

2017

# Effective Educational Practices Regarding General Education Teachers and Inclusion of Students With Autism

Chanda Rhodes Coblentz  
*Walden University*

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Chanda Rhodes-Coblentz

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## Review Committee

Dr. Melda Yildiz, Committee Chairperson, Education Faculty

Dr. Charla Kelley, Committee Member, Education Faculty

Dr. Jeanne Sorrell, University Reviewer, Education Faculty

Chief Academic Officer

Eric Riedel, Ph.D.

Walden University  
2016

Abstract

Effective Educational Practices Regarding General Education Teachers  
and Inclusion of Students With Autism

by

Chanda Rhodes-Coblentz

M.S. Ed., Franciscan University of Steubenville, 2003

B.S., West Liberty State College, 1996

Doctoral Study Submitted in Partial Fulfillment  
of the Requirements for the Degree of  
Doctor of Education

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## Abstract

Owing to the influx of students with autism to the general education classroom, the role of the educator has drastically changed. Limited training and negative perceptions among teachers of students with autism are concerning. A qualitative case study, based on Bandura's theory of self-efficacy as a conceptual framework, was used to gather information based on the preservice training and personal classroom experiences from 7 general education teachers who were purposefully selected based on their licensure in the state of Ohio and experience in teaching students with autism. Research questions for this study examined the types of training teachers received, perceptions and attitudes regarding the inclusion of students with autism, and classroom strategies used by teachers. Semistructured interviews with open-ended questions were used to guide the interview process. Data were analyzed through reflection, coding, and identifying prevalent themes. Findings indicated that none of the participants initially felt adequately prepared to teach students with autism but attempted to convey positive attitudes and individualize teaching strategies for each child. Based on these findings, an online course regarding students with autism was developed for preservice teachers. Successful project implementation may increase the knowledge base among teacher candidates in research-based teaching strategies that could potentially improve general teacher perceptions and encourage successful inclusion of students with autism.

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## Dedication

This work is dedicated to my beautiful sons, Preston and Elliot, my miracle and my gift. I am so very excited to complete this doctoral journey, but you, my sweet boys, are my *magnum opus*. I am so thankful to be your mommy. I love you to the moon and back! I hope to inspire you to achieve great things in this world. Keep God first in your lives and follow the plans He has set for you. Always remember, “I can do all things through Christ, who gives me strength.”

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## Section 1: The Problem

### **Introduction**

According to estimates given by The National Institute of Mental Health (2016) and the Center for Disease Control (2016), 1 in 68 children aged 3 to 10 years have been diagnosed with autism. Reported cases of autism are on the rise in the United States, researchers do not know the cause of autism, and physicians have no cure (Christensen et al., 2016; Deisher & Doan, 2015; Kogan et al., 2009; National Institute of Mental Health, 2016). Educators are concerned with helping children and teachers learn strategies to cope with the increased number of children with autism in schools (Rozanna, 2015).

The face of the American classroom changed significantly when autism was introduced as a federal disability category and children with autism were required to be educated in the least restrictive environment (Individuals with Disabilities Education Act [IDEA], 2004; Tutt, Powell, & Thorton, 2006; U.S. Department of Education, 2015). Educators have acquired the responsibility of educating children with autism within the confines of the regular education classroom (Individuals with Disabilities Improvement Act [IDEIA], 2004; Yell, Drasgow, & Lowery, 2005). Students with autism in Ohio increased from 2,543 during the 1999–2000 school year to 19,948 during the 2013–2014 school year (Easter Seals, 2015). During the 2010–2011 academic school year, 42.9% of all children with autism in the state of Ohio, and 39% of all children with autism in the United States, spent 80% or more of their school day in the regular education classroom (IDEA Data Center, 2012).

Students with autism deserve education that teaches improved functioning in society while receiving the appropriate amount of assistance in the classroom (Reupert, Deppeler, & Sharma, 2015; Yell et al., 2005). However, students with autism present specific challenges and hurdles for the general education teacher within the inclusion classroom (Dillenburger et al., 2015). Many teachers tend to be afraid to teach children with autism because of their lack of knowledge and a lack of support among administrators (Cambridge-Johnson, Hunter-Johnson, & Newton, 2014). Few teachers, even those with a special-education background, were specifically trained in their undergraduate work to manage students with autism (Abl et al., 2015; Godek, 2008; Harding, 2009; Leko & Brownell, 2009; Probst & Leppert, 2008). This lack of training contributes to fear and frustration amongst teachers.

Few data exist regarding the formal training of teachers in scientifically based practices for children with autism (e.g., Brock et al., 2014; Corkum et al., 2014). Many researchers (e.g., Corkum et al., 2014; Taliaferro & Harris, 2014) have suggested that teachers who have received extensive and high-quality preservice training achieve the most success in their teaching. As of this writing, however, only six states offered an autism endorsement for undergraduate students: Delaware, Florida, Michigan, Nevada, Pennsylvania, and West Virginia (Pennsylvania Department of Education, 2015; Whitmer, 2013). Many preservice teachers have not received specific training to educate children with autism in the regular classroom. Individual school districts are needed to provide additional in-service training to teachers (Barnhill, Hooloway, & Sumutka, 2011; Odom, Cox, & Brock, 2013; Scheuermann et al., 2003). Throughout the United States,

teachers trained in scientifically based practices for educating children with autism are needed (Hart & Malian, 2013; Simpson, 2005, Tincani et al., 2013).

Educators may be more willing to include students with disabilities such as autism into their classes if they receive training before they become licensed teachers (Sharma, Simi, & Forlin, 2015; Sharma, Forlin, & Loreman, 2007). Many teachers are ill equipped and unprepared to teach a diverse population including students with special needs such as autism (Futrell, Gomez, & Bedden, 2003; McCrimmon, 2015). Preparing highly qualified educators can assist students with autism to make progress in the classroom, especially in view of the Common Core State Standards, which children with autism are expected to meet (Constable et al., 2013; Wolfberg, LePage, & Cook, 2009).

*Inclusion*, a common term in schools, has been defining the face of education (Causton-Theoharis & Theoharis, 2008; Majoko, 2016). The practice of inclusion has existed in U.S. legislation and in most U.S. classrooms since the mid-1980s. However, only since the early 21st century have schools been widely including children with autism in the regular education classroom (Causton-Theoharis & Theoharis, 2008; Humphrey, 2008; Mintz, 2008; Roberts & Simpson, 2016; Watson et al, 2015).

Many theorists (e.g., Causton-Theoharis & Theoharis, 2008; Chandler-Olcott & Kluth, 2009; Dillenberger, et al., 2015) have suggested that inclusion is more thinking than a practice. The theory of inclusion is built on the notion that all students are valuable and have much to gain and contribute from the general education setting. Successful inclusion is not a process that can happen simply because of federal mandates. Instead,

successful inclusion is a planned process that must be willingly accepted by teachers and supported by all support staff involved (Burstein et al., 2004).

### **Definition of the Problem**

For inclusion to be successful, teachers unfamiliar with teaching children with autism must make a major shift in attitude and perception (Chung, Edgar-Smith, & Palmer, 2015; O'Rourke, Main, & Cooper, 2008). Teacher attitudes can play a critical role in the academic and social success of the students, especially when children have been diagnosed with a disability such as autism (Amanda & Barnes-Holmes, 2013; Bain, Brown, & Jordan, 2009). In explaining negative attitudes, teachers have cited reasons such as unfamiliarity with characteristics of children with autism, preconceived ideas, and observable challenges in the classroom setting (Razali et al., 2013). Positive teacher attitudes have been linked with teacher training and readiness to accept the challenges of educating children with autism (Razali, 2013). With proper training, easily implemented strategies, and sufficient support, educators may find a measure of success of including students with autism (Leblanc, Richardson, & Burns, 2009; Leko & Brownell, 2009; Sainato et al., 2015).

Educators need to receive adequate training in methods of including children with autism (Bruce et al., 2010; Wong et al., 2013). Training may help eliminate some of the fears and negative attitudes toward these children and the entire process of inclusion (Leblanc et al., 2009; Long, 2008). When teachers are equipped to deal with the difficulties of teaching students with special needs, misconceptions and negative attitudes may dissipate (Futrell et al., 2003; Jobling & Moni, 2004). Using an array of behavioral

strategies and teaching methods may allow these teachers to educate children with autism in the general education classroom more effectively and achieve some level of success (Gehrke & Cocchiarella, 2013; Sansoti & Sansoti, 2012).

The role of the classroom teacher has changed substantially since the implementation of the IDEA in 1992 and has changed even further since the IDEA was revised in 2004. Teachers need additional time for lesson planning and preparation so that assignments and assessments can be modified to accommodate the learner with autism (Finke, McNaughton, & Drager, 2009). Because of behavioral issues, increased noise level and disruptions, and extra personnel in the classroom, the classroom environment is changing so rapidly that administrators and teachers alike are calling for preservice teacher training for children with autism to address issues that will affect the inclusion teacher (Finke et al., 2009).

Many teachers are insecure and stressed because of the influx of special needs students into the classroom. These feelings may create a negative attitude toward these students and to teaching in general (de Boer et al., 2014; Harding, 2009). Individuals responsible for developing preservice educator programs and courses are encouraged to take responsibility for exposing new general and special education teachers to children with disabilities early in the teachers' careers and providing these teachers with teaching strategies. In this way, the teachers will be more confident in their skills, making negative feelings less likely (Blacher, Linn, & Zeedyk, 2014).

In the United States, teacher education programs in 45 states require that preservice general education teachers complete classes in which the subject of students

with disabilities is covered (Sobel, Iceman-Sands, & Basile, 2007). However, the curricula of these classes tend to be broad, giving little attention to specific disabilities such as autism (Ashworth, 2016; Moss, 2008). Preservice teachers are, therefore, not adequately prepared (Kramer et al., 2008).

The amount and type of training teachers receive have been noted to influence the effectiveness of inclusion (Bradshaw & Mundia, 2006; Sharma et al., 2007). To provide children with autism a high-quality education, the lack of training for teachers is a significant barrier (Dymond, Gilson, & Myran, 2007; Kantavong & Sivabaedya, 2010). Teachers who attend in-service training and autism workshops have demonstrated positive attitudes to the inclusion process and to students with autism (Park & Chityo, 2009). Furthermore, according to the National Research Council (2001), teachers receive little, if any, formal preservice training in evidence-based practices for children with autism. This lack of training in evidence-based practices continues to be a problem in U.S. schools, given that the enrollment of children ages 6 to 21 years diagnosed with autism rose from 5,000 students in 1992 to 231,165 students in 2012, according to the U.S. Census (U.S. Department of Education, 2012).

### **Rationale**

Problems exist in schools in northeast Ohio regarding the inclusion of children with autism in the regular classroom. Schools in northeast Ohio have seen a significant increase in the number of students with autism enrolled in local school districts (Matas, 2014). The Ohio Department of Education (2012) reported that 42.9% of students with autism spent more than 80% of their day in the general education classroom, whereas

19.1% spent 40% to 79% of their day and 26.1% spent less than 40% of their day in the general education classroom. In a recent study of 18 elementary teachers of students with autism in Ohio, only eight reported feeling adequately prepared to teach the students (Wortman, 2013). Discussions regarding teacher preparedness within the education department at my university have also prompted the investigation of local teachers and their perceptions of preparedness.

