon & Black, 2011). NCLB also recognizes IEPs and considers these plans as it requires all students with disabilities to be included in state and district assessments. IEP accommodations are considered individually before assessments begin (Raymond, 2008). Overall, NCLB has “increased access to the standard/general
education curricula and instruction for students with disabilities” (Simon & Black, 2011, p. 170).

Defining special education and the history of the changes and developments in United State’s public schools laid the groundwork for understanding special education. Special education has changed dramatically from its earliest forms in the 1800’s. Understanding the special education laws and regulations aids educators in properly teaching children with disabilities in the proper setting. PL 142-94, ADA, and NCLB each played a role in requiring children with disabilities to be placed in regular education classrooms while explanations of IEP and LRE lead into the creation of inclusion (Ferguson, 1996; Kavale et al., 2009). Specifically, this study focused on the inclusion of children with ASD within the regular education classroom.

**Inclusion**

Special education laws have changed the learning environment for disabled students and students with special needs. In the late 1800s, these students were placed in an entirely different classroom to reduce distraction in the regular education classroom (Raymond, 2008). The establishment of the LRE in 1975 increased the time disabled students were taught in the classroom (Keogh, 2007). Currently, inclusion laws are requiring these students to be included in the regular education classroom as much as possible with their peers (Dukes & Lamar-Dukes, 2009; Singh, 2007). Defining inclusion, explaining proper inclusion practices, identifying areas with a lack of training are paramount to this study.

Increasing the access to general education curricula has required schools to increase inclusive practices. Inclusion refers to “the process by which educators provide
appropriate supports and services to students with disabilities in the least restricted environment, namely the general education classroom” (Dukes & Lamar-Dukes, 2009, p. 17). Comparatively, Singh (2007) defined inclusion as “physical, social, and instructional integration” (p. 205). Inclusion “takes the principle of LRE one step further” by stating the “general education classroom is an appropriate learning environment for all (or most) children” (Yell et al., 2005, p. 40). It is not to be confused with mainstreaming which is when a child spends part of the day in the special education classroom and another part of the day in the general education classroom (Idol, 2006). Laws such as IDEA require students with disabilities to learn and be engaged in the regular education classroom, which aligns with inclusion practices (Black & Smith, 2011). Overall, inclusion practices are established to create “one educational system” for all students (Florian, 2010, p. 22).

Inclusion practices have been established to meet the goals and demands of special education laws and regulations. First and foremost, inclusion practices must keep the best interest of each individual child in mind, examining IEP’s is crucial for placement (Moore, 2009). Once placement options have been identified, the varying teacher practices can be examined and a proper fit can be made.

Idol (2006) identified supportive resource programs, consulting teacher model, cooperative teacher model, and instructional assistants as four practices currently in place to meet the needs of diverse learners in the inclusive classroom. Supportive resource programs primarily consist of collaboration between the instruction of the regular education teacher and the resource teacher. The goal of this collaboration is to “support students’ transferring what they have learned in the resource room to learning in the general education classroom” (Idol, 2006, p. 78). Consulting teacher model refers to an
“indirect” connection between the special education teacher and the special education students as the special education teacher works “directly” with the classroom teacher as a consultant for instructional ideas and needs (Idol, 2006, p. 78). Instruction is delivered completely in the regular education classroom in this model. Cooperative teacher model is a co-teaching model established when the special education teacher and regular education teacher collaborate “in the same classroom to provide educational programs for all students” (Idol, 2006, p. 78). Finally, Idol (2006) explained instructional assistants as a fourth teaching practice for proper inclusion practices. These assistants are paraprofessionals who are with a specific student throughout the day aiding the student in the learning process. Whether a teacher is using these practices or a multitude of others, it is apparent that when children with special needs are placed in the regular education classroom, teachers are realizing their “tried-and-true activities” will not always work for every student (Chandler-Olcott & Kluth, 2009, p. 553).

Overall, a lack of training for proper inclusion has been felt by educators and identified by many researchers (Connelly & Rosenberg, 2009; Jung, 2007; Singh, 2007). When students with special needs are immersed in the regular education classroom, educators must reevaluate their practices. “Adjusting expectations, providing different kinds of support, and offering more challenge where needed” are all areas in which educators may need to make adjustments in their instruction practices (Chandler-Olcott & Kluth, 2009). However, with these changes comes the need to be properly trained. Teaching strategies have been created to meet the special needs of various students with disorders; however, these strategies can be utilized for other disorders as well (Florian,
2010). Being properly educated on teaching strategies to meet students’ needs is vital, especially when it comes to inclusion (Jung, 2007).

Inclusion helps students with disabilities to be immersed in the regular education classroom with their peers. Educators must learn the laws and definitions associated with inclusion and adhere to these regulations to properly educate all students in their regular education classrooms. Teaching practices are in place to aid educators in completing this task; however, further research on these practices and new practices for evolving students are necessary. With proper practices identified, teachers then must be trained for students to learn in the inclusive environment. This study focuses on the specific inclusion of children with ASD.

**Autism Spectrum Disorder**

Autism Spectrum Disorder (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 regular 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.

*History of Autism Spectrum Disorder*

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 Specified (PDD-NOS) (Gerdts & 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 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” 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 was “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 defines autism as a learning disability, children with ASD are guaranteed a 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 regular education classroom as much as possible and for teachers to be qualified to properly teach them; however, the strategies needed for regular 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, 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. 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 Trail Teaching. Discrete Trial Teaching (DTT) 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 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 incorporates 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 Speak, 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 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, 2007). However, properly engaging these students in the inclusion setting remains a challenge for regular educators (Kleinert et al., 2007). Teaching strategies are currently in place to aid regular 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 regular 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 regular education teacher's 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 regular 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 regular education teachers (Rothstein, 1990, p. 45). With the increase of students with ASD in the general education classroom, the need to educate regular 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 regular education teachers working together to educate children with ASD (Ali et al.,
Efficacy refers to how effective regular 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 regular 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 regular education teachers to understand student expectations and needs (Cahill & Mitra, 2008; Conderman & Johnson-Rodriquez, 2009). FAPE required regular 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 regular education teachers with the knowledge background currently provided primarily to their special education cohorts, thus increasing their effectiveness.

Regular education teacher attitudes and confidence levels in working with special education students are currently at low levels (Jung, 2007). Regular 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. Missouri State University (2012) indicates one special education course for their elementary education graduates. SPE 310 is the only course required for graduates to apply for teacher certification. This course is an introduction to special education and covers diverse students with disabilities, giftedness, and cultural diversity. In order to increase the efficacy of regular 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 regular 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 regular education teachers as they tackle the challenge of teaching students with wide ranges of abilities in their regular 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 regular education classrooms having completed required preservice training from a college or university. As the number of children with ASD increases, the confidence level of regular 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 regular education teachers have the confidence they need to educate children with ASD (Jung, 2007). A large part of the lack of confidence experienced by regular 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 regular education classroom. Special education laws have played multiple roles in increasing requirements for regular 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 regular 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 regular education teachers striving to educate children with ASD in their regular 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 regular 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 regular 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 regular 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 regular education teachers has been found to be beneficial when providing professional development for inclusion to properly be implemented (Cahill & Mitra, 2008; Conderman & Johnson-Rodriquez, 2009). Regular 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).

Regular education teachers feel inadequately trained to teach children with ASD in their classrooms (Singh, 2007). Educational institutions must properly educate regular education teachers in order to increase their efficacy in educating children with ASD. Identifying specific areas in which regular 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 regular 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 regular education classrooms (Raymond, 2008). Regular 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 regular 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 regular education classrooms, and current teachers were in need of training to properly implement these regulations.

Increasing professional development for current regular 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 regular 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 regular 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-Rodriquez, 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 regular 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.

Summary

The history of special education, defining inclusion, the explanation of ASD, the clarification of past and current preservice teacher preparation, and the outlining of ongoing processes of professional development within schools laid the foundation for this study. In identifying ways to train regular education teachers to properly serve children with ASD, a proper understanding of the past and present state of inclusion practices provided the springboard for this study.

Special education laws, including IDEA, ADAA, and NCLB, have been synthesized and investigated to provide understanding for regular education teachers. Properly defining and explaining inclusion practices set a guideline for both special education teachers and regular education teachers. Illustrating a timeline and defining ASD have narrowed the topic from the broad heading of special education to a more localized and time-sensitive topic for this study. Identification of preservice teacher preparation practices provided the necessary information for a gap in knowledge to be
identified, thus providing the basis for increased current professional development opportunities.

This synthesis of literature guides the study as it provides the background information for understanding the purpose of the study. The following chapters will combine this information with current research to answer the study’s research questions. In Chapter Three, the research design and methodology of the study will be presented and defined. In Chapter Four, the results of the collected data will be interpreted as they relate to the study’s research questions. Finally, in Chapter Five, the significance of the study and plans for future research will be addressed.
CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

Introduction

Regular education teachers are required to provide resources and instruction for students spanning the entire spectrum of learning abilities. Educators face this challenge each day in their regular education classrooms serving as the least restricted environment for students with disabilities and more specifically for students with Autism Spectrum Disorders (ASD). A proper understanding of the history of special education, inclusion, ASD, teacher preparation, and professional development coupled with proper training prove essential for completing this task.

Increasing knowledge of special education has been identified as a way to increase confidence and teaching abilities of regular education teachers in inclusion classrooms (Jung, 2007). Special education reform required children with disabilities to be placed in regular education classrooms, yet resources were not provided to meet this mandate (Ferguson, 1996; Kavale et al., 2009). Inclusion refers to “the process by which educators provide appropriate supports and services to students with disabilities in the least restricted environment, namely the general education classroom” (Dukes & Lamar-Dukes, 2009, p. 17). Comparatively, Singh (2007) defined inclusion as “physical, social, and instructional integration” (p. 205). Inclusion requires regular education teachers to modify lessons and provide the least restricted educational environment for children with Autism Spectrum Disorders with little to no knowledge on these disorders (Dukes & Lamar-Dukes, 2009). For this reason, this study focuses on the specific inclusion of children with ASD.
The term autism was first coined in 1948 and was used to describe children who were socially withdrawn and focused on routine (Baker, 2008; Vernon & Rhodes, 2009; Al-Shammari, 2006). Engaging these students in the inclusion setting became a challenge for educators (Kleinert et al., 2007). The deciphering between special education versus inclusive education primarily for children with ASD is very controversial (Panerai et al., 2009). Laws require students with ASD to be placed in the classroom, yet regular education teachers are not fully prepared (Yell et al., 2005).

This study, using teacher experiences and perceptions as the unit of analysis, was intended to explore a proper educator training program to be implemented by educational leaders into preservice training and professional development regimens to serve the needs of this diverse population. Proper teacher training is essential to equip teachers with skills, competencies, and strategies (Jung, 2007).

The research design and methodology include seven distinct sections. The sections are as follows: introduction, research questions, population and sample, data collection and instrumentation, quantitative data collection procedure, qualitative data collection procedure, data analysis, and conclude with a summary. Each section of this paper serves a specific purpose for the completion of the research design and methodology. A brief introduction is followed by the research questions guiding the study. The population and sample of the study will be described and explained specifically, including the size of population backed with relevant research. Data collection and instrumentation will include data collection details, survey information, focus group procedures, and an explanation of the steps completed for human subject protection. The quantitative and qualitative data collection procedure sections will
explain how both types of data will be collected and utilized in the study. Data analysis will be included to explain how the collected data will be treated. Finally, the summary will identify key points from the research design and methodology of the study.