Many resources are in demand, such as further funding for services and for increased teacher training. Many teachers are ill equipped to teach children with this type of disability and may have negative perceptions owing to inexperience regarding the inclusion of children with autism into the classroom (Bain et al., 2009; Chandler-Olcott & Kluth, 2009; Greenway, 2000; Hayes, 2015; Leatherman, 2007; Scheuerman et al., 2003). Currently, many school districts offer on-site, in-service training programs and staff meetings to address the education of students with autism (Harding, 2009; Mueller & Brewer, 2013). However, these limited training sessions may not equip teachers to effectively meet the specific needs and challenges of teaching children with autism (Leko & Brownell, 2009; Tasneem & Paulson, 2015). Children with autism require extra attention, alternative assignments and assessments, and behavioral strategies that many teachers are not prepared to handle (Simpson, 2005; Bullard, 2004; Iovannone, Dunlap, Huber, & Kincaid, 2003; Safran, 2002).

Many possible factors contribute to this problem including the lack of teacher training and negative perceptions of children with autism (Colombo- Dougovito, 2015; Dahle, 2003; Ingersoll, Jenkins, & Lux, 2014; Leatherman, 2007; Lindsey, Proulx,

Thompson, & Scott, 2013; Mueller, 2005; Sobel et al., 2007). My study will contribute to the body of knowledge needed to address this problem by suggesting possible reasons for ineffective inclusion and suggesting ways to better equip teachers in northeast Ohio, and throughout the United States, to educate children with autism in the most effective way.

During the 2010–2011 school year, the number of children with autism who were served through disability services reached more than 400,000 (U.S. Department of Education, 2013). As a college professor in the state of Ohio, I have been made profoundly aware of the need to educate preservice teachers in the subject of autism inclusion. Administrators from four local school districts in the northeast region of Ohio report that the percentage of students with autism in the classroom now ranges from 1% to 15% of the entire school population. One local administrator, who wished to remain anonymous, asked me to allow her to read this proposed study upon completion and to notify her of any significant findings. She said that with 15% of all students in the district falling within the range of an autism diagnosis, she is desperate for any assistance available (anonymous, personal communication, July 2014). Teachers in the previously mentioned district are frustrated and are not prepared to deal with so many children with type of disorder in the regular classroom. This particular district provides some training for teachers, but they are finding teachers to still be ill equipped to deal with such a high percentage of children with autism included in their classrooms. These teachers educate children with other disabilities as well. Classrooms throughout the United States are being inundated with students diagnosed with the disorder, yet most teachers do not have the training required to successfully include children with autism into the classroom.

Projections regarding the growth of autism in Ohio also reveal a steady increase in the incident rate. Public schools in Ohio ultimately need to address this issue.

Research has supported the need for further training of general education teachers of students with autism (Debettencourt, 2013; Sansoti & Sansoti, 2012). In this study, I extended the current research for professionals in northeast Ohio by providing insight to school administrators and educator preparation programs regarding the amount and types of preservice training teachers have received and how it affects the attitudes and perceptions of classroom teachers and their personal experiences in teaching students with autism. The online course that was developed based upon the results of this study will extend the current knowledge base for classroom teachers regarding the characteristics and needs of students with autism and will provide helpful classroom strategies. This study, therefore, will be beneficial to schools in northeast Ohio that are in need of teachers who are highly qualified with adequate training to teach children with disabilities such as autism and will enable them to find ways to more effectively include students into the general education classroom. My intent in this study was to equip future educators with knowledge regarding autism spectrum disorder and specific strategies that will assist students with autism in the inclusion classroom. Through the proposed online course, teacher candidates will have the opportunity to gain the necessary skills to enable them to become more equipped to deal with the challenges that accompany teaching students with autism. The results of the study will also contribute to the limited number of studies that exist on the topic of teacher preparation for teaching students with autism in the inclusion classroom.

## Definition of Terms

*Autism spectrum disorder*: The result of dysfunction of the central nervous system that leads to disordered development. According to the *Diagnostic and Statistical Manual of Mental Disorders*, 5th edition (*DSM-V-TR*), published by the American Psychiatric Association (2013, p. 50). This new edition made several changes that affect the way autism is diagnosed. Note the following changes, as they affect some of the terminology in standing research:

1. The new classification system eliminates the previously separate subcategories on the autism spectrum, including Asperger syndrome, PDD-NOS, childhood disintegrative disorder, and autistic disorder. These subcategories will be folded into the broad term autism spectrum disorder (ASD).
2. Instead of three domains of autism symptoms (social impairment, language/communication impairment, and repetitive/restricted behaviors), two categories will be used: social communication impairment and restricted interests/repetitive behaviors. Under the *DSM-IV*, a person qualified for an ASD diagnosis by exhibiting at least six of twelve deficits in social interaction, communication or repetitive behaviors. Under the *DSM-5*, diagnosis will require a person to exhibit three deficits in social communication and at least two symptoms in the category of restricted range of activities/repetitive behaviors. Within the second category, a new symptom

will be included: hyper- or hypo-reactivity to sensory input or unusual interests in sensory aspects of the environment.

3. Symptoms can currently be present, or reported in history.
4. In addition to the diagnosis, each person evaluated will also be described in terms of any known genetic cause (e.g. fragile X syndrome, Rett syndrome), level of language and intellectual disability and presence of medical conditions such as seizures, anxiety, depression, and/or gastrointestinal (GI) problems.
5. The work group added a new category called social communication disorder (SCD). This will allow for a diagnosis of disabilities in social communication without the presence of repetitive behavior.

*Free and appropriate public education (FAPE):* Special education and related services that (a) have been provided at public expense, under public supervision and direction, and without charge; (b) meet the standards of the state educational agency; (c) include appropriate preschool, elementary, or secondary education in the state involved; and (d) are provided in conformity with the individualized education program required by PL 105-17, Section 614(d) [20 U.S.C. 1401 (18)].

*Highly qualified teacher:* A teacher of core academic subjects has obtained full state certification as a teacher or passed the state teacher licensing examination and holds a license to teach in such State (No Child Left Behind Act of 2001, 20 U.S.C. 70 § 6301 *et seq.*, 2002).

*Inclusion:* The practice of providing a child with disabilities an education within the general education program with peers without disabilities. Supports and accommodations may be needed to assure educational success in this environment (The Service Guidelines for Individuals with Autism Spectrum Disorder, 2004, p. 80).

*Inclusive setting:* An inclusive setting refers to the full-time placement of children with disabilities in a classroom with typically developing peers (Odom, 2000).

*Individuals with Disabilities Education Improvement Act (IDEIA):* The revised United States federal law that governs how states and public agencies provide early intervention, special education, and related services to children with disabilities. It addresses the educational needs of children with disabilities from birth to age 21 years (Individuals with Disabilities Education Improvement Act, 20 U.S.C. § 1412, 2004).

*Least restrictive environment (LRE):* To the maximum extent appropriate, children with disabilities, including children in public or private institutions or other care facilities, are educated with children who are not disabled (IDEA of 2004, 20 U.S.C. §1412{a} {5} {A}).

*No Child Left Behind Act (NCLB):* A U.S. law initiated in 2001 that dramatically increased the role of the federal government in education. It requires that highly qualified educators use scientifically based practices to ensure that all children, including those attending special education classes, attain academic achievement (NCLB of 2001, 20 U.S.C. 70 § 6301 *et seq.*, 2002).

*Perception:* According to Thomasson (2008), “What qualitative researchers refer to as perception and attitude in the case of teachers or parents is perception based on

critical, informed judgment, *not* raw opinion, which from a philosophical point of view is the lowest form of communication”(p. 43). According to Ian Burkitt (2012), perception is “the ability to see, hear, or become aware of the world through the senses we possess, such as sight, hearing, or touch. It is through the senses that the body perceives something and becomes consciously aware of it. But sense also means to have a feeling that something is the case, to sense it in a way that might be useful for us” (p. 463).

*Self-efficacy*: According to Albert Bandura (1977), self-efficacy is a person’s belief that he or she is capable of completing a task or reaching a goal. Bandura and Wood (1989) suggested that those with high self-efficacy focus on “assessing a problem and finding solutions,” while those who lack self-efficacy “concentrate on their own deficiencies, and become so preoccupied that they can’t devote the necessary attention and skill to the task at hand” (p. 2).

### **Significance of the Study**

With reported cases of autism on the rise, adequately prepared teachers are needed in the inclusion classroom (Blumberg et al., 2013; National Institute of Mental Health, 2015). Concerns about teacher attitudes, preparation, and teacher qualifications have been noted as problems that can interfere with student achievement (Baker, 2012; Scheuermann et al., 2003; Sherman & Ding, 2008; U.S. Department of Education, 2002). The National Research Council (2001) found little data about autism preparation programs and no data about specific training of autism specialists in the United States.

The practice of inclusion is becoming more widespread in the United States and internationally, but many teaching professionals are still unwilling to accept the

appropriateness of this practice in some circumstances (Chung et al., 2015; Yell et al., 2005). The literature suggests that positive attitudes and sufficient teacher training are linked (Avramidis et al., 2000; Engstrand & Roll-Pattersson, 2014; Loi & Allen, 2008; Power & Costley, 2014; Varcoe & Boyle, 2014). I further examined this link in this project study.

This project study contributes to Walden University's commitment to social justice and change owing to the nationwide effect that autism has on teachers and students. To reiterate the urgency of the problem, Congress presented information about the increase of autism by using the state of Ohio as an example. During a 15-year period, the number of students ages 6 to 21 years diagnosed with autism increased by 17,405 (Ohio Department of Education, 2016). The Individuals with Disabilities Education Improvement Act (2004) mandated that students with disabilities receive their education in the least restrictive environment. The least restrictive environment refers to a number of options and services for children with disabilities, including separate special education classes and facilities. However, 37.6% of students with autism ages 3 to 5 years in the state of Ohio receive the majority of their education in the regular education classroom, and 42.9% of all students ages 6 to 21 years receive the majority of their education in the regular education classroom (IDEA.org, 2015).

This project study was necessary owing to the limited published research regarding preservice teacher training regarding students with autism, teacher attitudes about such students, and methods to effectively include students with autism. Acquiring information from educators regarding these specific facets of inclusion will allow the

researcher to gain a better perspective of the inclusion process, thus allowing other educators to gain insight regarding the topic. If the proposed study can effectively communicate to educators the importance of further training, maintaining a positive attitude, and implementing new strategies, then students with autism can be taught in more effective ways, thus allowing them to better function in the classroom and in society.

### **Research Questions**

The purpose of this qualitative research study was to examine (a) the amount of training that general education teachers receive regarding students with autism, (b) teacher perceptions regarding the inclusion of students with autism, (c) various teaching methods and intervention strategies used by general education teachers within the included classroom, and (d) the effects of such on the inclusion process. By using a qualitative research study, I explored the following research questions:

1. In what ways do teachers perceive that they are prepared or unprepared to instruct students with autism?
2. How do teachers believe that their attitudes and perceptions affect the inclusion of students with autism?
3. Which teaching methods and intervention strategies do teachers perceive to be most effective in helping students with autism advance academically and socially in the inclusion setting?

The results of this project study will be used to determine the role that educators play in the inclusion of students with autism. In this study, the importance of teacher

training, teacher attitudes and perceptions, and which teaching methods and intervention strategies are considered to be most effective in allowing students with autism to achieve academic and social success in the inclusion classroom will be examined.

### **Summary**

Autism is on the rise and educators are required to meet the needs of students identified within the spectrum (Bain et al., 2009; Center for Disease Control, 2015; Kogan et al., 2009; Wilkinson, 2005). Research has shown that many teachers feel unqualified to teach these students and rely on methods that are not effective simply owing to frustration or lack of training (Harding 2009; Leblanc et al., 2009; Long, 2008). Teachers need to be given the opportunity to learn effective teaching methods and intervention strategies so they can implement them into their inclusion classrooms (Bullard, 2004; Chandler-Olcott & Kluth, 2009; Leblanc et al., 2009). Children with autism are capable of learning important life skills in the inclusion classroom (Biklen, 2000; Heflin & Alberto, 2001; Humphrey & Parkinson, 2006; Ledford & Wheby, 2015; Safran, 2002). I attempted to expose methods and strategies that have proven to be effective in educating children with autism in the inclusion setting. With proper training and implementation of teaching methods and intervention strategies, teacher attitudes and teaching methods may improve, thus allowing students with autism to achieve academic and social success in the inclusion classroom.

### **Review of the Literature**

The purpose of this project study was to explore how teacher training, teacher attitudes and perceptions, and specific teaching strategies may affect the educational

practices of teachers and the inclusion of children with autism. A focused search of the literature was performed to identify prior research done in the area of autism inclusion.

A review of literature was conducted using several online education, psychology, technology, and social research databases to obtain peer-reviewed journal articles related to the identified topics. Published works related to the training of teachers in the area of autism and educational practices that include children with autism support this literature review. Several books and articles were found in such scholarly journals as *The Journal of Autism and Developmental Disorders*, *Focus on Autism and Other Developmental Disabilities*, *Journal of Applied Research in Intellectual Disabilities*, *Teaching Exceptional Children*, *Behavioral Disorders*, *Educational Psychology*, and a number of other peer-reviewed journals. Several key terms were used in the search for literature, including training of teachers, children with autism, inclusion, inclusion of students with autism, effective educational practices, intervention strategies, teacher perceptions, students with disabilities, federal regulations regarding children with disabilities, teaching methods, and special education.

### **Conceptual Framework**

The conceptual framework of this study was built upon Bandura's Theory of Self-Efficacy (Bandura, 2004; Skaalvik & Skaalvik, 2016). Self-efficacy is a person's belief in his or her abilities to accomplish a particular task (Bandura, 1977). According to Bandura (2004; 2013), past experiences shape a person's accomplishments and belief system about themselves. Vicarious experiences, such as the modeling of other teachers and professors, can shape the behavior of a teacher within the classroom. Coaching and

evaluative feedback can also influence how a teacher will begin to respond in specific situations. These elements can shape a teacher's self-efficacy, and therefore, shape attitude, behavior, and performance in the classroom.

Three concepts that have been most prevalent in this study include the training of educators to teach students with autism through use of the inclusion model, teacher attitudes and perceptions regarding students with autism, and interventions for these students in the inclusion classroom. The concept of self-efficacy is evident throughout the literature review regarding teachers and their perceived ability to effectively educate children with autism in the inclusion classroom. As Bandura's initial work indicated (1977, p. 193), "expectations of personal mastery affect both initiation and persistence of coping behavior. The strength of people's convictions in their own effectiveness is key to affect whether they will even try to cope with given situations". Given this conceptual idea, it can be assumed that many teachers view themselves as capable of effectively including children with autism simply because they believe in themselves to be effective educators. However, Bandura also discussed the idea that simply because one believes that one is capable of performing a task or embracing an idea or attitude, one must possess the initial skills and incentives to be successful and capable.

The movement towards inclusion for students with autism has become very widespread in recent years (Godek, 2008; Humphrey, 2008; Leblanc et al., 2009). The latest statistics report that 120,000 students with autism in the United States receive special services and 88.4% of those students spend some part of their day in the regular classroom (Finke et al., 2009). Legislation emphasizes the importance that all students

with disabilities, including those with autism, have an active place in the general education classroom and make adequate progress in the regular curriculum ((IDEIA: 34 C.F.R. § 300.320(a)(2)(i) {A}; 2004). No Child Left Behind (2002), demanded that states develop assessments to demonstrate that every student in the school district is making adequate yearly progress in academic standards (34 C.F.R. § 200.6). For adequate progress to take place, school districts must be held accountable to educate all students, including those with autism, in the regular classroom (Amos, 2013; Harvey, Yssel, Bauserman & Merbler, 2010).

However, recent reports suggest that only 39.5% of these children are included in the regular education classroom for 80% of the school day (Ferraioli & Harris, 2010; National Center for Educational Statistics, 2016). Some researchers speculate that perhaps an unclear definition and model of inclusion, lack of teacher training, lack of documented evidence supporting positive outcomes, and misconceptions about the disorder may be factors influencing full inclusion of students with autism (Ferraioli & Haris, 2010; Obiakor et al., 2012; Smith, 2007). Other research indicates that educators may be apprehensive about embracing full inclusion due to the amount of time and adaptations required to plan successful lessons for students with autism (Finke et al., 2009; Leblanc et al., 2009; Simpson & Bogan, 2015).

Successful inclusion of children with autism requires an in-depth study of a number of factors, but the role of the educator is the focal point of this proposed study. Several studies indicate the importance of teacher preparation programs regarding students with autism (Harvey et al., 2010; Leblanc et al., 2009; Schueuermann et al.

2003; Varco & Boyle, 2014). IDEA requires that students with disabilities, including those with autism, be provided instruction by highly qualified teachers (34 C.F.R § 300.18). Limited studies exist regarding the knowledge and training of inclusion teachers; therefore, it is speculated that the majority of inclusion teachers may not be well prepared to meet the specialized needs of students with autism (Hughes, Combs, & Metha, 2012; Loiacono & Alen, 2008; Ruble, Dalrymple & McGrew, 2010; Segall & Campbell, 2012; Yang & Rusli, 2012).

Students with autism present many challenges for the inclusion teacher that can interfere with the learning process (Mintz, 2008; Shippen, Crites, Houchins, Ramsey, & Simon, 2005). Behaviors such as rocking, repeating phrases or gestures, aggressive actions, or sudden outbursts impede their learning in the typical classroom and the learning of their peers (Goodman & Williams, 2007). Many inexperienced teachers may exhibit fearfulness and reservation when experiencing such behaviors (Al-Sharbati, 2015; Robertson et al., 2003; Travers & Ayres, 2015). Teachers should be given the training and classroom experience needed to lessen these fears, give them more confidence, and improve their attitudes towards children with autism (Gillespie-Lynch, et al., 2015; Loreman, Forlin, & Sharma, 2007; Tipton & Blacher, 2014).

This conceptual framework based upon Bandura's theory of self-efficacy can be applied to the notion that teachers need to possess adequate skills to educate students with autism (Corkum et al., 2014). These skills may be obtained through traditional college and university preparation programs, through local school in-service opportunities provided for teachers, and through modeling and coaching of more experienced

colleagues. The attitudes and perceptions may be improved based upon such training and experiences, thus improving general dispositions toward all students, but particularly those students with autism who can be viewed as difficult or unmanageable. If teachers then have the skills needed and have improved attitudes based upon more confidence and experience, teachers can begin to implement strategies that are effective within the classroom; thus improving the overall environment of the classroom, improve upon social skills of all students, and perhaps even improve test scores and overall academic achievement (Bandura, 2004; Corkum et al., 2014).

### **Research Regarding Autism Diagnosis, Causes, and Symptoms**

*Autism* was a term introduced by Kanner (1943) to describe socially withdrawn children who experienced delays in spoken language and a preoccupation with routine. Currently autism is a spectrum of neurodevelopmental disorders that includes the three diagnoses of autistic disorder, Asperger's disorder, and pervasive developmental disorder not otherwise specified [PDD-NOS] (Kenny, et al., 2016; Newschaffer et al., 2007; Yirmiya & Charman, 2010). The terms *autism* and *autism spectrum disorder* (ASD) are often used interchangeably. Autism results in abnormal communication and social interaction problems, limited interests, and repetitive behaviors (Schall & McDonough, 2010). The Centers for Disease Control and Prevention (CDC) (2014) have found that 1 in 68 children have an autism spectrum disorder (ASD). The CDC defined *autism spectrum disorder* as "a group of developmental disabilities that can cause significant social, communication and behavioral challenges" (para. 1). The key feature of ASD is the child's inability to interact socially (NIH, 2016). Children with autism differ from

their typically developing peers in how they learn, pay attention and react to different sensations. Children with autism may range from gifted to severely limited in their verbal and social interactions with others. Autism begins before the age of 3 years and lasts throughout a person's life (CDC, 2014).

Researchers have found that causes of autism are associated with genetic and environmental factors. In studies of persons with ASD, researchers found irregularities in several regions of the brain (Rapin & Tuchman, 2008). Other studies (e.g., Redcay & Courchesne, 2008) suggested that abnormal levels of serotonin or other neurotransmitters in the brain could cause ASD. These irregularities and abnormalities suggest that ASD could develop as a result of disruption of normal brain development during fetal development (Courchesne, Campbell, & Solso, 2011). ASD could also be caused by defects in genes that control brain growth and regulate the communication among brain cells. These genetic defects could also be influenced by environmental factors, such as infectious or toxic damage to the central nervous system during a child's early development (Damodaran, Priya & Geetha, 2010).

Most studies of ASD are inconclusive, although researchers tend to believe that genetics are a key influence in ASD (Abrahams & Geschwind, 2008; Amaral, 2011; Cohen et al., 2005; Nakayama & Sato, 2005). Dawson (2008) asserted that autism is a genetic disorder and that it is not caused by drug exposures before and after birth, vaccinations and heavy metals, or infections. Researchers showed that children with autism have physiological sleep abnormalities (Cortesi, Giannotti, Ivanenko, & Johnson,

2010), difficulties with digestion (Cubala-Kucharska, (2010), and compromised immune system functions (Heuer, Ashwood, & Van de Water, 2008).

ASD appears as early as infancy (Bolte, et al., 2014; Wallace & Rogers, 2010). A baby with ASD may not respond to other persons or may focus exclusively on one item for long periods of time. Children with ASD may appear to develop normally, but then they withdraw from social engagement. From a social perspective children with an ASD may avoid eye contact with others; fail to respond to their names; fail to interpret the social cues of others, such as facial expressions or vocal tones; lack empathy; and be unable to play with other children interactively. More outward demonstrations of ASD include repetitive movements such as rocking and twirling and self-abuse such as biting or head-banging. Children with ASD also tend to start speaking later than other children. They may speak in a singsong voice about their own favorite topics with no concern about whether the person to whom they are speaking is interested. They may also refer to themselves by name instead of “I” or “me” (NIH, 2011).