**Research Questions**

The research questions guiding this study are:

1. What are the experiences of regular education teachers in the areas of preservice preparation related to inclusion of students with Autism Spectrum Disorders?

2. What are the professional development experiences of regular education teachers in the areas of teaching strategies and collaboration pertaining to inclusion of students with Autism Spectrum Disorders?

3. What are the levels of efficacy experienced by regular education teachers in teaching students with Autism Spectrum Disorders?

**Population and Sample**

In this case study third, fourth, and fifth grade regular education teachers in the Logan-Rogersville R-VIII School District in Southwest Missouri, a typical Missouri school, provided the data source to keep a narrowed focus on the needs of regular education teachers for inclusion and focused on professional development educational leaders can provide. The sample accounted for 16 elementary education teachers. Surveys were sent to all third, fourth, and fifth grade regular education teachers in the district.

The specification of third, fourth, and fifth grade regular 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 regular education teachers and the children with ASD. Perceptions of regular education teachers on proper inclusion training were identified as necessary for the study; comprehensive sampling was utilized as all third, fourth, and fifth grade regular 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 Missouri school to provide generalizable findings. The Department of Education and Secondary Education (2012) calculated the K-12 enrollment at Logan-Rogersville R-VIII 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 education 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. The information gathered was useful in understanding the importance of collaboration and team teaching for inclusion to be a success in the regular 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.

**Human Subjects Protection**

This study was conducted to identify proper training techniques for inclusion practices. The information is useful to understand the importance of collaboration and team teaching for inclusion to be a success in the regular education classroom. Teacher demographics and perceptions were the main focus of the results and were obtained through the use of a survey and two focus group studies.

Informed consent was collected from each participant, for the survey and focus groups, after gatekeeper approval from the district superintendent was confirmed (Fink, 2009). Participation in the study was completely voluntary, and participants could stop participation at any point without penalty. Codes were used in place of participant names.
to keep confidentiality. Participants did not need to answer all of the questions. All responses were coded and kept confidential and were presented in summary form using no identifying information.

This project was reviewed and approved by the University of Missouri-Columbia Campus Institutional Review Board (IRB) for the use of human subjects. Research was conducted after IRB approval was granted (Mertens, 2005). The IRB believed the research procedures adequately safeguarded the subject’s privacy, welfare, civil liberties, and rights. The researcher completed required online tests for IRB approval to confirm the understanding of the IRB process prior to research.

**Quantitative Data Collection Procedure**

The use of a previously utilized needs assessment instrument increased the validity and reliability of the survey in identifying percentages and frequencies in the areas of preparation, strategies, efficacy, and professional development. Teachers were chosen for the focus groups based on their level of experience with children with ASD as determined by the needs assessment instrument and their openness to share experiences as indicated by the survey. Surveys were conducted with third, fourth, and fifth grade teachers in the Logan-Rogersville R-VIII School District in Southwest Missouri by way of comprehensive sampling (Mertens, 2005). Comprehensive sampling was used as the surveys were presented to only third, fourth, and fifth grade teachers in the Logan-Rogersville R-VIII School District in Southwest Missouri, and all the third, fourth, and fifth grade teachers were invited with the same opportunity to participate. The researcher contacted the district administrator to gain access to the third, fourth, and fifth grade teacher email listings, and then a consent letter was emailed to each teacher with a link to
the online survey. Surveys were distributed to all third, fourth, and fifth grade teachers in
the Logan-Rogersville R-VIII School District in Southwest Missouri through the use of
the online survey provider, Survey Monkey.

**Qualitative Data Collection Procedure**

The ANAS-R included four open-ended questions related to teacher preparation,
strategies, efficacy, and professional development. These questions allowed for more
descriptive responses for the qualitative piece of the study. The survey questions were
elaborated upon to create several of the focus group questions to gather further
information to answer the research questions of the study.

The focus groups were conducted alongside the survey. The focus groups were
conducted to gather additional information to answer the research questions of the study.
The focus group questions were created by elaborating the survey questions. Two focus
groups were conducted. One consisted of five third grade regular education teachers and
the second consisted of thirteen fourth and fifth grade regular education teachers.

**Data Analysis**

The data analysis for this case study consisted of quantitative and qualitative data.
Quantitative data were collected through a survey completed by third, fourth, and fifth
grade teachers in the Logan-Rogersville R-VIII School District in Southwest Missouri, a
typical Missouri school. Qualitative data were drawn from open-ended questions within
the survey and from field notes and a voice recording collected during each focus group
consisting of third, fourth, and fifth grade teachers in the Logan-Rogersville R-VIII
School District in Southwest Missouri.

*Quantitative Data Analysis*
The survey provided categorical data in the form of demographic questioning as well as numerical data in the form of discrete numbers assigned to given perceptions. Research findings were analyzed using SPSS to determine patterns of perceptions within the teacher responses (Field, 2009). Perceptions were measured using a multiple choice answering format with an open-ended option and recorded for perceptions for various areas of educator training for teaching students with ASD. The quantitative data included a test for percentages as well as frequencies displayed on pie charts and bar graphs (Creswell, 2007). The techniques utilized to ensure quality of data and data analysis for quantitative data included the selection of a sample of teachers who represented third, fourth, and fifth grade teachers in the Logan-Rogersville R-VIII School District in Southwest Missouri. Items on the instrument provided quantitative descriptions of preservice preparation, teaching strategies, teacher efficacy, and professional development as perceived by teachers.

Research Question One. In determining the level of preservice preparation received by the participants, question four of the survey asked how many college credits related to special education were received to obtain a teaching certificate for each participant. Question ten on the survey required participants to identify where they had received support and training to educate children with ASD. Participants were asked on question fifteen to identify the level of formal training they have received on ASD. The options ranged from introductory to advanced. Survey question nineteen listed locations for training, including preparatory programs, which the participants chose from to distinguish where they had received special education training. These questions will be
utilized to gather quantitative data pertaining to experiences of regular education teachers in the areas of preservice preparation related to inclusion of students with ASD.

*Research Question Two.* Numerous survey questions addressed experiences of regular education teachers in the areas of teaching strategies pertaining to inclusion of students with ASD. Survey question six asked participants to identify the number of students with ASD they have had in their teaching career, while question seven asked participants to estimate the typical number of children with ASD in the classroom each year. Survey question eighteen asked participants to indicate methodologies they have received training on to use in their classrooms. Six common strategies were listed with the option to list other methodologies being provided in the participants’ districts. Participants checked all applicable strategies. Survey question nineteen asked where the participants had received training for educating children with ASD and question twenty had the participants rate the training they received.

*Research Question Three.* The experiences of regular education teachers in the areas of efficacy in teaching students with ASD were measured quantitatively through multiple survey questions. Survey questions ten and eleven addressed the sufficiency of resources provided for teaching children with ASD. Questions twelve through fourteen had participants rate their preparedness, confidence, and sense of effectiveness when educating children with ASD in their classrooms. Questions sixteen and seventeen asked participants how open to professional development opportunities they are specifically to identify if they need additional training. Questions eighteen through twenty on the survey asked the level of training provided and how satisfied the participants were with the training. Question twenty on the survey asked participants to rate the training they have
received, and survey question twenty-one asked which area the participants feel
additional training is needed to better serve children with ASD.

Validity and Reliability. Validity and reliability were present through the use of
previously created, piloted, and administered survey instrument. Internal validity was
provided due to the selection of the participants. Participants were not selected due to any
biases, yet due to their current third, fourth, and fifth grade teaching positions (Fink,
2009). External validity was present as the “findings apply to other people and other
settings” (Fink, 2009, p. 72). The researcher will be the administrator of the survey and
evaluator of the results. The researcher also served as the conductor of the focus group
studies. Due to the researcher’s role in the survey administration and focus group
procedures, intrarater reliability will be present as the data collected will be made by the
“same observer” (Mertens, 2005, p. 350). Ultimately, the survey and focus group
questions were created around the study research questions to keep the data collected
valid and reliable.

Generalizability. Due to the external validity of the study, generalizability of the
findings can be made. Comprehensive sampling was utilized to find the participants.
Only third, fourth, and fifth grade regular education teachers at Logan-Rogersville R-VIII
School District were asked to participate (Mertens, 2005). Third, fourth, and fifth grade
teachers were focused upon due to their self-contained classrooms for the majority of the
day. Generalizability to other self-contained elementary educators can be noted due to the
sampling of third, fourth, and fifth grade teachers participating in the study (Creswell,
2007).
Qualitative Data Analysis

The qualitative data were drawn from connections between open-ended answers on the survey and focus group responses (Krueger & Casey, 2009). Quality for qualitative data included multiple sources allowing triangulation, descriptions of teachers allows transferability to other areas, and member checking and peer coding aid in reliability checking (Krueger & Casey, 2009).

Research Question One. Determining preservice preparation related to inclusion of students with ASD will be measured qualitatively through focus group questions. Specifically, when asking the participants what training they have received to properly educate students with ASD the researcher will gather data on preservice preparation of participants. Participants were able to elaborate on their preservice preparation with specific examples and experiences.

Research Question Two. Open-ended questions on the survey addressed teaching strategies utilized by regular education teachers. Survey question twenty-three asked for experiences in collaboration with special education teachers and question twenty-four on the survey asked for successful strategies used by the participants. These questions coupled with several focus group questions provide a qualitative analysis of the data. Specifically, focus group questions asked for training experiences, collaboration practices, successful strategies, and unsuccessful strategies used by the participants.

Research Question Three. Question twenty-two of the survey provided qualitative data to explain the level of efficacy regular education teachers have for properly educating students with ASD. This question asked for areas where additional resources were needed for the participants to feel comfortable educating students with ASD. Focus
group questions also provided qualitative data to answer research question three. Questions focused on how many students the participants have taught and ideas on programs and professional development opportunities that could be provided to increase the participants’ knowledge and confidence levels in teaching students with ASD.

**Role of the Researcher.** The researcher is currently a fifth grade regular education teacher and was required to take only one special education college course. Personal feelings of inadequacy to serve the needs of students with ASD while following the guidelines set forth through the inclusion laws was identified as a driving source in this study. As data were gathered, this researcher identified these bias feelings and allowed them to drive the purpose of the study, but not become evident during surveying and focus group questioning (Creswell, 2009; Krueger & Casey, 2009; Mertens, 2005). The focus groups were conducted, while voice recording and taking field notes, in the researcher’s own school district, yet two of the focus groups were with teachers whom she does not collaborate and work with on a day-to-day basis. This unfamiliarity aided in eliminating convenience researching and increased the validity of the study as the “accuracy of the findings” was upheld (Creswell, 2009, p. 184).

**Trustworthiness.** Objectivity and trust were on the forefront of the study while the researcher collected data in an unbiased way. The focus on third, fourth, and fifth grade teachers eliminated the use of convenience sampling as the researcher interacted with unfamiliar participants. Human rights protection was also held in high esteem as the researcher followed the proper steps to obtain permission from the educational institution and individual educators through the use of consent letters. Identification of individuals was “masked” as to keep sensitive experiences private and untraceable (Creswell, 2007,
p. 185). Relationship building was considered during the focus group processes where open questioning and proper introductions played a crucial role (Krueger & Casey, 2009).