According to *the Diagnostic and Statistical Manual of Mental Disorders*, 5th edition (*DSM-V*) (APA, 2013, p. 50), for children to be diagnosed with autism, they must show at least six developmental and behavioral characteristics before age 3 years. A diagnosis of autism is made if the child demonstrated problems in three broad areas: social interaction, communication, and stereotyped patterns of behavior. Impairment in social interaction is demonstrated by such behaviors as limited eye contact, inappropriate or limited facial expression and body postures; inability to establish relationships with peers; and lack of interest in others. Communication is often impaired in students with

autism. Such impairments may be displayed in speech delay, or the lack of speech, language that is repetitive, and lack of imaginative play alone or with peers. Children with autism will often display repetitive or stereotyped patterns of behavior and a preoccupation and fixation on objects or themes (Carpenter, 2013; Greenspan & Wieder, 2006; Lenne, & Waldby, 2011).

Clinical manifestations of these conditions cover a broad range, which complicates the diagnosis of autism (Lenne, & Waldby, 2011; Silva & Cignolini, 2005). Recently much attention has been focused on developing standardized instruments for diagnosing children with autism, and reliable measures are now available to allow clinicians better diagnose the presence of autism. The measures include the Gilliam Autistic Rating Scale [GARS] (Gilliam, 1995) to identify and diagnose autism in children and young adults aged 3-22 years; the Childhood Autism Rating Scale [CARS] (Schopler, Reichler, DeVellis, & Daly, 1980), which was developed for children aged 2 years and over; and the Autism Diagnostic Interview Revised (Lord, Rutter, & Le Couteur, 1994) for use with children over the ages of 4-6 years.

### **Education of Children With Autism**

As mandated in IDEA (2004), all students with disabilities have the right to receive a free and appropriate education. This education is to occur in the least restrictive environment (LRE). In response to IDEA (2004), the No Child Left Behind Act (2002), and the Every Student Succeeds Act (2015), students with autism are now very visible in the public school setting. Although no exact parameters have been outlined for the inclusion of students with disabilities, the number of students diagnosed within the

autism spectrum placed in the regular classroom has risen drastically (Chandler-Olcott & Kluth, 2009; Linton, et al., 2014). Between 2002 and 2005, the National Center for Education Statistics (2008) indicated that the number of students with autism placed in a regular classroom for at least 80% of the school day increased by 5%. With such an increase of time in the regular classroom, educators need to acquire the necessary skills to provide a quality education for children with ASD (Mandy, et al., 2016; Scheuermann et al., 2003).

LeBlanc et al.'s (2009) study empirically demonstrated the importance of teachers having a better understanding of ASD. LeBlanc et al. examined the influence of autism training for beginning teachers in terms of changing their perceptions of student with ASD in an inclusive classroom, increasing their technical knowledge about autism, and providing specific teaching strategies for enhancing the success of students with ASD in an inclusive classroom. Participants were 105 students enrolled in a bachelor's of education degree program and divided into three experimental groups of 35 participants each. An ASD inventory developed by an Ontario, Canada, School Support Program-Autism Spectrum Disorder (SSPASD) program to evaluate the level of ASD knowledge and evidence-based practices was administered to the participants pretest and posttest 2 months later. Participants received a 200 minutes of instructional training from SSPASD consultants. Two training sessions were separately conducted 1 week apart for each of the three experimental groups. The results showed (a) a significant positive increase in participants' perceptions about children with ASD; (b) a significant positive increase in posttest scores compared to pretest scores on the ASD inventory, indicating that the

training increased participants' technical knowledge of ASD, and (c) an increase in knowledge of effective behavioral teaching strategies and evidence-based practices.

LeBlanc et al. concluded that even a limited amount of professional training strategically placed within an educator preparation program can have a positive effect on integrating students with ASD into the classroom. LeBlanc et al.'s study focused on teachers in Canada; however, autism crosses national boundaries and the results of this study can be applied to U. S. schools.

### **Research on Teacher Training**

Researchers suggested a link between teaching success and preservice training of teachers (Forlin, Earle, Loreman, & Sharma, 2011; Lerman et al., 2004; Mueller, 2005; Sokal & Sharma, 2015; SPENSE, 2002; Yell et al., 2005). Teachers who have been trained in autism inclusion practices prior to entering the classroom are more accepting of the idea (Cramer, 2015; Park, Chityo, & Choi, 2010; Savolainen, Engelbrecht, & Malinen, 2012; Wilkins & Nietfeld, 2004),

Only six states, Delaware, Florida, Michigan, Nevada, Pennsylvania, and West Virginia, offer an autism endorsement to teachers, and many educators are not given the opportunity to receive training in specific autism practices (Barnhill, Sumukta, Polloway, & Lee, 2014; Mueller, 2005; Pennsylvania Department of Education, 2015). Few universities offer a specialized program in autism training (Brock, et al., 2014; Ludlow, Conner, & Schechter, 2006). Less than 15% of educators who are currently teaching a student with autism reported receiving their training at a college or university (Morrier, Hess, & Heflin, 2011). Barnhill, Polloway, and Sumutka (2011) surveyed 87 colleges and

universities regarding their teacher preparation programs and autism coursework. Forty-one percent of these institutions did not offer any coursework within their education programs. With such a lack of preservice and even Master's level coursework available, continuing education programs and in-service options are necessary for teachers to receive specialized training in autism practices (Baker, 2012, Leko & Brownell, 2009; Lerman et al., 2004; Yell et al., 2005).

With many colleges and universities offering limited courses in the area of autism behaviors, new teachers are unequipped to face the challenges of working with these children in the classroom (Baker, 2012; Kraemer, Cook, Browning-Wright, Mayer, & Wallace, 2008; Summers, Houlding, & Reitzel, 2004). Researchers suggested that colleges and universities are not equipped to provide preservice teachers with the necessary training to educate children with autism and the challenges that accompany that task (Loicongo & Allen, 2008; McCrimmon, 2015; Rusby, Ingram, Bowron, Oliver, & Lyons, 2012).

With the number of students with autism included in the classroom increasing in great numbers, the need for further education of preservice and current teachers is evident (Bellini, Henry, & Pratt, 2011). While many teachers feel confident in their ability to teach subject material, research has indicated a need for training in areas such as classroom interventions and behavioral strategies, especially for those students with autism who present many challenges to the traditional classroom setting (Andrews, Drefs, Lupart & Loreman, 2015; Fallon, Zhang, & Kim, 2011). The demand for highly qualified teachers trained in very specific types of instruction and interventions has greatly

increased due to the inclusion of students with autism; however, the majority of preservice college graduates feel ill prepared for the task awaiting them (Bell, et al., 2010; Duffin, French & Patrick, 2012; Loiacono & Allen, 2008; Ruble, Toland, Birdwhistell, McGrew, & Usher, 2013). In addition, many educators currently in the field express concerns about teaching children with autism due to inadequate training (Busby, Ingram, Bowron, Oliver, & Lyons, 2012).

Oliver and Reschly (2010) examined education teacher preparation in classroom organization and behavior management. Twenty-six course syllabi from education preparation programs were examined to determine if the topics of classroom organization and behavior management were included in their courses. A rubric based on the innovation configuration [IC] (Hall & Hord, 2001) was used to measure the amount and rigor of training provided regarding behavior management and classroom organization. Oliver and Reschly were trained for 2 weeks on how to use the IC.

Oliver and Reschly's (2010) analysis of the syllabi scores showed that only 27% ( $n = 7$ ) of the educator preparation programs offered a course on classroom management. The other 73% ( $n = 19$ ) had courses that included content related to behavior management, but were not specifically devoted to classroom behaviors. Behavior reduction strategies were a predominant component in 96% ( $n = 25$ ) of programs. The second most predominant component was encouragement of appropriate behavior; 58% ( $n = 15$ ) of programs had this component. The results confirmed that teachers received little preparation regarding very specific behavioral components such as classroom structure and organization and school-wide discipline policies. Oliver and Reschly

pointed out that the scant results regarding the more preventive strategies such as behavioral expectations and rules are of concern because, based on their data, teachers are learning more reactive rather than proactive strategies for reducing inappropriate behaviors. According to Oliver and Reschly, less than 23% of general education teachers agreed that their training prepared them to deal with the demands of children with a disability, such as autism. Inadequate general and special education preparation hinders successful integration of students with disabilities into the regular classroom. Oliver and Reschly concluded that more emphasis on preventive strategies for inappropriate behaviors would better support inclusion of students with disabilities such as autism should be part of all teacher preparation programs.

A weakness of Oliver and Reschly's (2010) study was that it did not focus specifically on students with ASD. Probst and Leppert's (2008) study of a teacher-training program specifically for ASD based on the more structured Treatment and Education of Autistic and Related Communication Handicapped Children [TEACCH] (Mesibov, Shea, & Schopler, 2006) filled that gap. Probst and Leppert focused on (a) the effect of the training on child behavioral symptoms in the classroom, (b) teachers' stress reactions, and, (c) implementation of structured teaching strategies into the classroom as reported by teachers. The sample consisted of 10 children with autism and 10 teachers. Six of the children were diagnosed with severe autism, three were diagnosed with moderate autism, and one was diagnosed with mild autism. The goals of the teacher-training program were to impart knowledge about a theoretically valid disability model of

ASD, evidence-based practical methods, and skills to teach and manage children with ASD in the classroom. Training topics included the nature, causes, assessment, and treatment of ASD and implications for the school and classroom environment. The training also covered practical methods and skills for use in the classroom. There were three training sessions of groups of five teachers each held at 1-month intervals between sessions. The duration of each session was 30 minutes. Three standardized measures were used pretest and posttest. Child behavioral symptoms in the classroom was measured by the Classroom Child Behavioral Symptoms Questionnaire [CCBSQ] (Probst & Leppert, 2008), teachers' stress reactions were measured by the Classroom Teachers' Stress Reaction Questionnaire [CTSRQ] (Probst & Leppert), and implementation of structured teaching strategies into the classroom was measured by the Implementing Structured Learning Strategies in Everyday School Life Questionnaire (Probst & Leppert). The pretest-posttest results of all of the questionnaires significant improvement in children's behavioral symptoms, reduced teacher stress, and a successful implementation of an average of two structured teaching methods in classrooms. Teachers who did not implement structured methods in their classrooms explained that the methods were not appropriate for a particular child or that personnel and time constraints caused increased stress during their implementation.

As Probst and Leppert (2008) illustrated, assessing and evaluating a teacher preparation program is a complex process that depends largely upon the validity of the study and proper collection of data (Sherman & Ding, 2008). A more in-depth study of teacher training programs is needed to determine how teachers can be better equipped

upon graduation. Although researchers find it difficult to correlate a direct link between student achievement and teacher training due to the lack of access to student data (Maddox & Marvin, 2012; Wineburg, 2006), it has been noted that teacher quality is the predominant factor in achieving student success (Fallon, Zhang, & Kim, 2011).