**Summary**

This case study identified regular education teachers' demographic information and teacher perceptions related to proper inclusion training. The three provided research questions were addressed through a descriptive quantitative analysis. The population for the study included a marked number of third, fourth, and fifth grade teachers in the Logan-Rogersville R-VIII School District in Southwest Missouri, a typical Missouri school. Mixed methods including quantitative and qualitative data collections served to provide numerical and real world experiences aiding in the answering of the research questions. Proper procedures were established prior to data collection to aid in reliability and validity of the findings. The purpose of this study was to gather information on experiences of regular education teachers concerning inclusion practices for children with ASD in adding to the knowledge base and research for proper teacher training.

Chapter Three focused on the design and methodology of the study. Chapter Four will contain the results of the collected data as they relate to the research questions. Finally, Chapter Five will include the significance of the study and plans for future research.
CHAPTER FOUR

RESULTS AND FINDINGS

Introduction

Autism Spectrum Disorder (ASD) is on the rise (Singh, 2007). Bower (2011) stated 1 in 110 children in the United States was labeled with an ASD in 2006. In 2009, 1 in every 100 children was identified as having an ASD, while in 2012, 1 in every 88 children was identified with an ASD (Center for Disease Control and Prevention, 2012). ASD includes an umbrella of disorders, specifically, Autistic Disorder, Asperger’s Disorder, Pervasive Developmental Disorders-Not Otherwise Specified, Rett Syndrome, and Childhood Disintegrative Disorder (Gardts & Bernier, 2011; Ryan et al., 2011). The populace of children with ASD in the regular education classroom is increasing and education laws require children with ASD to be placed in the least restricted environment, thus in the regular education classroom with their peers (Dukes & Lamar-Dukes, 2009). Literature has identified the need to increasing the training provided to regular education teachers to educate this growing population (Bower, 2011; Singh, 2007).

Children with ASD require trained and prepared educators, yet research shows many teachers feel inadequately trained to work with this varied group of students (Singh, 2007). A gap is present between the training provided to regular educators and the training required for proper inclusion practices (Buelle, et al., 1999). Providing inclusion training during preservice programs and professional development workshops for seasoned teachers is a necessity (Jung, 2007).
Due to the need to training educators, teaching strategies and programs have been incorporated into educating regimens for educators. These researched-based teaching practices can be utilized by teachers within their classrooms to reach the educational needs of their students (Loreman, 2007). Applied Behavior Analysis, Developmental, Individual-Difference, Relationship-Based Model, Discrete Trial Teaching, Picture Exchange Communication System, Social Stories, and Treatment and Education of Autistic and Communication related handicapped Children have all been identified as some of the most common strategies for effectively educating children with ASD in the regular education classroom (Kurt, 2011; Ryan et al., 2011; Vernon & Rhodes, 2009).

Along with understanding effective strategies, educators must be provided with a sound knowledge background of special education and ASD.

Being aware of the history of special education, including restrictions and laws, is crucial for educators. Specifically, understanding inclusion laws in providing the least restricted environment for children with ASD allows educators to know their place in the educating of these children (Raymond, 2008). Training on defining and describing ASD as well as aligning the disorders with researched-based methodologies is paramount (Ryan et al., 2011). Children with ASD have various learning abilities due to the wide range of disorders covered by this title. Educators must be aware of these characteristics and the ways to meet the needs of each of these children. Providing training on the various teaching strategies provides background knowledge for educators (Ryan et al., 2011).

The purpose of this study was to identify the perceptions of needs of regular education teachers in regards to educating children with ASD. Information was gathered
on experiences of regular education teachers 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.

Three research questions were developed to identify needs of educators in educating children with ASD. Initially, the first research question identified experiences of regular education teachers in the areas of preservice preparation related to inclusion of students with ASD. The second research question gathered professional development experiences of regular education teachers in the areas of teaching strategies and collaboration pertaining to inclusion of students with ASD. The final research question recognized levels of efficacy experienced by regular education teachers in teaching students with ASD.

The Autism Needs Assessment Survey-Revised (ANAS-R) was used to measure the gap between current training practices and the needs of regular educators in the Logan-Rogersville R-VIII School District in Southwest Missouri. Quantitative and qualitative data were collected on the survey as open-ended questions allowed educators to provide their own responses to their experiences with students with ASD in their regular education classrooms. Perceptions and experiences of regular education teachers were explored during two qualitative focus groups with current third, fourth, and fifth grade educators at Logan-Rogersville R-VIII School District in Southwest Missouri.

In this chapter, the results of the collected data as they relate to the research questions are presented. First, the demographics of the participants were presented to identify their level of experience with ASD. Next, the research findings are presented. Each research question is restated with both quantitative and qualitative data presented.
SPSS version 16.0 was used to find percentages and frequencies for quantitative data in answering the research questions. Qualitative data were coded for the identification of connections. Finally, a summary will conclude Chapter Four.

**Demographics of Participants**

Third, fourth, and fifth grade regular education educators in the Logan-Rogersville R-VIII School District in Southwest Missouri provided the data source to keep a narrowed focus on the needs of regular education teachers for inclusion to answer the research questions of the study. Third, fourth, and fifth grade regular education teachers were chosen to keep a narrowed focus on teachers with self-contained classrooms and larger experiences with inclusion during the entire school day. The sample accounted for 16 elementary education teachers. All third, fourth, and fifth grade regular education teachers in the district received the survey. The survey participants had the opportunity to participate in focus groups to elaborate on their experiences with their same grade level peers. The researcher conducted the two focus groups (Krueger & Casey, 2009; Mertens, 2005).

The survey was sent electronically to the 19 third, fourth, and fifth grade educators at Logan-Rogersville R-VIII School District in Southwest Missouri. Participation in the survey was completely voluntary, and participants were informed they could stop at any time and were not required to answer all questions. Of those asked to participate, 16 educators chose to complete the survey. Confidentiality of the responses was made possible as the results were not tied to each individual participant, but presented in summary form. The survey received 16 respondents from these grade levels. Demographic data included asking the participants their primary role, primary grade
level, and years of teaching experience. All 16 respondents identified their primary role
as a regular educator in the elementary setting. However, the number of years of teaching
experience varied greatly among the participants as illustrated in Table 1. Of the
participants, 8 teachers had 10 years or less of teaching experience, 7 had 11-17 years
experience, and 1 participant had 25 years of experience.

Table 1

*Number of Years of Teaching Experience (N=16)*

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<th>Response</th>
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<th>Percent</th>
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<td>6.2%</td>
</tr>
<tr>
<td>25</td>
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</tr>
</tbody>
</table>

*Note*: mean=11.0, SD=6.0

The focus groups protocol included voluntary participation, participation could
end at any time, and participants could answer only the questions they were comfortable

64
answer. Two focus groups were conducted. For confidentiality, perceptions of teachers will be presented using the letter “RE” for regular education teacher followed by a “3,” “4,” or “5” indicating the teacher’s grade level. This code was then followed by a dash and a number representing the individual participant. The first focus group consisted of ten fourth and fifth grade teachers at Logan-Rogersville R-VIII School District while the second was made up of five third grade teachers in the same district. Focus groups were recorded and transcribed for accuracy in coding responses for the qualitative findings.

**Research Findings**

The research questions guiding this study were:

1. What are the experiences of regular education teachers in the areas of preservice preparation related to inclusion of students with Autism Spectrum Disorders?

2. What are the professional development experiences of regular education teachers in the areas of teaching strategies and collaboration pertaining to inclusion of students with Autism Spectrum Disorders?

3. What are the levels of efficacy experienced by regular education teachers in teaching students with Autism Spectrum Disorders?

**Research Question One**

Research question one identified the experiences of regular education teachers in the areas of preservice preparation related to inclusion of students with ASD. This research question was answered in a variety of ways within the survey and focus group in both quantitative and qualitative findings. This research question sought to identify the
possible deficiencies of preservice training present in the current teacher training programs.

**Quantitative Findings for Research Question One**

Multiple survey questions were aimed at identifying preservice preparation received by participants related to educating children with ASD. Survey question 4 focused on the number of special education college credits received by the participants to fully understand the knowledge obtained before entering the regular education classroom. Survey question 10 gauged the areas of support and training for educating children with ASD, the majority of participants’ responses showed collaboration with peers laid the foundation for their knowledge base not formal training. Survey question 15 determined the formal level of autism training the participants felt they had to identify if they had a background knowledge and understanding of ASD. Finally, question 19 of the survey asked participants where the majority of their training for special education was gathered, and preparatory programs was ranked at the top.

Question four of the survey asked participants to determine how many college credits related to special education were received to obtain their teaching certificate. Options ranged from “0-3,” “4-9,” “10-12,” and “12+” in order to include special education classes accounting for three credit hours. Illustrated in Table 2, 93.7% of the participants determined nine credits or less were accumulated in the area of special education to receive their teaching certificate, with only 6.2% having 10-12 college credits in special education.
Survey question 10 required participants to identify training venues with the option to list other areas where support, training, resources, and assistance were provided. The options included in-district specialist, out of district specialist (including neighboring districts), external consultant or specialist from a public or private agency, collaboration with a special education teacher in the same building, or collaboration with other regular education teacher within the same building. Participants were allowed to check all responses which directly applied to their experiences and could write in other options. Of those surveyed, 14 participants answered question 10 with a total of 31 responses; therefore, some respondents chose more than one area for support. No participants chose to write in another option. Table 3 shows 74.2% of the 31 responses indicate collaboration as the main source of support for educating children with ASD.
Table 3

*Areas of Support and Training for Educating Children with ASD (N=31)*

<table>
<thead>
<tr>
<th>Training Source</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-district specialist</td>
<td>6</td>
<td>19.3%</td>
</tr>
<tr>
<td>External consultant</td>
<td>2</td>
<td>6.2%</td>
</tr>
<tr>
<td>Collaboration Special Education</td>
<td>11</td>
<td>35.5%</td>
</tr>
<tr>
<td>Collaboration Regular Education</td>
<td>12</td>
<td>38.7%</td>
</tr>
</tbody>
</table>

Survey question 15 asked participants to identify which word best described their formal level of ASD training. The options included “introductory/awareness,” “intermediate,” and “advanced.” Fifteen of the participants chose to answer this question. Of the participants, 86.7% selected “introductory/awareness” and 13.3% identified most with “intermediate.” No participants chose “advanced” to describe their training levels.

Survey question 19 listed locations where participants had received special education training. The options included preparatory programs, local public and private organizations, local university or colleges, and peer-led professional development. The option to list other locations was also provided. Research question one focused on where participants received training for ASD, particularly in preservice preparation; this question allowed participants to identify where they had received the majority of training. Twelve participants chose to answer the question, while four skipped the response. The responses were illustrated in Table 4. Overall, 41.7% of participants listed preparatory programs as their primary location for training.
Table 4

Locations of Training Received for Various Methodologies (N=12)

<table>
<thead>
<tr>
<th>Responses</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparatory Program</td>
<td>5</td>
<td>41.7%</td>
</tr>
<tr>
<td>Local University/College</td>
<td>1</td>
<td>8.3%</td>
</tr>
<tr>
<td>Private/Public Agency</td>
<td>1</td>
<td>8.3%</td>
</tr>
<tr>
<td>Peer-led Professional Development</td>
<td>3</td>
<td>25.0%</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>16.7%</td>
</tr>
</tbody>
</table>

Summary for Research Question One Quantitative Findings

These survey questions were utilized to gather quantitative data pertaining to experiences of regular education teachers in the areas of preservice preparation related to inclusion of students with ASD. Identifying college credits received, main areas of support for training, and venues for training allowed research question one to be answered quantitatively. In identifying the experiences of regular education teachers in the areas of preservice preparation related to inclusion of students with Autism Spectrum Disorders research question one was addressed.

Qualitative Findings for Research Question One

Aligning with research question one, determining preservice preparation related to inclusion of students with ASD was measured qualitatively through focus group questions. Specifically, when asking the participants what training they have received to properly educate students with ASD the researcher gathered data on preservice preparation of participants. Participants were able to elaborate on their preservice
preparation with specific examples and experiences. Overall, a deficiency of training was identified through questioning and was followed up with asking participants what types of programs their school administrator could provide to compensate for their shortage of background knowledge with ASD.

**Deficiency of training.** In questioning the participants on training they had received to educate children with ASD in their regular education classrooms none recalled their preservice coursework as being helpful. In the first focus group, only one participant replied. RE5-5, “We have had some professional development.” No other participants spoke up to respond on training they had received. In the second focus group, three participants spoke up when asked about training they had received to educate children with ASD in their classrooms. All responses echoed a deficiency of training. “I don’t really recall any,” stated RE3-3. RE3-5 replied, “Haven’t had any.” Finally, RE3-4 spoke up with, “I haven’t really had any formal training.” This shortage of formal training indicates a deficit of preservice training and training in general of the study participants. The researcher than asked the participants what types of programming for training they felt would be beneficial for their administrators to offer within their district.

**Types of programming needed.** In both focus groups, several participants spoke up wanting additional programming and training to better serve the students with ASD within their classroom. An overall understanding of a shortage of knowledge was apparent. “I guess maybe some workshops or have some experts come and speak and just give some different methods that you could use with those students,” stated RE3-3. In the first focus group, RE5-5 answered, “It would be nice to have specific training for the type of diagnosis you are dealing with because the students with Asperger’s are so different
from the severe student that I had.” Another teacher in the first focus group agreed and added how it would be good to know “how to handle them and their circumstance in a certain situation.” Participant RE5-3 took another spin off the question and asked, “If there is a discipline problem or a behavior problem, how do we handle it?”

**Summary for Research Question One Qualitative Findings**

In conclusion, research question one was mostly addressed through the quantitative analysis with minimal responses through the qualitative analysis. The qualitative analysis of question one focused mostly on prior training received and what types of future programming would be beneficial due to the deficiency of preservice training. Those who chose to respond indicated overall a lack of training and an overall desire for future training opportunities specifically in the areas of learning methods, increasing information for each disorder in the ASD umbrella, and handling circumstances both academically and in the area of discipline.

**Research Question Two**

Research question two gathered professional development experiences of regular education teachers in the areas of teaching strategies and collaboration pertaining to inclusion of students with ASD. The demographics of the participants played a role in the response to this question; some participants have been in the classroom over ten years while some have only been teaching for less than three years. The professional development opportunities experienced by the participants varied as they were measured through both quantitative and qualitative findings.
**Quantitative Findings for Research Question Two**

Various survey questions answered research question two in a quantitative way as participants addressed experiences in the area of teaching strategies for inclusion of students with ASD. Participants were asked how many ASD students they have had in their entire teaching career and how many ASD students they have on average each year. Specific methodologies were identified by the participants that are used within their regular education classrooms to educate children with ASD. Finally, the participants were asked if they had received training and to what extent they found the training useful within their classrooms.

Survey question six questioned participants on the total number of students with ASD they have educated in their entire teaching career. This question allowed the identification of participants who had a multitude of experiences with students with ASD. Of the sixteen surveyed teachers, 81.2% stated they had three or less students with ASD in their teaching careers, and three responded with four to nine total students with ASD.

<table>
<thead>
<tr>
<th>Table 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total ASD Students Educated in Teaching Career (N=16)</strong></td>
</tr>
<tr>
<td>Response</td>
</tr>
<tr>
<td>------------</td>
</tr>
<tr>
<td>0-3</td>
</tr>
<tr>
<td>4-9</td>
</tr>
</tbody>
</table>

Survey question 7 served as a follow-up to survey question 6. Survey question 7 asked the same participants how many students with ASD they had in their classrooms each year on average, 100.0% of participants answered in the 0-3 range. The participants
were also asked how many students with ASD they estimated were present in the entire school population. Responses ranged from 10 to 35. Only four participants responded to this question.

Research question two focused on professional development experiences of the regular education teachers pertaining to inclusion of children with ASD. Survey question 18 asked participants to indicate methodologies they have received training on to use in their classrooms. Six current and relevant teaching strategies were listed with the option to list other methodologies being provided in the participants’ districts. The strategies included Developmental, Individual-Difference, Relationship-Based Model (DIR), Discrete Trial Training (DTT), Applied Behavior Analysis (ABA), Picture Exchange Communication System (PECS), Social Stories, and Treatment and Education of Autistic and Communication related handicapped Children (TEACCH). Participants had the option to check all applicable strategies. Only 6 of the 16 participants chose to answer this question. The 3 who responded with “other” had the following responses: none, in services, and Exceptional Lives-Special Needs Course. Overall training in the six common methodologies is missing as noted by the response rates noted in Table 6.
Survey question 19 asked where the participants had received training for educating children with ASD and the results are recorded previously in Table 4 indicating the majority (41.7%) of participants had received training in preparatory programs. The second highest percentage was 25.0% of respondents with the response of “peer-led professional development.” A follow-up question asked participants to rate the training they had received. Four participants answered the question while twelve skipped and did not respond to the question. The four respondents chose “satisfied.”

**Summary for Research Question Two Quantitative Findings**

Overall, the quantitative findings for research question two were limited as a substantial number of participants skipped over these questions. All respondents fell in the nine or less category for the number of children educated in their entire teaching career with an average of “0-3” students per year. When the participants were asked to identify common methodologies for working with children with ASD that they had received training on three respondents chose the options presented to them, three others listed other options, and ten chose not to answer the question. The minimal amount of

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**Table 6**

*Methodologies for which Training has been Received (N=6)*

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIR</td>
<td>2</td>
<td>33.3%</td>
</tr>
<tr>
<td>Social Stories</td>
<td>1</td>
<td>16.7%</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>50.0%</td>
</tr>
</tbody>
</table>
participation is described later in the qualitative findings as a shortage of knowledge of proper methodologies for teaching children with ASD and also is noted in the deficiency of training received by the participants.

**Qualitative Findings for Research Question Two**

Research question two was measured qualitatively through open-ended questions on the survey which addressed professional development in the two areas of collaboration and teaching strategies utilized by regular education teachers. Survey question 23 asked for experiences in collaboration with special education teachers, and question 24 on the survey asked for successful strategies used by the participants. These questions coupled with several focus group questions provided a qualitative analysis of the data. Specifically, focus group questions asked for training experiences, collaboration practices, successful strategies, and unsuccessful strategies used by the participants.

The qualitative findings were broken into two professional development categories of collaboration and successful strategies. The qualitative findings were coded and placed into these two categories. Collaboration was coded into collaboration with special education teachers and collaboration with others. Successful strategies were divided into three areas of communication, positive environment, and scheduling.

**Collaboration**

Research question two focused on professional development of regular education teachers in teaching children with ASD specifically with collaboration and teaching strategies. Collaboration was acknowledged throughout open-ended survey questions and focus group questions. Once coded, the responses fell into two categories of collaboration as follows: collaboration with special education teachers, and collaboration with others.
Collaboration with special education teachers refers to the direct communication between the regular education teacher and the special education teacher in educating children with ASD. Collaboration with others refers to various in district and out of district personnel from whom the regular education teacher seeks advice and aid to educate children with ASD.

*Collaboration with special education teachers.* Survey question 23 specifically asked participants to describe collaborative experiences in which they had worked with special education teachers to meet the individual needs of their students with ASD. Focus group question five also questioned participants on their collaborative experiences. Various other survey and focus group questions induced responses which included collaboration between regular education teachers and special education teachers.

Collaboration between regular education teachers and special education teachers was identified by the participants in numerous ways. Most responses referred to working with special education teachers to modify curriculum or in aiding students with ASD in transitioning. Modifying lessons and curriculum stood out as a major concern among the teachers in which they sought out the aid of the special education teachers for assistance. Survey question 23 had participants elaborate on collaboration experience they had encountered. One participant stated they had worked with the special education teacher to “modify science curriculum for a student on the extreme end of the spectrum.” Another participant mentioned how collaboration with the special education teacher aided her in “finding meaningful work for students with ASD in my classroom.”

A comparable focus group question elicited similar responses on modified lessons and curriculum. RE5-5 stated in reference to collaborating with the special education
teacher in her building, “We tried to modify the curriculum to things that she could actually do and comprehend” within her science classroom. In the second focus group, RE3-3 stated the special education teacher gave her “some techniques to refocus his attention or topics he was really interested in.” This aided the teacher in being able to “go a little more in depth with those and try to get some different writing samples and projects like that out of him on topics he was kind of fixated on.”

Along with modification of lessons and curriculum, transitioning was a common answer on both the open-ended survey responses and focus group responses. Transitioning was identified by many participants as an area in which they would like to assist their students with ASD. Transitioning referred to aiding ASD students in social skills and in preparing for future grade levels. One participant answered survey question 23 with, “I have spent time collaborating with the special education teacher in my building dealing with how to transition my autistic student socially.” Another participant on the survey described a way she had collaborated with a special education teacher, “We developed a sort of basic life skills adaptation of the regular material.” Finally, one teacher stated, “We worked together to hold her accountable for certain social protocols.” The teacher then elaborated with an explanation, “Such as answering when someone said hello.” These teachers worked hand in hand with the special education teacher to aid the students in social transitioning with an emphasis on life skills.

During both focus groups, one question also asked for specific examples of collaboration. Once again, transitioning was mentioned as a collaboration point between the regular education teachers and the special education teachers. Participant RE5-4 discussed the need for further knowledge and collaboration to meet the “social” needs of
her students with ASD. RE5-5 echoed the need to collaborate to aid ASD students in social skill building in her science class. She explained how she worked with the special education teacher to aid the student so she “was interacting socially with the kids as well as hitting on some life skills in science.” RE5-5 further elaborated and added, “We tried to get her as actively involved as we could.”

Collaboration with others. Collaboration with others referred to collaboration between the regular education teacher and any other peer within the educational setting in finding resources to educate children with ASD. Other individuals within the educational setting who were mentioned in survey and focus group responses included para professionals and occupational therapists.

Para professionals are individuals who aid students with ASD when included in the regular education classroom. Many participants recalled collaboration with para professionals on survey question 23 as a positive way to increase the learning of students with ASD in their classrooms. One success story was mentioned in reference to working with one para professional on a survey response as her student, “had a one on one para at the beginning of the year. When he was promoted to the next grade he did not have to have a para.”