With the implementation of the Common Core State Standards in most states, including Ohio, it is essential that teachers become aware of ways to effectively reach each child in their classrooms to prepare them to be college and career ready upon graduation, and that includes children with autism. Particular accommodations and modifications need to be made to the classroom environment and to specific assignments so that children with autism find a level of success (Constable, et al., 2013).

Other factors such as socioeconomic levels, effective parental involvement, prior knowledge of students, other support staff, and the influence of other teachers cannot be assessed by means of standardized testing, thus making it difficult to determine a connection between teacher preparation programs and students success (Lynch & Irvine, 2009; Sherman & Ding, 2008).

### **Research on Teacher Attitudes and Perceptions**

Upon reviewing several suggestions and strategies for the classroom teacher, the attitudes and perceptions of teachers regarding the inclusion of students with disabilities, particularly those with autism, will now be examined. Examining the attitudes and feelings about the inclusion of children with autism is a key component to evaluating the success of the program (Ross-Hill, 2009). Positive teacher attitudes and extensive knowledge about the disability have been directly linked to the successful inclusion of

children with autism (Forlin, Earle, Loreman, & Sharma, 2011). The attitudes of educators, including administration and all support staff, have been shown to be a predictor in student success (Dillenburger, et al., 2015; Eldar, Talmor, & Wolf-Zuckerman, 2010). While these attitudes and feelings are quite important to evaluate, it is also important to note any feelings of inadequacy or concerns addressed by the staff (Symeonidou & Phtiaka, 2009).

Scales such as the Sentiments, Attitudes, and Concerns about Inclusive Education Revised Scale (SACIE-R) have been useful in collecting data regarding the feelings of teaches regarding inclusion. In an attempt to finalize the development of this scale, a 19-question Likert-type scale was administered to 297 preservice teachers to measure their sentiments, attitudes, and concerns about the inclusion of children with special needs. Results of this study showed that this scale may be useful in assessing the attitudes of preservice teaches and addressing negative perceptions at the college or university setting (Forlin, Earle, Loreman, Sharma, 2011).

Children with autism have specific deficits in communication and social interactions (Dawson, 2008; Patten & Watson, 2011; Probst & Leppert, 2008; Weiss & Rohland, 2015; Wilkinson, 2005). Although, children with autism are most often of average or above average intellect, they often do not recognize subtle hints and social cues that the typical child would notice (Emam & Farrell, 2009; Orinstein, et al., 2015). Their behaviors are often disruptive and erratic, and may cause the child with autism to not be accepted well by peers and teachers (Woolfson & Brady, 2009). These idiosyncrasies in social and emotional behaviors may make it difficult for a teacher to

develop an understanding of how to best manage the behaviors of a child with autism (Hundert, 2007; Lam & Young, 2012). Children with poor classroom behavior often have poor relationships with the classroom teacher; therefore, the teacher will often have poor relationships with children with autism because of their disruptive behaviors, repetitive mannerisms, and inability to communicate their feelings, which can often be misinterpreted by teachers (Eisenhower, Bush & Blacher, 2015; Jordan, 2005; Robertson, Chamberlain, & Kasari, 2003; Strain, P., Wilson, K., & Dunlap, G., 2011).

When aggressive behaviors occur in the classroom, teachers often disengage from the child due to fear or frustration, which can also lead to a poor relationship and diminished academic performance (Paul, McKechnie, Johnstone, Owens, & Stanfield, 2015; Sutherland, Lewis-Palmer, Sticher, & Morgan, 2008; Taurines, Schwenck, Westerwald, Sachse, Siniatchkin, & Freitag, 2012). These aggressive behaviors can easily be misinterpreted by the teacher as disobedience and defiance, when, in fact, they may be solely physiological responses to the stress levels of the child. The literature indicates that children with autism who are integrated into the classroom have higher levels of cortisol than their typically developing peers, thus making their stress levels heightened, which can cause anxiety and lead to social withdrawal, aggression, and disruptive classroom behaviors (Hegde, 2015; Lytle & Todd, 2009). Other studies investigated the cortisol levels in the saliva of children with autism and typical children. It was noted that the levels of cortisol, and subsequent stress levels, were much higher in children with autism during times of social play and interaction (Corbett, et al., 2010; Lyden, et al., 2015)

Although high levels of stress and anxiety and autism seem to be directly linked, teachers must not dismiss these children physically or emotionally when such situations arise. Teachers must consider a number of intervention strategies when dealing with a student who is experiencing a high level of stress (Lytle & Todd, 2009). Educators who possess a high level of social intelligence tend to demonstrate care and concern through their classroom discipline, organizational tools, and lesson planning; hence, students are less likely to show aggression towards a caring and inviting teacher (Jeloudar & Yunus, 2011).

Children with developmental disabilities, such as autism, have been shown to greatly benefit from a positive relationship with the teacher (Blacher & Eisenhower, 2006; Eisenhower, Bush, & Blacher, 2015). This, in turn, can lead to children to higher levels of performance, both socially and academically. Researchers suggested that students are willing to put forth more effort and are have achievement levels when they know a teacher respects them and cares about them (Bereeman, et, al., 2015; Shaunessy & McHatton, 2009; Stipek, 2006). A high quality teacher-student relationship can be a determining factor in academic success and improved classroom behavior (Longobardi, Prino, Pasta, Gastaldi & Quaglia, 2012; Whitted, 2010, Zhang & Sun, 2011).

In a study of 888 students and their teachers from 21 different schools, researchers conducted a few surveys regarding the student/teacher relationship and its relationship to the social and academic outcomes of students. A correlation was noted between the positive student/teacher relationship and physiological health, social adjustment, and academic achievement (Murray-Harvey, 2010).

The teacher/student relationship with students with autism may be a bit more challenging because of their tendency towards social avoidance (Eisenhower, Blacher, & Bush, 2015; Falkmer, Parsons, & Granlund, 2012; Tsai & Cheney, 2012). In a related study, 69 special education teachers were interviewed to assess their feelings about teaching a child with autism and their need for further support (Rodriguez, Saldana, & Moreno, 2012). The results of the study showed a very positive view of educating children with autism in the inclusion classroom. A surprising find of the study was the low demand for further resources and support staff. This may have been due to the confidence of the teachers and/or the low ratio of students with autism being included. The authors stress that the low demand does not minimize the importance of a strong resource base for the inclusion teacher.

Sometimes teachers may perceive the relationship positively while the student with autism may view it differently due to characteristics of the disorder such as difficulties in communication and social abilities (Falkmer, Parsons, & Granlund, 2012). Students with autism may not react to the enthusiasm or kindness displayed by teachers or may even respond in a negative manner (Emam & Farrell, 2009). In a recent study, (Natof & Romanczyk, 2009), researchers conducted a test to determine if students with autism performed better academically if they had high teacher attention, such as high fives, praise, positive facial expressions, and teacher initiated conversations. The results were inconclusive due to the inability of students to differentiate between the conditions due to the social avoidance displayed by the students. More research on this specific aspect is needed.

Several factors have reoccurred in the literature that may explain some of the negative attitudes and perceptions of teachers regarding including students with autism: extra time involved in planning lessons and restructuring classrooms, fear of sudden outbursts by students with autism, and guilt and extreme frustration due to lack of training and lack of knowledge about the disorder (Horne & Timmons, 2009; Loreman, Forlin, & Sharma, 2007; Park, Chityo, & Choi, 2010; Shade & Stewart, 2001; Wildenger & McIntyre, 2012).

Recent research has made use of the Student-Teacher Relationship Scale designed by Pianta (2006), which measures the teacher's perception of his or her relationship with the student, assesses the areas of closeness, conflict, and dependency (Blacher, Howell, Lauderdale-Littin, Reed & Laugeson, 2014). Using this scale, one study found relationships between teachers and students with disabilities were noted to be plagued with conflict due to poor behavior and an unhealthy dependency on the teacher (Archer & Blacher, 2006). Student behavior, the child's self-competence, and peer perceptions were shown to be factors in this poor teacher-student relationship; however, cognitive ability and student IQ did not seem to affect the relationship in a negative way. Another study of 187 children in second and third grade included classrooms in two urban middle-class schools, 12 of whom were students with autism, examined the relationships of general education teachers with that of children with autism (Robertson et al., 2003). Overall, the teachers indicated a positive relationship with the included the children with autism. However, behavioral problems affected that relationship. A correlation was proven to exist between the teacher-student relationship and that of the child's peer relationships.

A related study surveyed 131 college students regarding their attitudes and feelings towards the inclusion of students with autism (Park, Chityo, & Choi, 2010). The results of this study showed that the majority of students had positive feelings, especially those who had direct contact with children with autism. The study continued to compare the results of preservice teachers with in-service teachers. The results showed no difference between the groups. It is speculated that the favorable results of this survey were due to the fact that 96.5% of the students had prior exposure to children with autism. The study also suggested that positive media coverage of autism may influence teachers to feel positively and less intimidated by children with autism.

Students with autism are at risk for failing and dropping out of high school not because of academic issues, but rather due to their inability to adapt to the classroom environment and lack of acceptance by teachers and peers (Ashburner, Ziviani & Rodger, 2010; Spilt, Hughes, Wu & Kwok, 2012). The literature suggests that negative feelings about children with autism can hinder the inclusion process, and thus inhibit these children from receiving a high quality education (Park & Chityo, 2011). Teacher attitudes can determine the success or failure of including children with autism (Chung, et al., 2015; Forlin et al., 2011). There is evidence to suggest that training and enhanced support in the classroom may improve teacher attitudes and negative perceptions about the inclusion of students with autism (Donaldson, 2015; Engstrand & Roll- Patterson, 2014; Guldberg, 2010; Kosko & Wilkins, 2009; Rae, Murray, & McKenzie, 2010).

### **Research on Intervention Strategies**

The NCLB Act (2002) required that the instruction and achievement of students, including those with ASD, be improved. Also referenced within this law was the requirement for educators to use scientifically based strategies and methods. Now with the implementation of the Every Child Succeeds Act (2015) less than 1% of all students may take an alternative assessment, including students with autism. With the implementation of the Common Core State Standards, even children with autism are expected to pass rigorous exams and assessments (Common Core State Standards Initiative, 2010). Forty-six states have adopted the Common Core, yet many teachers feel quite unprepared to reach these new standards to typical students, let alone to those students with autism (Association for Supervision of Curriculum and Development, 2016; Constable, et al, 2013).

Schools need to incorporate several different theories when approaching autism training; otherwise, teachers may get the false impression that one method works with all students falling within the autism spectrum (National Research Council, 2001; Wong, et al., 2015). Administrators must take ownership of the inclusion process and ensure that all educators are trained in several different methods so that each child receives an individualized method of instruction (Eldar, Talmor, & Wolf-Zuckerman, 2010; Odom & Wong, 2015; Scheuermann et al., 2003).