Several teachers referred to the support of para professionals in the focus group responses. In the first focus group, RE4-1 stated, “I worked with my autistic student’s para to meet their individual needs.” RE3-5 added, “the aid was very helpful with this student, just working with them on an individual basis.” In a follow-up question during this focus group, participants were asked if they had other concerns which the previous questions did not address; collaboration with aids came up once again in the responses.
RE5-2 began the discussion as she stated it would be helpful for administrators to get “more information out to us” to aid students with ASD. RE5-4 added, “Because we rely so much on the aids.” RE4-1 concluded, “especially if they do have the one-on-one aid with them.” The teachers were referring to needing more information to not have to rely so much on the para professionals to do all the work but to be able to work more collaborative with them. A final success story was shared in how proper collaboration and inclusion of one student aided him to be independent as RE5-2 recalled the increased independence of her former student with ASD:

A couple years ago we had one that it was neat to see how he progressed and was able to be on his own in the classroom and not have his aid. He was able to work independently. He wanted to know about everything, he was very inquisitive.

Occupational therapists were referred to twice in the study responses. On the survey, one participant referred to collaborating with her student’s occupational therapist in stating, “We encouraged her participation in hands on activities and use of the SmartBoard.” While another recalled using an occupational therapist strategy of “sorting pictures of things that were living and things that were not” in modifying a science lesson. The occupational therapists working with students with ASD are another helpful resource for regular education teachers within their educational setting; however, only two participants mentioned collaboration with this helpful resource.

Along with collaboration, teaching strategies were the second part to this two part research question focused on professional development opportunities within the school setting. A multitude of responses mentioned strategies teachers had encountered which aided them tremendously in educating students with ASD.
Successful Strategies

Research question two focused on professional development of regular education teachers in teaching children with ASD specifically with collaboration and teaching strategies. Teaching strategies were elaborated upon through open-ended survey questions and focus group questions. The participants were allowed to describe both positive and negative experiences they had with teaching strategies in their regular education classrooms when educating children with ASD. Upon coding the responses, the answers could be placed into three categories. The categories were communication, positive environment, and scheduling. In this section, communication referred to verbal exchanges between the regular education teacher and the student with ASD. The positive environment referred to a classroom environment conducive of learning for the students with ASD. Finally, scheduling was referred to repeatedly for keeping students with ASD engaged and interacting within the regular education classrooms.

Communication. Communication was identified as a key component for proper inclusion of students with ASD. Communication was mentioned multiple times within the survey responses. When asked for successful strategies utilized, one participant simply answered, “listening, communicating, implementing, and reflecting.” This participant referred to her way of learning to aid her students with ASD through communication and learning as a teacher. Another referred to communication, “Always tell them what you expect the end result to be before you begin.” Two other participants mentioned how proper communication can aid in minimizing flare-ups in the classroom. On the survey, one said, “When a certain negative behavior arises with the child, the child needs to be spoken to in a manner that will not escalate the situation.” A final
survey participant related an experience on how communication specifically aided her student with ASD in having limited outbursts in her regular education classroom:

At times, my student would get agitated if something didn't quite go the way that he thought that it should go. I was able to reason with him and calm him down by asking him what was wrong and talking it through. I know that this is not always the case. That is why I feel that my student had a mild case of Autism. Very rarely did we have to deal with extreme, uncontrollable behavior.

One focus group response also exemplified the need for proper communication between regular education teachers and students with ASD. Consequently, RE4-1 “found with a student I had that humor did not work because he didn’t really get it.” Through proper communication, the ability to understand each student individually appeared to aid in properly educating students with ASD in the regular education classroom.

Positive Environment. Proper communication lends itself to creating a positive learning environment for students with ASD. Multiple responses on the survey and during the focus group referred to the classroom environment when asked about proper strategies. Overall, avoiding overstimulation, making the student comfortable, and offering praise to the student provided this positive environment for learning needed by students with ASD.

Overstimulation was mentioned a multitude of times when asked what strategies did not work in the classroom. On the survey one participant warned, “Be careful of over-stimulating.” This response was elaborated upon many times during both focus groups. In the first focus group, RE5-5 began the conversation on overstimulation by stating her student “loved the SmartBoard. Sometimes she would get a little sensory overload so we
Another participant added to this response with, “That is one thing in your room, with the sensory overload, things would get a little excitable and it would overwhelm her.” Mentioning overstimulation one final time, RE5-4 stated, “Echoing the sensory overload, I have to keep things at a reasonable level.” Each of these regular educators in the first focus group had experience with overstimulation, and once again it was brought up in the second focus group. RE3-5 stated:

> Well, this isn’t a strategy I used but it is something that I used in my class a lot. Music. And the student I have this year it doesn’t effect him at all, but the former student, that was not, he had to go into the hallway with his aid when the music was playing. He did not like that at all.

Comparatively, RE3-3 was quick to add:

> Yeah, mine was the same way. I had to become aware of the noises in the classroom and any disruption in the classroom really bothered that student. In music class, music was too loud and we had to do headphones and things like that.

On the survey, several participants recalled strategies they had utilized to make their students with ASD feel welcomed and comfortable in their classrooms. One participant recalled, “Pairing her with a student she really liked” to engage the student in the lessons. Another echoed, “Making sure she was in a group with someone she related to was helpful.” Finally, another participant mentioned, “Finding what talent the student has works well and then expanding on that” to keep them actively involved in the classroom discussions. One participant in the first focus group, RE5-5, stated, “We would
try to pair her with students she was comfortable with” when asked for successful teaching strategies.

Another strategy that resounded in the responses was offering praise to the student when it was authentic and appropriate. On the survey, one participant simply answered, “praise” when asked for helpful teaching strategies. Another survey participant stated, “It is always good to compliment them on their talents to help them build up confidence in themselves.” RE5-3 provided a description of a time when praise was used in her classroom to build up the confidence of one of her former students with ASD:

I know that they have specific talents and they will be very, very good at like either drawing or very good at math, or they just have that certain talent. And that is one thing I remember feeling like it was good for me to brag on that student a lot about that to help build up the self confidence. This student knew he was different from the others, but he wanted to blend in so much. And whenever you give them that praise it just helps so much. This student is getting ready for junior year this year and just doing so well and so happy now and everything.

On an open-ended survey question, another participant commented on praising students with ASD and emphasizing on their individual expertise. She said, “My student read No David perfectly from memory and with expression. I bawled. It was a great experience for us.”

Scheduling. A comfortable environment also consisted of keeping a timely schedule. Scheduling refers to the use of time during the day to day activities in the classroom. On the survey, one participant pointed out, “Giving daily schedules and reminding what we are learning, and when we will move to the next task” aided her in
keeping her student with ASD on task. Another participant referred to using “firm, caring, safe guidelines” within the classroom to keep her student with ASD informed. Two respondents during the focus group also mentioned scheduling. “Anything out of the ordinary, like if its not math, reading, science, every day; that was quite a struggle” stated RE3-5 when discussing changes in routines for her former student with ASD. RE3-3 added, “Following that schedule!”

**Summary for Research Question Two Qualitative Findings**

Qualitative data for research question two abounded throughout the open-ended survey questions and focus group questions. Breaking professional development opportunities into collaboration and teaching strategies aided the researcher in finding specific areas of concern and need for regular education teachers.

Collaboration was divided into collaboration with special education teachers and collaboration with others. This distinction was made due to the main response of collaboration with special educators and the minimal feedback of collaborating with other school personnel. However, para professionals and occupational therapists were mentioned as helpful resources to regular education teachers. Overall, the collaboration taking place between regular educators and special educators, para professionals, and occupational therapists are aiding students with ASD in the regular education classroom to receive more involved and beneficial educations.
Table 7

*Collaborative Strategies for Educating Students with ASD*

<table>
<thead>
<tr>
<th>Collaborative Strategy</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaboration with Special Education Teachers</td>
<td>Modify subject curriculum</td>
</tr>
<tr>
<td></td>
<td>Create meaningful work</td>
</tr>
<tr>
<td></td>
<td>Refocus attention</td>
</tr>
<tr>
<td></td>
<td>Social transitions</td>
</tr>
<tr>
<td></td>
<td>Life skills and adaptations</td>
</tr>
<tr>
<td>Collaboration with Others</td>
<td>Meeting individual needs</td>
</tr>
<tr>
<td></td>
<td>One-on-one help</td>
</tr>
<tr>
<td></td>
<td>Participation in hands-on activities</td>
</tr>
</tbody>
</table>

Teaching strategies were addressed by asking participants to provide descriptions of both positive and negative strategies they had utilized within their regular education classrooms. The strategies were divided into communication, positive environment, and scheduling. These three areas were addressed with direct contact between the regular education teacher and the students they have served with ASD.
Table 8

Teaching Strategies for Educating Students with ASD

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

Largely, the participants in the survey and focus groups were open to further professional development and had already been contemplating the need for further knowledge on ASD to properly educate children with ASD in their regular education classrooms. Starting with collaboration and teaching strategies, many ideas were shared and discussed in increasing the learning received by these students.

Research Question Three

Research question three recognized the levels of efficacy experienced by regular education teachers in teaching students with ASD. This question aimed at identifying the feelings of adequacy or inadequacy felt by the participants in educating children with
ASD in their regular education classrooms. The levels emerged in both quantitative and qualitative findings as the perceptions of adequacy surfaced in the participants.

**Quantitative Findings for Research Question Three**

The experiences of regular education teachers in the areas of efficacy in teaching students with ASD were measured quantitatively through multiple survey questions. Efficacy refers to how effective regular education teachers perceive their teaching engages children with ASD (Jung, 2007). Participants were asked to identify if sufficient resources are available for educating children with ASD to measure any lack of preparedness felt by the participants while other questions directly asked participants to rate their preparedness, confidence, and sense of effectiveness. On survey questions 16 and 17, participants were asked if they felt a need for more professional development opportunities. Finally, questions 19 and 20 on the survey asked participants to rate the training they have received, and question 21 had participants identify areas of the school district where additional programming and training are needed.

Addressing the sufficiency of resources provided for teaching children with ASD was necessary in measuring the effectiveness the participants felt. Question 10 asked participants where they received support, training, resources, and assistance for children with ASD. The responses were recorded previously in Table 3. Only 6.2% of responses noted a source outside of the school; the remaining 93.8% chose “in-district specialists,” “collaboration with a special education teacher in your building,” and “collaboration with other regular education teachers within your building.” Survey question 11 was a follow-up question to survey question 10. Survey question 11 asked participants if the supports they were receiving met their needs. Table 7 illustrates, of the thirteen respondents,
69.2% felt the resources 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.”

Table 9

*Resources Received for Educating Children with ASD meet Teacher Needs (N=13)*

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, all of the time</td>
<td>2</td>
<td>15.4%</td>
</tr>
<tr>
<td>Yes, most of the time</td>
<td>9</td>
<td>69.2%</td>
</tr>
<tr>
<td>No, or not consistently</td>
<td>2</td>
<td>15.4%</td>
</tr>
</tbody>
</table>

Efficacy is determined in part by how prepared a regular education teacher feels in educating children with ASD. Question 12 of the survey asked participants to rate their feelings of preparedness from “highly qualified” to “not qualified.” Table 8 illustrates the make up in the responses. The majority of participants (80.0%) fell in the “minimally qualified” to “not qualified” categories. Only 20.0% of respondents felt they were “moderately qualified,” with 0.0% of respondents chose “highly qualified.”
Table 10

*The Perception of Preparedness by the Regular Education Teacher (N=15)*

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderately Qualified</td>
<td>3</td>
<td>20.0%</td>
</tr>
<tr>
<td>Minimally Qualified</td>
<td>10</td>
<td>66.7%</td>
</tr>
<tr>
<td>Not Qualified</td>
<td>2</td>
<td>13.3%</td>
</tr>
</tbody>
</table>

Survey question 13 had participants rank their confidence levels in educating children with ASD to further identify their perceptions of efficacy. Participants could choose from highly confident to not confident. Table 9 illustrates their responses. The regular education teachers participating in this study all responded with “moderately confident” to “not confident.” There were no participants who felt “highly confident” in educating children with ASD.

Table 11

*The Perception of Confidence by the Regular Education Teacher (N=15)*

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderately confident</td>
<td>2</td>
<td>13.3%</td>
</tr>
<tr>
<td>Adequately confident</td>
<td>6</td>
<td>40.0%</td>
</tr>
<tr>
<td>Minimally confident</td>
<td>5</td>
<td>33.4%</td>
</tr>
<tr>
<td>Not confident</td>
<td>2</td>
<td>13.3%</td>
</tr>
</tbody>
</table>
Finally, the participants were asked to measure their sense of effectiveness in educating children with ASD. Twelve participants answered the question, with four skipping the response. The participants measured their effectiveness from “highly effective” to “not effective.” The majority of respondents (41.7%) felt “adequately effective.” No participants chose “highly effective” or “not effective.”

Table 12

*The Perception of Effectiveness by the Regular Education Teacher (N=12)*

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderately effective</td>
<td>3</td>
<td>25.0%</td>
</tr>
<tr>
<td>Adequately effective</td>
<td>5</td>
<td>41.7%</td>
</tr>
<tr>
<td>Minimally effective</td>
<td>4</td>
<td>33.3%</td>
</tr>
</tbody>
</table>

To follow-up these questions on perception, the participants were then questioned on their openness to additional professional development. First, participants were asked if a complimentary online course entitled “Introduction to Autism” were offered, would they sign up and take the course. Secondly, participants were asked if the same course were offered via professional development within their school district, would they participate. Fifteen respondents answered both of these questions and with similar results. When asked if participants would take the online course, 53.3% responded with “yes.” Consequently, for the professional development course offered within the participants’ district, 60.0% replied “yes.” For the online course, 40.0% replied “maybe” while 33.3% replied “maybe” to the in district professional development opportunity. For both questions, one respondent replied “no” accounting for 6.7% of the responses.
Survey questions 18 through 20 questioned the participants on training they had received. Question 18 (Table 6) illustrated 18.8% of participants had background knowledge of the six common, current, and relevant teaching strategies while 12.5% listed other methods of training not provided in the survey. Preparatory training was selected by 41.7% of participants in Table 4 which displayed the responses from where the participants had received training (survey question 19). Options included local and state agencies, colleges and universities, and national providers. In referring back to questions 18 and 19, question 20 was a follow up question to survey question 19. Participants were asked to rate the level of training they had received. This question was included to measure the sense of efficacy within the participants on whether the training they are receiving is indeed aiding in increasing their knowledge and understanding of educating children with ASD. Four participants responded with “satisfied” representing 25.0% of the population of the study, while 12 participants skipped the question.

Finally, survey question 21 was a more specific question regarding where within the participants’ district was additional programming and training needed to better sever children with ASD. Participants could choose from preschool and early childhood, elementary, middle school, and high school divisions. Participants were asked to choose each division where training was needed; therefore, they could choose all four divisions if they felt it were necessary in all locations. The main area of increased need was found to be in the elementary school, with a response of 45.2%. The need in the other locations was almost evenly spread.
Table 13

*Location of Need for Additional Programming within the District (N=31)*

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preschool/Early Childhood</td>
<td>7</td>
<td>22.6%</td>
</tr>
<tr>
<td>Elementary</td>
<td>14</td>
<td>45.2%</td>
</tr>
<tr>
<td>Middle School</td>
<td>5</td>
<td>16.1%</td>
</tr>
<tr>
<td>High School</td>
<td>5</td>
<td>16.1%</td>
</tr>
</tbody>
</table>

**Summary for Research Question Three Quantitative Findings**

Research question three focused on the efficacy level of regular education teachers in teaching children with ASD. Survey questions provided the quantitative questions aimed at measuring the confidence levels of regular education teachers. Participants were questioned on sufficiency of resources, preparedness, confidence, effectiveness, need for additional training, knowledge of teaching strategies, and areas of need within their school district.

Collaboration is noted as the main source of support, training, resources, and assistance by the participants, yet the teachers they are seeking advice from are in similar situations with a shortage of knowledge to educate children with ASD. The collaboration is taking place between peers in the same district with the same training. Teachers are receiving these supports, but they are only feeling their needs are met “most of the time.”

Participants identified low levels of preparedness in the form of quality of teaching, confidence, and effectiveness. These low levels of efficacy were backed by the eagerness of participants to sign up for complementary online or in-district courses titled
“Introduction to Autism.” Finally, the elementary school was noted as the location where additional training on ASD would be beneficial.

**Qualitative Findings for Research Question Three**

Qualitative findings for research question three were limited. However, question 22 of the survey provided qualitative data to explain the level of efficacy regular education teachers have for properly educating students with ASD. This question asked for areas where additional resources were needed for the participants to feel comfortable educating students with ASD. Focus group questions also provided qualitative data to answer research question three. Questions focused on ideas on programs and professional development opportunities that could be provided to increase the participants’ knowledge and confidence levels in teaching students with ASD. Overall, research question three was measured qualitatively though the identification of needs of teachers. Specifically, the needs identified could be placed in two categories: additional resources and need for further training opportunities.

During the first focus group, RE4-5 tearfully shared after discussing the desire of the group to have increased resources and training:

I have had several students in my room with Autism Spectrum Disorder, but two have really helped to make me a better teacher. The first student is going to graduate high school this year. He was not able to read. Because whenever he came in, everything was very concrete. You did this, then you did this, and then you did this. And on paper he had to see visually, and it was pictures, what we are doing at this time and this time. And it would be one letter a day, but he knew ahead of time by chunks what we were doing. And by the end of the year he was
able to read some simple site words. A couple years later his big sister wrote me a letter and it said, ‘I never thought I’d be able to hear my brother’s voice reading a book.’ I think of how far he has came and it is sad and happy.

*Additional resources needed.* Both survey and focus group participants provided an overall feeling of additional recourses needed. A feeling of limited knowledge resounded, and the responses provided specific areas in which the participants felt they need additional information to better serve children with ASD in their regular education classrooms. On the survey, one participant asked for “information on how to academically meet their needs” when asked what additional resources were needed in the school district. Focus group responses echoed the additional need for resources and information. When asked what additional resources were needed, RE5-3 answered, “Aiding in dealing with frustration.” Students with ASD can very easily experience feelings of frustration as limited communication skills are noted as a common feature of children with ASD. When asked if there were further concerns not addressed in the previous focus group questions, RE5-4 stated a focus on “more the needs and equipping us for what we need to do to help them both socially and academically.” Once stated, RE5-2 added, “Getting the information out to us.” This conversation then led into needing an increase of knowledge to better serve students with ASD instead of relying so heavily on special education teachers and para professionals.

*Need for further training opportunities.* In both focus groups, when asked if the respondents would participate in additional training and professional development opportunities to increase their knowledge of ASD all participants resounded with “Yes!” An obvious need for increased training was made evident in many focus group responses.
The participants were eager to receive additional training on ASD, and RE5-5 stated it specifically, “It would be nice to learn strategies. Do we need to be more concrete? It would help to know teaching strategies, things that help them.” A final statement from the second focus group summed it up, “I think the spectrum is just so big and wide it is difficult to know what to do sometimes.”

**Summary for Research Question Three Qualitative Findings**

The qualitative findings for research question three were limited, yet powerful. Overall, the regular educators expressed a deficiency of resources and training are hindering them from being effective teachers for students with ASD. The participants provided specific areas in which they felt additional resources would be beneficial and even recalled meeting social and academic needs of their students. Increased knowledge on strategies and each specific disorder within the ASD were noted. Increasing resources and training resonated between both groups of focus group participants and the survey participants.

**Summary**

Chapter Four contained the results of the collected data as they relate to the study’s three research questions. The data analysis included both quantitative and qualitative findings for each research question for this mixed methods descriptive study. The use of the Autism Needs Assessment Survey-Revised and two focus groups provided the data needed to answer the research questions.

Research question one focused on identifying to what extent regular education teachers had preservice training related to educating children with ASD. Measured both quantitatively and qualitatively, the results found little to no training on ASD.
Preparatory programs were noted as the highest percentage of responses for locations of training received for various methodologies to assist teachers in educating children with ASD. However, only nine credit hours or less were acquired in special education courses for the majority of participants. Most of the training teachers are receiving is in preparatory programs in universities or colleges, yet the hours they are receiving are minimal. The participants described their formal training on ASD as “intermediate” and “introductory/awareness.” Overall, it appears the majority of training is being received via collaborative efforts within the school system.

Research question two focused on professional development experiences of the participants, specifically in the area of collaboration and teaching strategies. When the participants were asked to identify which methodologies for working with children with ASD that they had received training on three respondents chose the options presented to them which were among the six most common and relevant methodologies discovered in the literature review. Collaboration was divided into collaboration with special education teachers and collaboration with others in the educational setting. Echoing the results of research question one, collaboration within the school system seemed to be the overall biggest resource perceived by regular education teachers in properly educating children with ASD. Finally, teaching strategies were broken into communication, positive environment, and scheduling as these topics came about through survey and focus group responses.

Research question three sought to measure the perceptions of efficacy of regular education teachers in their ability to educate children with ASD. Overall, the sense of preparedness, confidence, and effectiveness was low among respondents with no
participant rating in the “highly” category for all three perceptions. The overall feelings of minimal resources and training were identified in the qualitative findings of research question three.

Chapter Five presents a summary of the findings of the study as well as the limitations of the study. The implications and recommendations for future research are also included.
CHAPTER FIVE

DISCUSSION

Introduction

Autism Spectrum Disorders (ASD) are on the rise as the numbers have climbed to 1 in 88 United States children being diagnosed on the spectrum in 2012 (Centers for Disease Control and Prevention, 2012). Students with ASD are increasingly walking through the doors of regular education classrooms as inclusion laws require all students the right to learn alongside their peers. Inclusion refers to “the process by which educators provide appropriate supports and services to students with disabilities in the least restricted environment, namely the general education classroom” (Dukes & Lamar-Dukes, 2009, p. 17). Inclusion laws have required an increase in collaboration and efficacy within regular education teachers as they tackle the challenge of teaching students with wide ranges of abilities in their regular education classrooms (Cahill & Mitra, 2008; Singh, 2007). Inclusion requires regular education teachers to be collaborative, prepared, and effective. Students diagnosed with ASD deserve teachers properly educated to meet their individualized needs.

The purpose of this study was to identify the perceptions of needs of regular education teachers in regards to educating children with ASD. Information was gathered on experiences of regular education teachers 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.

In this chapter, the summary of the findings based off the data analysis in Chapter Four will be presented for each of the three research questions. Next, a discussion section
will provide an understanding of the study’s results. The study’s limitations will then be addressed followed by the implications for practice. Finally, recommendations for future research will be listed.

**Summary of Findings**

**Research Question One**

Research question one asked to identify experiences of regular 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 regular 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 regular 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 regular 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. Regular 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 regular education classroom.