Students with autism must be treated as individuals with specific needs that may vary and change daily, which can be particularly difficult when the child with autism is incapable of expressing his or her needs (Lorcan, et al., 2016; Odom & Wong, 2015;

Sohn & Grayson, 2005; Zee, Kooman, & Van der Veen, 2013). Teachers must be consistent and firm, making requests only one at a time. The teacher must maintain calm and control at all times to ensure the student feels secure in the classroom. The teacher needs to anticipate times when the child may begin to feel anxious so early intervention can deter any major incidents. Chaotic situations may cause the child to become further withdrawn and anxious. Children, especially those with some form of autism spectrum disorder, crave order and routine. The teacher needs to maintain a structured classroom, yet encourage flexibility (Hart & Whalon, 2008; Steinbrenner & Watson, 2015).

Bruey (2004) discussed a treatment strategy that has proven successful in the treatment of children with autism over the past 35 years. The Applied Behavior Analysis (ABA) is based on years of research that explains how behavior is learned and how it can be changed. This is a data based technique that requires charting, graphing, and documenting behaviors of the child. His data is then used to evaluate if the teaching methods that are being used are effective or need to be modified. The ABA strategy also offers repeated learning opportunities for the child. Children with autism spectrum disorder (ASD) often have the need to practice things several times before a new skill is mastered. Bruey also mentioned that ABA breaks down information into small steps, which proves to be effective in teaching a child with ASD. These children seem to learn most effectively when prompted immediately for answers. Easy tasks and questions should be required of students until they feel comfortable and show an immediate response, whether verbal or nonverbal. This strategy is most effective when paired with creative forms of reinforcement that are tailored to the child's interests or desires. These

reinforcers, in turn, shape the child's behavior to the desired outcome. Some argue that this form of behaviorism may have negative effects on the child. Modern behaviorism does not favor the use of punishment, but rather offers positive reinforcement. However, some still argue that ABA may encourage the child to respond in a mechanical way. Proponents of this strategy argue that if taught properly, robotic or mechanized responses should not occur.

The Treatment and Education of Autistic and Related Communication Handicapped Children (TEACCH) method was developed by Schopler and Mesibov at the University of North Carolina about 30 years ago. Schopler (2000) described TEACCH as an approach that considers autism a lifelong disorder. The TEACCH model is based on five principles: (a) use of strengths and interests to connect the community of individuals with autism with individuals without autism so that individuals with autism will fit into society; (b) ongoing assessment that provides opportunities for independence and success; (c) providing a structured environment that helps individuals with autism to understand meaning; (d) substituting the notion of noncompliance with the idea that individuals with autism do not understand what is expected of them; and (e) parental involvement as a key element of collaboration with an interdisciplinary team (Mesibov et al., 2006).

The goal of the TEACCH program is to build on the strengths of the child, the family, and community resources to help the child achieve certain goals and to help the family and community understand how to live with children with autism (Erba, 2000, Mesibov & Shea, 2010). To accomplish this goal, TEACCH uses behavioral techniques

within a cognitive-developmental framework to teach self-care and manage inappropriate behavior. The focus is on individual autonomy and developing communication behaviors and not simply reducing problem behaviors (Tutt et al., 2006). The cognitive-developmental framework is based on Piaget's (1952) stage theory that proposed that children move through four sequential developmental stages—sensory-motor, preoperational, concrete operations, and formal operations. Piaget viewed development as continuous and consistent. Each stage evolves out of the one before it and contributes to the following one. Some children mature faster than others, but the sequence is unchanging. The TEACCH program's approach to intervention is also based on the belief that development is horizontal and vertical (Erba, 2000; Mesibov & Shea, 2010).

TEACCH focuses on children learning through a visual means. It encourages the use of charts, pictures, labels throughout the classroom, sign language, and other visual mediums (Bruey, 2004). It uses some of the same principles as the ABA strategy but focuses less on charting data to make decisions. The teacher works closely with each student and makes suggestions as to what the child should learn next. The TEACCH method offers each child an individual workstation that is equipped with a timeline or schedule of assigned activities (Penerai et al., 2009). The classroom is clearly marked so each child knows where to perform each task. This gives the child a sense of security due to the clarity, organization, and predictability of the classroom set up and expectations (Tutt et al., 2006). At the same time timetables and structure are established to control impulsive behavior (Tutt et al., 2006).

Developers of the TEACCH method encourage parental involvement with this program. Parents seem to be willing to participate within the classroom and exhibit a general satisfaction with the results. The only caution mentioned about this program is that some who oppose behaviorist philosophies feel that students may not be able to function properly unless they are in such a structured, designated environment. However, no research was given to indicate negative results once children exit this type of classroom setting (Tutt et al., 2006). The primary goal of the TEACCH program is to prepare students for life outside of the classroom. A strong emphasis is placed on teaching children and their families how to live and work together more cohesively with fewer behavioral issues. This includes helping them understand the outside world, acquiring communication skills to help them relate to others, and building their competence in making choices. Educational strategies are established through a detailed individual assessment that identifies the abilities of the child (Dempsey & Foreman, 2001).

Systematic instruction is necessary to help children with autism to develop a social awareness and understanding. The TEACCH program uses strategies such as social stories, role-playing, and cue cards to teach social skills (D'Elia, et al., 2014). Posting classroom rules and strategies is viewed as an effective part of the TEACCH program. Rules must be stated clearly and include an explanation regarding their importance. This type of clarity helps children with autism make social connections that they may otherwise not make on their own (Ciurlik, Tennenbaum, & Duer, 2015; Greenspan & Wieder, 2006).

Panerai et al. (2009) studied the effectiveness of TEACCH in a residential center (R-TEACCH) and a TEACCH program (NS-TEACCH, or natural setting TEACCH) implemented at home and at inclusion schools (INSP or inclusive nonspecific program) after specific parent psycho educational training. The study took place over a 3-year period with 34 male children (11 children in the R-TEACCH group, 13 children in the NS-TEACCH group, and 10 children in the INSP group) who were diagnosed with autism and severe developmental deficiencies. Children were assessed for autistic disorder (AD) with the Psycho-Educational Profile-Revised [PEP-R] (Schopler et al., 1990, as cited in Panerai et al., 2009) and the Vineland Adaptive Behavior Scale-survey form [VABS] (Sparrow et al., 1994, as cited in Panerai et al., 2009). All participants in both the R-TEACCH and NS-TEACCH groups were trained in the same manner, but with differences in environments and varying duration of activity sessions and staff members. In R-TEACCH, general education teachers implemented the program, whereas in NS-TEACCH parents of children with autism, especially mothers, and support teachers carried out the activities of the program. Children in the INSP group received a 10-day diagnostic protocol and several 5-day follow-up protocols to diagnose AD and to monitor the children's development. Children did not participate in any educational programs; rather, they were fully included into a general education classroom with roughly 20 children and the classroom teacher. Parents were given a diagnosis, but were not included in the educational process. The post treatment results showed statistically significant changes in all VABS scores in the residential settings groups but not in the groups of children who were included in the traditional classroom setting. Panerai et al.

concluded that these results confirm that the TEACCH program is more effective than an inclusive program not specifically designed for children with autism. However, according to Al-Qabandi, Gorter, & Rosenbaum (2009), while the results show promise, a single study undertaken in a specific setting and controlled clinic may have caused the study to be biased and should be repeated in other settings to validate the results of this study.

Social Stories, an intervention method that uses short stories to teach children with ASD appropriate behaviors, was first introduced by Gray (2000). She designed this method as a nonthreatening way to teach children through fun, relevant stories that enforce proper responses in various situations. Social Stories can address situations which are difficult for the child or discourage repetitive behaviors such as self-talking or singing, rocking, arm flapping, tantrums, or inappropriate greetings. These stories are personalized and written by the teacher, therapist, parent, or others who may live or work closely with the child. These stories are read to the child before the anticipated situations occurs to prepare the child, or during a difficult circumstance to calm the child down. For the Social Story to be written effectively, several guidelines must be followed. First, the author must set a goal and picture it while writing the story. Second, the author must gather information about the child and the situation. This may be done through interviewing the parents and involved professionals and by observing the child. The story must accurately depict what is occurring and why. Third, the text must be written to fit the needs of the individual student. Finally, the title of the Social Story must identify and reinforce the main concept of the story (Gray, 2000; Leaf, et al., 2015).

Adams, Gouvousis, VanLue, and Waldron (2004) conducted a case study to collect data about the effectiveness of the Social Story method in decreasing undesired behaviors during a series of 12 homework sessions. This experiment focused on a 7-year old boy who exhibited the behaviors of crying during homework time, falling out of his chair, hitting people and objects, and screaming at his mother and sister. A Social Story was developed to address these negative behaviors. Upon implementation of the Social Story, crying episodes diminished 48% after five sessions, screaming decreased 61%, falling decreased 74%, and hitting decreased 60%. Both parents and the teacher noted a positive difference in the child's behavior after the use of the social stories method. The child was able to transfer the learned behavior from the home to the classroom in a very effective manner. He was able to remember the story and implement the learned behaviors and use it when he needed help. The researchers noted the use of social stories to be an effective teaching method in decreasing undesirable behaviors.

Floor Time is a developmental model developed by Greenspan as an alternative to the rigidly structured ABA approach. Floor Time is child-directed approach with adults adding support. Floor Time has main four goals: encouraging children and caregivers to become intimate with each other, practicing reciprocal communication, modeling and expressing emotions, and encouraging children to think logically. Floor Time is a special playtime set aside that focuses on helping the child acquire the necessary developmental skills by engaging with others, taking initiative, making wishes and needs known, and getting responses (Greenspan & Wieder, 2006; Hess, 2013). Play is a spontaneous, unstructured activity where teachers, parents, caregivers, or therapists engage in child-

directed activities on the floor with the child. Examples of Floor Time activities are Through the Tunnel (showing a child how to drive a toy car through a tunnel), Dance with Me (dancing to the child's favorite music while imitating the child's movement and encouraging the child to imitate the play companion's movements), and Puzzles (completing the child's favorite puzzles by taking turns). Children with autism often need many sessions of Floor Time a day; six to ten 20-30 minute floor-time sessions a day are recommended (Greenspan & Wieder, 2006; Mercer, 2015). Children with autism tend to lack the social skills needed to form appropriate peer relationships. This lack of peer contact may cause these children to become even more withdrawn and socially unacceptable.

Another approach used to assist children in forming appropriate peer relationships is the Circle of Friends method (Schlieder, Maldonado, & Baltes, 2014). This approach gives the teacher an opportunity to meet weekly for several months with a child with autism as the focus and a small peer group consisting of students from the inclusion classroom. This is meant to benefit all children involved allowing typical students to understand the needs of children with autism and find ways to support them. The adult leader is responsible for facilitating the group and setting up basic rules for interactions. Effective communication and behavioral coping strategies are modeled and practiced. Children are encouraged to implement these strategies and communication skills when they return to the classroom (Whitaker, Barratt, Joy, Potter, & Thomas, 1998).

Kalyva and Avrmadis (2005) conducted an experiment to prove the effectiveness of the Circle of Friends intervention strategy. The goal of this study was to expose the

children with autism to a group of normal functioning peers, allow the teachers to work within a very small group to observe the children with autism, allow typical children the opportunity to recognize the problems of the focus children while treating them with tolerance, and to address problems with creative solutions. The study included five children with autism between the ages of 3 and 4 years who were at or above normal IQ levels. Three of the children were included in the focus groups and two were part of the control group. At the time of this study, these five children were using the ABA method facilitated by a therapist at home. Twenty-five typical children and five teachers also took part in this study. Kalyva and Avramadis conducted the experiment at a nursery school once a week for 30 minutes over a period of 3 months. The focus children were observed to see how many successful responses were made to the initiations of their peers to make contact. The response was considered positive if the children with autism acknowledged their peer by speaking, smiling, touching, or even looking at the peer. The children with autism were also expected to initiate contact with their peers. The initiation was considered to be successful if the peer acknowledged the response. Behaviors, such as pushing, taking toys, or shouting at the peer, were considered to be unsuccessful. The teacher or therapist only intervened if there was an emergency, which included severe fits or violence. This did occur twice in the first few weeks and the sessions had to be stopped and resumed the following day. At the end of the 3 months, results were collected and data was analyzed to formulate the following conclusion. Those children in the focus group did exhibit more positive peer responses than those in the control group, thus proving the hypotheses of the investigators (Kalyva & Avramadis, 2005).

Another instructional approach for the inclusion of children with autism is known as the Responsive Classroom (Abry, Rimm- Kaufman, Larson, & Brewer, 2013; Winterman & Sapona, 2002; Wong & Hall, 2010). This approach integrates academics and social skills into the regular classroom, which it regards as equally important. The teacher maintains organization and structure within the classroom and enforces rules with logical consequences. Teachers and students are encouraged to build social community that maintains a similar schedule each day. This schedule begins with a morning meeting for all students. This is particularly important for students with autism because it guides their day in a predictable pattern. The students are given the opportunity to share their ideas and feelings. Proper social interactions and behaviors are modeled for all children. Students are encouraged to interact with one another in small groups during the guided discovery time that follows. Student groups are then given a time for academic choice, which is beneficial for students with ASD who seems to enjoy the freedom of choosing their own activities.

Winterman and Sapona (2002) tracked the inclusion of a boy with autism from kindergarten through second grade. The child attended a school that followed the tenets of the Responsive Classroom. The progress within those 3 years showed dramatic improvement. When he began kindergarten, he needed prompting to participate in the morning meetings and center time. He occasionally attended assemblies, but most often could not because of his fears and inappropriate behaviors. The student needed an aide to walk him to and from the bus each day and needed a buddy to help him line up for lunch or recess. He never participated in independent work time, but would sit and watch the

other children. After spending 3 years in such a supportive environment, the child's behavior and participation improved. By the time this student was in second grade, he joined the group for all activities without prompting, participated in all student assemblies, walked independently through the school and to the bus, and participated willingly in academic tasks. In addition to the assistance of the classroom teacher, a team of teachers met twice a week to discuss student goals and progress. Regular communication and meetings were held with the child's parents to review progress and share ideas. All of these strategies combined proved to be successful in the case of this child.

Hoffman (2013) discussed several evidence-based classroom strategies that have shown to reduce anxiety of children with autism in the classroom. Implications for classroom teachers include strategies such as providing predictability and structure for children with autism. Providing a quiet space and a spacious environment that is not overly stimulating has shown to reduce anxiety and problematic behaviors. Teachers can become proactive by instructing children to express emotions in a healthy manner, implement relaxation techniques, and gradually exposing students to new and fearful situations. Accommodations to meet students' academic and social needs and adaptations to curriculum must be taken into consideration for the student to have a successful classroom experience.

The use of paraprofessional aides to support children with autism in the regular classroom is now a common practice (Hall, Grundon, Pope, & Romero, 2010; Walker & Smith, 2015). Students with disabilities most often rely on the paraprofessional for

educational support and guidance in the classroom and throughout the school building (Keller, Bucholz, & Brady, 2007; Robinson, 2011; Serna, et, al., 2015). The most disturbing fact about such heavy use of aides is that the least qualified people are often given the most difficult children to oversee (Walker, 2013). The wage offered to the aide is usually very low, thus making it difficult to attract educated and experienced professional to take these positions (Christie, 2013; Giangreco & Broer, 2005; Stephenson, Carter, & Arthur-Kelly, 2011).

The involvement of the parents in the lives of children is an essential element in the socialization process. Parents have the opportunity to model correct social skills to their children from infancy up until the time they enter school. Parents are highly influential and necessary in the training of their children in the home setting (Iovannone et al., 2003; Shire et al., 2015). Based upon this assumption, Herring and Wahler (2003) conducted a study to investigate the correlation between the cooperation and compliance of children at home and at school. In this study, 33 second- third grade middle- upper class Caucasian children were observed at home for 1 hour and at school for 1 hour. At home, the television had to be off and phone calls were only made out of necessity. The mother and one other family member were to be present and the child was to remain inside the home. At school, all observations took place during teacher led discussion times. The study ultimately showed a direct correlation between home and school. Children who were responsive and compliant at home exhibited these same behaviors at school. The same correlation was true for negative behaviors. Those students who were shown to be compliant and responsive were also considered to be very social. Their

responses in the classroom were positive and they did not disturb the class. A correlation was also shown to exist between the response of the teacher and the parent. Children who were praised for good behaviors were more apt to repeat those same behaviors. Thus, the results of this study showed that children, whether at home or at school, would make behavioral choices based on the actions modeled for them and based upon the reactions of those significant in their lives (Herring & Wahler, 2003; Kasari et al., 2014).

Levy, Kim, and Olive (2006) comprised a list of individual studies discussing effective intervention strategies for children with autism. Six studies were shown to prove that parental involvement is a contributing factor in the success of children with ASD. Parental intervention was the primary intervention source for each child studied. Each of the six studies mentioned included parents who were trained in a particular strategy and were willing to spend several hours per week implementing the strategy. One study discussed speech and language intervention for a period of 10 weeks. These children performed significantly better after the intervention. Another study analyzed several parents who implemented a type of family therapy that included conflict resolution, communication skills, and language skills. After a period of 2 years, 40% of the children involved proved to have increased cognitive skills and decreased autistic behaviors.

Children with disabilities especially need the support and love of family members. The family can provide stability and prove to be very influential in the child's development and learning processes. Parents should seek to advocate for their child and seek interventions that will help the child attain independence and maintain a high quality of life. Teachers can introduce many strategies during the school day and reinforce

intervention methods, but these practices are most effective when supported by the parents and implemented at home and in the community (Iovannone et al., 2003; Patterson, Smith & Mirenda, 2012).

With such a vast array of methods for effective inclusion available, teachers must employ every exhaustible resource to educate each child in the classroom, including those with autism. Within each classroom exist many individuals with many varying needs and types of intelligence who deserve to be educated with respect and appropriate interventions (Andronic & Andronic, 2016; Gardner, 1995; Gardner, 2011). If teachers use evidence based practices and suggested interventions, students with autism can achieve the same rigorous expectations of today's standards based curriculum (Constable, et al., 2013).

### **Implications**

As is evidenced in the literature review, a need exists for teacher training so they feel confident in their skills to teach students with autism. With only 6 states currently offering an autism endorsement, the majority of teachers will not have extensive training in the area of autism. Teachers will need to acquire additional training on their own if it is not provided by the school district. Even though many schools offer in-service trainings, these trainings may not be specific to address the needs of teachers within an inclusion classroom. Since each child with autism is vastly different, the training teachers receive may not be applicable in certain situations. Hence, the need for specific training is shown to exist. Extensive training has been shown to improve teachers' attitudes and levels of confidence, which then improves the inclusion process (Segall & Campbell, 2012;

Sharma & Nuttal, 2016). The literature implies that teacher training, teacher attitude and perception, and the implementation of teaching strategies are interrelated (Alkalin &, Sucuoglu; 2015; Forlin, Loreman, & Sharma, 2014; Reagan, 2012; Savolainen, Engelbrecht, Nel, & Malinen, 2012; Sharma & Sokal, 2014).

Different options for addressing the need for further education of inclusion teachers were considered for this project. The option of an intensive 3-day professional development course was considered. In this workshop materials regarding characteristics of students with autism, social and emotional needs of learners with autism, and classroom strategies for educators could be discussed. This method could be an option for those teachers who are currently licensed and teaching in the inclusion classroom. However, I decided not to take this approach due to the lack of time and commitment level involved with teachers missing 3 days of teaching or attending the workshop during the summer. Another factor in deciding against this option was the cost involved. Licensed teachers who are recently employed in northeast Ohio have limited may have limited financial resources. Many are repaying student loans and do not have the means to attend an extensive workshop. This option did not seem to be the best option. Therefore, the approach on which I decided was offering the same content at the undergraduate level for those teacher candidates who have not yet obtained a teaching license. This online course could be offered at the university at which I am employed. The proposed course could be offered as an elective course in the teacher education program. The state of Ohio does not require teacher candidates to take a course strictly related to autism; therefore it will most likely not be added to the required sequence of

courses. However, many students could consider this as an option for an elective course because they will not be required to pay any additional tuition costs. This would allow students to receive crucial information regarding autism inclusion prior to entering the classroom. This option could help address the problems teachers face due to the lack of training. Based on the findings in the literature review, this option could adequately prepare teacher candidates to enter the workforce with a general knowledge regarding the effective inclusion of students with autism.

### **Summary**

The researchers mentioned in this section addressed the need for more effective teacher training in the area of autism inclusion as supported by the research, while addressing the need for further research regarding the perceptions of teachers related to autism inclusion. This section also offered several intervention strategies as suggested by the research. A review of the literature related to each of the study variables was also presented and supported by previous research studies. An introduction, historical review, and explanation of the experiential learning approach to instruction for students with significant disabilities, such as autism have also been presented in this literature review. The review has established the need for further research studies and training regarding effective educational practices regarding teachers and the inclusion of children with autism.

## Section 2: The Methodology

### **Introduction**

The purpose of this qualitative case study was to understand how teachers could effectively include students with autism based on their training, attitudes, perceptions, and use of strategies within the classroom. The study originated from my own experience in the classroom. I was teaching in an inclusive setting, which included a child with autism. I had no formal university training in teaching students with autism and had received no training at my place of employment. I was then expected to include this child fully and was responsible for his entire education. Given my desire to educate this child to the best of my ability, I began to conduct my own research and attempted to find ways to instruct this child effectively. The idea of self-efficacy was evident in my own practice of inclusion. I became more knowledgeable about autism through my own research and observations. My confidence began to grow, and thus my perceptions of teaching a child with autism began to change. I became more effective in implementing helpful academic and behavioral strategies within my own classroom. Thus began the current qualitative study.

### **Research Questions**

Based upon Bandura's (1977, 2012) theory of self-efficacy, I addressed three research questions to examine the concept of self-efficacy and its perceived effect on teachers of children with autism. In the current chapter, I describe the research methods used in this study, along with the research design, participants, interview questions, data

collection method, data analysis processes, and rights and protection of participants. I addressed the following questions:

1. In what ways do teachers perceive that they are prepared or unprepared to instruct students with autism?
2. How do teachers believe that their attitudes and perceptions affect the inclusion of students with autism?
3. Which teaching methods and intervention strategies do teachers perceive to be most effective in helping students with autism advance academically and socially in the inclusion setting?