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 regular 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.
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 regular 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 regular 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 regular 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 regular 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.

Integration of Findings

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 14 provides an overall explanation of the quantitative findings. Survey questions were utilized to identify preservice preparation, professional development experiences, and efficacy levels of regular 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 14

Summary of Quantitative Findings for the Study

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are the experiences of regular education teachers in the areas of preservice</td>
<td>Majority of participants identified nine or less credits in special education</td>
</tr>
<tr>
<td>preparation related to inclusion of students with ASD?</td>
<td>Three-fourths of participants identified collaboration as their main source of ASD support</td>
</tr>
<tr>
<td></td>
<td>Majority of participants selected “introductory/awareness” as their formal level of ASD training</td>
</tr>
<tr>
<td>What are the professional development experiences of regular education teachers in</td>
<td>Majority of participants stated they had educated three or less students with ASD in their teaching</td>
</tr>
<tr>
<td>the areas of teaching strategies and collaboration pertaining to inclusion of</td>
<td>careers</td>
</tr>
<tr>
<td>students with ASD?</td>
<td>Three participants had knowledge of current best practices for educating children with ASD</td>
</tr>
<tr>
<td>What are the levels of efficacy experienced by regular education teachers in</td>
<td>Participants felt the supports received for educating students with ASD met their needs “most of</td>
</tr>
<tr>
<td>teaching students with ASD?</td>
<td>the time”</td>
</tr>
<tr>
<td></td>
<td>Majority of participants felt “minimally qualified” or “not qualified”</td>
</tr>
<tr>
<td></td>
<td>Almost half of participants felt “minimally confident” to “not confident”</td>
</tr>
<tr>
<td></td>
<td>Three-fourths of participants felt “adequately effective” to “minimally effective”</td>
</tr>
</tbody>
</table>
Table 15 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 regular 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 regular education teachers and successful teaching strategies were identified. Finally, additional needs were acknowledged for regular education teachers to properly educate students with ASD.

Table 15

Summary of Qualitative Findings for the Study

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

Autism Spectrum Disorders include Autistic Disorder, Asperger’s Disorder, and Pervasive Developmental Disorders-Not Otherwise Specified, Rett Syndrome and Childhood Disintegrative Disorder (Gerdts & Bernier, 2011; Ryan et al., 2011). Each disorder within the ASD has its own characteristics and learning abilities. Within each disorder, individual children with ASD can vary between characteristics portrayed through the disorder. Characteristics include social awkwardness, communication delays, and unpredictable behaviors (Tonge & Brereton, 2001). The population of children being diagnosed with an ASD in the United States has grown from 1 in 110 in 2006 to 1 in 88 in 2012 (Bower, 2011; Centers for Disease Control and Prevention, 2012). In 1975, the least restricted environment was established to increase the time disabled students were to be taught in the regular education classroom (Keogh, 2007). Following suit, inclusion laws require these students to be included in the regular education classroom as much as possible with their peers (Dukes & Lamar-Dukes, 2009; Singh, 2007).

Previous studies have addressed teacher qualifications to follow inclusion laws. In one past study, the preparedness for educators in meeting the inclusion laws was addressed (Cooper, Kurtts, Baber, & Vallecorsa, 2008). In this study, a survey was created and utilized focusing on inclusion requirements. The study was conducted in part due to the curiosity of a superintendent on the preparedness of his teachers in educating diverse learners. Teacher perceptions were charted and analyzed for future training opportunities. This previous study was similar in purpose to this current study, yet the emphasis was shifted from inclusion to a more specific disorder, Autism Spectrum
Disorders. The findings were similar in the majority of participants in both studies felt an overall minimal level of preparedness for educating children with ASD.

Another past study also addressed the qualification of regular education teachers in meeting inclusion laws. Buell et al. (1999) conducted a similar study to identify perceptions of regular education teachers. Teachers were questioned on their ability to positively affect students, understanding of inclusion, self-efficacy in serving students in inclusive settings, need for in-service training, and availability of supports to promote inclusion. This study and the current study had similar themes throughout. The research questions were similar as the focus was on training and efficacy. Overall, both studies found a deficient of training to be a primary barrier to educating students in an inclusion setting.

Another past study focused on the inclusion of children with ASD through the TEACCH program, which was found in the literature review to be one of the six common and relevant teaching strategies for educating students with ASD. Panerai et al. (2009) utilized multiple inclusive educational settings to observe how students with ASD were engaging. Positive outcomes were recorded, yet mere inclusion in the regular education classroom was noted as insufficient. This study was similar to the current study in the focus on inclusion, yet the location of Panerai et al. (2009) was not limited to only a public school setting. Both studies found that having a proper knowledge and understanding of inclusion and ASD were crucial for success.

Though limited, the results of this study have added to the current research conducted on ASD and the educating of students with ASD. The small sample size did not deter from the large response of scarce preservice preparation, missing professional
development, and low levels of efficacy identified by the participants. The participants portray a small sample of regular education teachers wanting to meet the educational needs of the growing population of students with ASD.

**Limitations**

Several limitations were noted in the study which limited the generalizability of the findings. These limitations must be acknowledged and examined. Time, sample size and location, response rate, and interpretations of the findings were identified as limitations within the study.

Time constraints were evident throughout the study as the researcher surveyed participants and conducted a focus group to gather both quantitative and qualitative data to fit the allotted time schedule. Validity and reliability were considered as the researcher gained permission to modify a previously created, piloted, and administered survey to gather quantitative data (Mertens, 2005).

The sample size and location were also limitations in the study. The sample size was limited with 16 participants in the survey and 15 total participants in the two focus groups. The sample for the study was narrowed to third, fourth, and fifth grade regular education teachers in the Logan-Rogersville R-VIII School District in Southwest Missouri, thereby decreasing the generalization of the findings. Convenience sampling was utilized as the researcher was situated within the school district (Mertens, 2005). Another limitation included in the size of the sample was the limited number of children with ASD the sampled teachers had personally educated.
The response rate was limited as 16 of the 19 participants asked to return the survey succeeded in doing so. Participation was optional, and of those who did choose to participate, answering all survey and focus group questions was not required. This resulted in varying number of cases within the study tables and findings.

The findings from the qualitative focus groups can be interpreted in various ways (Krueger & Casey, 2009). The researcher had to guard against bias feelings and trust all responses on the survey and focus groups were accurate to the knowledge of the participants. Identifying bias feelings and allowing them to drive the purpose of the study but not become a focal point during surveying and the focus group questioning were optimal for the proper interpretation of the findings (Creswell, 2009; Krueger & Casey, 2009; Mertens, 2005).

Implications for Practice

The purpose of this study was to identify the perceptions of needs of regular education teachers in regards to educating children with ASD. Information was gathered on experiences of regular 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 regular 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 unbefitting to the increasing
number of students with ASD in the regular 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 have prepared educators to meet the needs of this population.

Research question focused on an overall need for regular education teachers to collaborate with special education teachers and other school personnel to educate children with ASD. This collaboration was noted as regular 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). Regular 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 regular 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 regular 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 regular 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 regular 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, the administration at Logan-Rogersville R-VIII School District can use this gathered data to increase the training provided to their teachers in the area of ASD. The teachers are needing training and eager to learn. Professional development opportunities would be warmly accepted by those surveyed, which can be generalized to the entire district. Current teachers can offer to present successful strategies, and collaboration can ensue to increase the knowledge of all educators in the district.

**Leadership Implications**

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 regular 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 regular education teachers can be supplemented by educational leaders through increased professional development opportunities within the schools to educate regular 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 regular 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. Regular 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 regular educators to create an environment conducive of learning for students with ASD.

Recommndations for Future Research

This study focused on the perceptions of teachers regarding teaching children with ASD in regular education classrooms. A focus on preservice training, professional development, and efficacy laid the groundwork for the study. The research questions focused on experiences and of regular education teachers in these three areas with some emphasis on collaboration and teaching strategies. Overall, the experiences of the participants aided the researcher in identifying the needs of regular education teachers to better serve the growing population of students with ASD.

A recommendation for future research would be to increase the sample size and narrow the focus to educators with a wide range of experiences with students with ASD. This study was narrowed to a sampling without knowing the extent to which the participants had engaged in educating students with ASD, and the result was a limited experience base.
Another recommendation for future research would include a wider participant base. This study took place in one location, a small Southwestern Missouri school district. It took into account the population of students with ASD in just this one area. In the future, surveying multiple schools in a wider range of areas would be beneficial to identify patterns.

Studies show an increase in ASD in specific states and areas (Centers for Disease Control and Prevention, 2012). A relevant future research study would include surveying and studying these areas to determine any factors as to why they have higher percentages of children with ASD compared to other places.

A follow up study at the Logan-Rogersville R-VIII School District would also be a recommendation for future research. Once the findings were presented, did the district begin to implement professional development opportunities focusing on educating teachers on ASD?

This study aided in the increasing research on Autism Spectrum Disorders, specifically in educating students within the spectrum. The emphasis on identification of regular education teachers’ needs played a role in increasing awareness of how to amplify the educational benefits to students with ASD. This study laid the groundwork for providing specialized professional development opportunities to make these educators more prepared, confident, and effective.
References


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Stories of inclusion, change, and renewal (pp. 16-37). New York, NY: Teachers College Press.


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moderate and severe disabilities in extracurricular and community recreation

intelligent children with Asperger’s disorder and those with pervasive
development disorder not otherwise specified. *Psychiatry and Clinical
Neurosciences, 62*, 691-696.


gestures/signs in teaching receptive language skills to children with autism.

*Educational Sciences, Theory, & Practice, 11*(3), 1436-1444.

Improving learning outcomes in the inclusive classroom: Practical strategies and

Loreman, T. (2007). Seven pillars of support for inclusive education: Moving from


Robinson, V. M. J., & Timperley, H. S. (2007). The leadership of the improvement of


1. Your primary role is
   ___ Process Coordinator
   ___ Special Educator
   ___ Regular Educator
   ___ Administrator

2. How many years have you been an educator? _____ years

3. The primary grade level that you service is:
   ___ Pre-school
   ___ Elementary
   ___ Junior High/Middle School
   ___ High School
   ___ Other __________________________

4. How many college credits did you take toward educating students with special needs to receive your teaching certificate?
   ___ 0-3
   ___ 4-9
   ___ 10-12
   ___ 12+

5. If you know, please indicate approximately how many students in your district have Autism Spectrum Disorders. _______

6. How many students with Autism Spectrum Disorders have you had personally in your classroom during your teaching career?
   ___ 0-3
   ___ 4-9
   ___ 10-12
   ___ 12+

7. Typically, how many students with Autism Spectrum Disorders do you have in your classroom each year?
   ___ 0-3
   ___ 4-9
   ___ 10-12
   ___ 12+
8. Check each division within your district where you believe you have high quality programs for children with autism that could be an example for others: (check all that apply)
   __Preschool/Early Childhood
   __Elementary
   __Middle School
   __High School
   __Other: ____________

9. If you know, please indicate how many staff members are designated to exclusively serve children with Autism Spectrum Disorders in your district. __________

10. Where do you access support when you need training, resources, or assistance with children with Autism Spectrum Disorders? (check all that apply)
    __In-district specialist (IDAC or MAC or other trained specialist)
    __Out of district specialist (IDAC or MAC or other trained specialist)-from neighboring district
    __External consultant or Specialist from Public/Private Agency
    __Collaboration with Special Education teacher in your building
    __Collaboration with other regular education teachers within your building
    __Other: ______________

11. Have the resources from the responses you identified above been sufficient to meet your needs?
    __yes, all of the time
    __yes, most of the time
    __no, or not consistently

12. How prepared do you feel in educating children with Autism Spectrum Disorders in your classroom?
    __Highly qualified
    __Moderately qualified
    __Somewhat qualified
    __Minimally qualified
    __Not qualified

13. Rate your sense of confidence in educating children with Autism Spectrum Disorders in your classroom:
    __Highly confident
    __Moderately confident
    __Somewhat confident
    __Minimally confident
    __Not confident
14. Rate your sense of effectiveness in educating children with Autism Spectrum Disorders in your classroom:
   __Highly effective
   __Moderately effective
   __Adequately effective
   __Minimally effective
   __Not effective

15. Which best describes the level of your formal autism training?
   __Advanced
   __Intermediate
   __Introductory/awareness

16. If an ONLINE course entitled “Introduction to Autism” was available at no charge, would you take it?
   __Yes
   __Maybe
   __No

17. If a professional development opportunity was offered within your district entitled “Introduction to Autism” at no charge, would you take it?
   __Yes
   __Maybe
   __No

18. Indicate methodologies for which you have received training: (check all that apply)
   __Developmental, Individual-Difference, Relationship-Based Model (DIR)
   __Discrete Trial Training (DTT)
   __Applied Behavior Analysis (ABA)
   __Picture Exchange Communication System (PECS)
   __Social Stories
   __Treatment and Education of Autistic and Communication related handicapped Children (TEACCH)
   __Other: ____________________

19. From where have staff members received training on various methodologies for educating students with Autism Spectrum Disorders? (check all that apply)
   __Part of a Preparatory Program (Undergraduate or Graduate)
   __Project ACCESS
   __Regional Professional Development Center
   __MU Thompson Center
   __Local University/College
   __MPACT-Missouri Parent Training Act
   __Private or Public Agencies (local or state)
   __National Training Providers
20. If you have received training on teaching strategies for properly educating children with Autism Spectrum Disorders, please rate your satisfaction with the training:

__Very Satisfied
__Satisfied
__Dissatisfied
__Very Dissatisfied

21. Check each division within your district where you believe you need additional programming/training in order to better serve children with autism? (check all that apply)

__Preschool/Early Childhood
__Elementary
__Middle School
__High School
__Other: _______________

22. What additional resources related to identifying and/or servicing students with Autism Spectrum Disorders do you believe are needed in your district?

________________________________________________________________________
________________________________________________________________________

23. Please describe any collaboration you have had with a special education teacher to properly educating students with Autism Spectrum Disorders in your classroom.

________________________________________________________________________
________________________________________________________________________

24. What is a strategy you have used within your classroom that was successful in properly educating students with Autism Spectrum Disorders?

________________________________________________________________________
________________________________________________________________________

25. Describe an experience(s) you have had with (a) child(ren) with Autism Spectrum Disorder in your classroom.

________________________________________________________________________
________________________________________________________________________
APPENDIX B

INFORMED CONSENT LETTER:

AUTISM NEEDS ASSESSMENT SURVEY - REVISED

Dear Research Participant:

Thank you for considering participation in this research study, Autism Needs Assessment Survey-Revised. It is being conducted in partial fulfillment of the requirements for the Doctor of Education Degree in Educational Leadership and Policy Analysis at the University of Missouri-Columbia.

The purpose of this study is to identify perceptions and experiences with Autism Spectrum Disorders within the classroom of regular education teachers. The goal of the study is to create an action plan addressing the findings of the project to provide timely information to educators and administrators as the number of children with Autism Spectrum Disorders increases in the classroom.

Before you make a final decision about participation, please read the following about how your input will be used and how your rights as a participant will be protected:

• Participation in the study is completely voluntary. You may stop at anytime.
• You need not answer all questions.
• Your answers will be kept confidential. Results will be presented in summary form only, without names or other identifying information.
• You will be participating in a survey which would last no longer 15 minutes.
• The data collected will be held in a locked file cabinet in the researcher’s offices and disposed of seven years after the conclusion of the study.

Survey Procedure: The survey will be conducted using Survey Monkey. Questions you will be asked focus on the demographics, teacher perceptions and experiences, and Autism Spectrum Disorders.

If you are interested in participating and assisting with this research study, please fill out the consent form on the following page. Keep this page for your reference. Thank you for your time and consideration.

Sincerely,

Natalie Precise
(417) 880-9076
nprecise@logrog.net
Informed Consent Form: Autism Needs Assessment Survey-Revised

I am informed of this survey aimed at evaluating the current level of understanding of Autism Spectrum Disorders conducted by Natalie Precise, a doctoral student at the University of Missouri-Columbia.

I understand:

My participation in the study is completely voluntary.
I may stop participation at any time.
I do not have to answer all questions.
My answers will be kept confidential.
The survey will take approximately 15 minutes.
All data collected will be kept secure, and then disposed of seven years after the study is completed.

I have read the information above; my questions have been answered to my satisfaction. I agree to participate in the survey.

__ Yes, I agree to participate in the study.
__ No, I do not agree to participate in the study.

Date: ________________________________
INTRO:

Greetings, thank you for taking part in my Autism Needs Assessment focus group. My name is Natalie Precise, and I will be serving as moderator tonight while I take filed notes and record our discussion. I am an MU student working on my Educational Leadership and Policy Analysis Doctorate Degree. This focus group is a part of the data gathering stage for my dissertation. Today I will be asking a series of questions about your experiences with Autism Spectrum Disorders. The purpose of this study is to identify perceptions and experiences with Autism Spectrum Disorders within the classroom of regular education teachers. The goal of the study is to create an action plan addressing the findings of the project to provide timely information to educators and administrators as the number of children with Autism Spectrum Disorders increases in the classroom.

I will begin by asking a question and whoever wants to answer first can and other participants can chime in as they see fit. This focus group is not an interview, but a discussion of your experiences as a teacher of children with Autism Spectrum Disorders. Once again, thank you for your participation, and I hope you enjoy this experience.

CONCLUSION:

Thank you for your time.
FOCUS GROUP QUESTIONS

Group dynamics: Third, fourth, and fifth grade teachers in the Logan-Rogersville R-VIII School District in Southwest Missouri.

1. Tell me your name and how long you have been an educator.

2. About how many students have you had in your classroom with Autism Spectrum Disorders (ASD) in your teaching career?

3. What training have you received to educate students with ASD in your classroom?

4. What programs could your school administrators provide to aid you in educating students with ASD in your classroom?

5. Have you collaborated with a special education teacher to educate students with ASD in your classroom? If so, in what ways?

6. What is a strategy you have used within your classroom that was successful in educating students with ASD?

7. What is a strategy you have used within your classroom that was not successful in educating students with ASD?

8. If a professional development opportunity for teaching strategies for children with ASD was provided at your school, would you participate?

9. Besides the questions I have asked, is there anything I have missed concerning the teaching of ASD students in the regular classroom?
10. Are there any final comments you came wanting to share and didn’t have a chance to say?
<table>
<thead>
<tr>
<th>Question</th>
<th>Field Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tell me your name and how long you have been an educator.</td>
<td></td>
</tr>
<tr>
<td>2. About how many students have you had in your classroom with Autism Spectrum Disorders in your teaching career?</td>
<td></td>
</tr>
<tr>
<td>3. What training have you received to properly educate students with Autism Spectrum Disorders in your classroom?</td>
<td></td>
</tr>
<tr>
<td>4. What programs could your school administrators provide to aid you in properly educating students with Autism Spectrum Disorders in your classroom?</td>
<td></td>
</tr>
<tr>
<td>5. Have you collaborated with a special education teacher to properly educating students with Autism Spectrum Disorders in your classroom? If so, in what ways?</td>
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<tr>
<td>6.</td>
<td>What is a strategy you have used within your classroom that was successful in properly educating students with Autism Spectrum Disorders?</td>
</tr>
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<td>Are there any final comments you came wanting to share and didn’t have a chance to say?</td>
</tr>
</tbody>
</table>
APPENDIX D

FOCUS GROUP CONSENT FORM

Dear Research Participant:

Thank you for considering participation in this research study, Autism Needs Assessment Focus Group. It is being conducted in partial fulfillment of the requirements for the Doctor of Education Degree in Educational Leadership and Policy Analysis at the University of Missouri-Columbia.

The purpose of this study is to identify perceptions and experiences with Autism Spectrum Disorders within the classroom of regular education teachers. The goal of the study is to create an action plan addressing the findings of the project to provide timely information to educators and administrators as the number of children with Autism Spectrum Disorders increases in the classroom.

Before you make a final decision about participation, please read the following about how your input will be used and how your rights as a participant will be protected:

- Participation in the study is completely voluntary. You may stop at anytime.
- You need not answer all questions.
- Your answers will be kept confidential. Results will be presented in summary form only, without names or other identifying information.
- You will be participating in an in-depth focus group discussion which would last no longer than 1 hour.
- An audiotape will be used to record the focus group for transcriptions and will be disposed of seven years after completion of the study.
- The data collected will be held in a locked file cabinet in the researcher’s offices and disposed of seven years after the conclusion of the study.

Focus Group Procedure: You will be with a group of 5-10 other people. The duration of the focus group will be limited to 1 hour. Questions you will be asked focus on demographics, teacher perceptions and experiences, and Autism Spectrum Disorders. The focus group will be audio taped.

If you are interested in participating and assisting with this research study, please fill out the consent form on the following page. Keep this page for your reference. Thank you for your time and consideration.

Sincerely,

Natalie Precise
(417) 880-9076
nprecise@logrog.net
Informed Consent Form: Autism Needs Assessment Focus Group

I am informed of this survey aimed at evaluating the current level of understanding of Autism Spectrum Disorders conducted by Natalie Precise, a doctoral student at the University of Missouri-Columbia.

I understand:

My participation in the study is completely voluntary.
I may stop participation at any time.
I do not have to answer all questions.
My answers will be kept confidential.
The focus group will take approximately 1 hour.
The focus group will be recorded with an audiotape.
All data collected will be kept secure, and then disposed of seven years after the study is completed.

I have read the information above; my questions have been answered to my satisfaction. I agree to participate in the focus group.

__ Yes, I agree to participate in the study.
__ No, I do not agree to participate in the study.

Date: ______________________________________
APPENDIX E
CONSENT FROM SUPERINTENDENT OF PARTICIPATING SCHOOL

**Date:** Thu, 29 Mar 2012 08:08:19 -0500 [03/29/2012 08:08:19 AM CDT]

**From:** Jeremy Tucker <jtucker@logrog.net>

**To:** nprecise@logrog.net

**Subject:** Re: Dissertation

Thanks for the email and update on your progress to date. Feel free to survey teachers and use the district's name in your study. Please let me know if there is anything that I can do to help you out along the way.

Sincerely,

M. Jeremy Tucker, Ed.D.
Superintendent
100 East Front Street
Rogersville, MO 65742
Phone: 417.753.2891
Fax: 417.753.3063
VITA

Natalie Louise Precise is currently a math intervention teacher. Prior to this position, she was a fifth grade math teacher for seven years. She is currently exploring working as an adjunct professor at the collegial level. Her life long goal is to educate future teachers in order to reach more children.