### **Research Design**

The purpose of this qualitative case study was to understand how teachers can effectively include students with autism based on their training, attitudes and perceptions, and use of strategies within the classroom. A case study is a qualitative research method designed to investigate a person, a group of people, or an event to broaden the understanding of a research problem (Stake, 1995). A case study enables a rich picture of the content and subjects. However, the contribution of a case study to an understanding of the field depends partly on how a researcher perceives reality (Stake, 1995). Case study data can be collected from many levels and many perspectives. As a case-study researcher, I gathered and interpreted data for the current study based upon my own knowledge and schema (as suggested by Baxter & Jack, 2008). With my experience in teaching in the inclusive classroom, I can apply my own interpretation to the data.

Through a case-study approach, I was able to gain information regarding teachers' understanding of their own self-efficacy regarding the inclusion of students with autism. I collected data by conducting in-depth, open-ended interviews with a purposeful sample of seven teachers in the northeast Ohio region. I explored the experiences of participants in a natural setting to obtain meaningful, realistic data that could then be analyzed for emerging themes (Creswell, 2013). My study contributes to social change because through findings, teachers may recognize their own level of training and their possible need for further training. In addition, teachers may be guided to address perceptions and attitudes toward included students, thereby using their own insights to implement instructional strategies within the classroom more effectively.

I chose this particular qualitative method for this study because I wanted to hear the voices of educators who were teaching students with autism in the inclusion setting. I wanted to hear about their experiences and gain insight from their perspectives. I desired to hear about the training they received as preservice teachers and to explore the perceptions of the participants regarding the effect of the training on their ability to include students in a manner that they deemed acceptable. The qualitative case study method allowed me to make my own interpretations of the data I collected from teachers. Unlike quantitative studies that focus on statistical measures, the case study approach allowed me to focus on the data that I obtained from participants and discover underlying causal relationships and emerging themes. Methods such as surveys often lack open-ended questions that allow in-depth information from respondents. The qualitative case

study allowed me to delve further into participants' perspectives on a topic by simply asking more probing questions.

Case studies are useful in understanding dynamic and complex processes. Education is an ever changing, dynamic field due to the influx of new students each year, changing laws and practices, and varying teacher perspectives and practices. This case study sought to investigate the perspectives of current teachers and their personal experiences in the autism classroom, rather than on isolated incidents and data collection.

### **Setting and Sample**

Sampling is the process of systematically selecting individuals who will provide information regarding what a researcher intends to study. For this study, I used purposeful sampling. Purposeful sampling involves selecting participants who can contribute a wealth of knowledge on a particular topic and area of interest (Creswell & Pano Clark, 2011; Mason, 2010). Purposeful sampling is widely used in qualitative research to identify and select cases rich in information and related to the research topic. Patton (2015) suggested that a researcher be strategically purposeful, which is a criterion in excellent research. Purposeful sampling fits well within the case study approach (Palys, 2008). Participants in this study were selected purposefully to gain a better understanding of teachers who have taught or were currently teaching a child with autism in the inclusive classroom. Participants were selected based upon the following criteria: 1.) Participants must hold a current teaching license in the state of Ohio. 2.) Participants must have teaching experience in the state of Ohio. 3.) Participants must have taught or be currently teaching a student with autism in the inclusion classroom.

A qualitative study takes place in a realistic, natural setting (Creswell, 2013). The current study took place within three school districts in northeast Ohio. The participants chose their own interview locations. I ensured comfort in the chosen setting but also maintained privacy. Some participants chose to be interviewed before or after school in their own classrooms, and others chose an off-site location. Privacy and confidentiality were the highest priority in the selection of a setting.

To identify particular themes, Creswell (2013) suggested a sample size of no more than four or five participants for a case study. For the current study, however, I needed seven participants to reach data saturation. I chose educators who were currently licensed to teach in the state of Ohio and who had experience with teaching a child with autism in an inclusion classroom.

### **Ethical Treatment of Human Subjects**

Prior to identifying and contacting participants for this study, I followed the Walden University protocol for research approval. I submitted my research proposal to the University Research Review (URR) and Institutional Review Board (IRB) of Walden University. I provided a certificate verifying my completion of human research participant training. Approval for this study was granted.

My primary concern throughout this study was the safety and confidentiality of the participants. Potential participants were contacted via email for recruitment for the study. Contact information was accessible to the public through the websites of the public school districts. I sent emails to each inclusion teacher in 10 different elementary schools within 3 local school districts. I sent a total of 87 emails. One school advised me that

none of their teachers would be permitted to participate in the study, thus eliminating 16 teachers from the participant pool. Of the 87 original emails sent, 10 teachers responded with interest. Of the 10 interested teachers who met the selection criteria, 7 were able to schedule a suitable meeting time. Therefore, I had 7 participants for this study based upon selected criteria, interest, and availability. I obtained written, informed consent from each participant before embarking with the interview process.

A brief description of the study was included in the initial email with the following questions: Do you currently hold a teaching license in Ohio? Are you currently or are you previously employed as a teacher in the state of Ohio? Have you previously taught or do you presently teach in an elementary general-education classroom setting with students identified as having autism spectrum disorder?

Potential participants who responded affirmatively to all questions received a follow-up email with a letter describing the study and the rights of the participants in more detail. Participants were informed that participation in this study was voluntary and that they had the right to withdraw at any time. Although no adverse effects were expected, participants were informed that they would be notified if such an occasion arose. Consent forms were signed and kept in a locked filing cabinet in my home office.

To obtain rich and accurate data regarding the experiences and perceptions of the teachers, I conveyed a message of trust and mutual understanding (Loh, 2013). Participants were more likely to offer candid responses because they trusted that my data collection would be kept confidential and would be used to benefit future teachers. Participants were assured that any identifying information would be strictly for my use in

this research and would not be available to anyone not directly involved in this study. No identifying details were used in reporting the data. Consent forms will be locked in my home office filing cabinet for 7 years from the date of the study and will then be destroyed.

To ensure accuracy in the data collection, I audio recorded each interview for later transcription. I personally transcribed each interview in the privacy of my office with the door closed. Until the transcription process was complete, transcripts were stored in a password-protected file on my personal laptop computer. Upon completion, the files of all transcripts were printed and stored in a locked filing cabinet in my home office. The recorded files were currently stored in a password-protected file on my personal computer, and the actual recordings were deleted from my recording device after the transcription process was completed.

Participants were provided a copy of their transcribed interview so they could review it for accuracy. Allowing the participants to review the interview and confirm for accuracy may reduce researcher bias. This is part of a process called member checking. In this process, the researcher will return the interview transcripts to the participant to review, verify, and validate the data (Birt, Scott, Cavers, Campbell, & Walter, 2016). Participants were encouraged to contact me by email or telephone with questions or concerns regarding the transcripts, but I received no comments or concerns. This process added verification and greater validity to this case study. Participants will receive a copy of the completed case study upon request (Sanjari et al., 2014).

## **Data Sources**

Interviews with participants were the source of information for this study. To obtain rich data, in-depth interviews were conducted with educators who held a valid teaching license in the state of Ohio and who had prior experience teaching a child with autism. Interviewing such individuals allowed me to focus on educators who had a specific interest in this topic, thereby enabling me to explore and identify emerging themes throughout the interview process (Creswell, 2013). The research questions addressed participants' perceptions regarding teacher preparation programs, the inclusion of students with autism, and participants' ideas regarding classroom strategies. Predominantly, participants discussed individual perceptions.

## **Data Collection: Interviews**

I gathered data for this project by means of semistructured interviews with participants. I formulated a set of guiding questions based on the local problem of teachers' lack of preparation and perceived ideas regarding the inclusion of students with autism in the general education classroom. I developed these questions based on the literature review and my personal experiences.

The interviews were conducted in a face-to-face format. The interview questions were developed for the sole purpose of gathering information. Every effort was made to keep each teacher on topic so that pertinent information could be gathered. Through this interview process I was able to understand the viewpoint of the participants and to allow their individual voices to be heard. I made every effort to avoid biasing the questions or swaying the opinions or perceptions of the participants. I listened actively, and I made

every effort to understand the true meaning of the words of each participant and to grasp the meaning behind the words (Lillrank, 2012).

During the interview process, I posed follow-up questions to participants based upon individual responses (Creswell, 2013; Wengraf, 2001). These follow-up questions allowed the interviews to proceed naturally as a narrative. Most participants shared stories regarding their own experiences in the classroom and their own ideas and perceptions. Open-ended questions allowed for deeper discussion, and more information naturally emerged throughout the process. I asked closed-ended questions on occasion when the answers needed to be clarified or when a definitive answer was needed (Creswell, 2013; Newton, 2010).

During the interviews, I took notes regarding my thoughts and observations. I observed body language, facial expressions, tone of voice, and other nonverbal cues so I could gain more insight (Kolb, 2012). To preserve accuracy, I audio recorded each interview so that accurate transcription could occur at a later date. To maintain confidentiality, I transcribed each interview within the privacy of my office with the door closed. In additional efforts to maintain confidentiality, the transcripts were coded so names of participants would not be associated with the interviews. The transcripts reside on my personal computer, which is password protected. Hard copies of the transcripts reside in a locked filing cabinet within my home office. I gave each participant a copy of the transcribed interview to ensure accuracy. I gave participants the opportunity to read the transcription notes and discuss possible discrepancies with me.

After each interview, I made notes regarding the interview process. I took notes of any special circumstances that occurred during the interview. I made note of my perceptions of the participants' behaviors and mannerisms that I had observed during the interview. My goal was to gain a rich and full understanding of the experiences and perceptions of each participant (Hyett, Kenny, & Dickson-Swift, 2014).

### **Role of the Researcher**

As the sole researcher in this study, I served as the primary instrument for data collection (Creswell, 2013; Lewis, 2015) by conducting interviews and gathering data from participants. I analyzed the data and used that information to identify emerging themes to answer the research questions.

I have been a licensed educator for 19 years, I have been licensed in the state of Ohio for 14 years, and I taught in an inclusive elementary setting for 10 years. This work experience, together with a review of the literature, was the basis for developing the proposed study. I have been teaching in higher education for 9 years. I have been employed in my current position as professor of education for 2 years. Several of the courses I teach address inclusion in the classroom. As little of the formal curricular content includes skills needed to teach students with autism, my work experience has shown me a need for further education in this area.

I was flexible when I scheduled interviews and remained cognizant of the participants' time constraints, duties, and responsibilities. I attempted to maintain a positive rapport with my participants, as I wanted to ensure that they felt as comfortable as possible. My goal for the interviews was to create a positive experience both for the

participant and for me as the researcher (Creswell, 2013). As the researcher in this study, I acknowledge that my personal biases, feelings, and experiences may have affected the findings. I made a conscious effort to separate my own personal biases and experiences from the study by focusing on the research questions, by attempting to remain objective in the data collection process, and by consciously reflecting on the responses of participants.

My intent was to conduct a study that was meaningful and personal, but largely free of bias. I reflected continually as I conducted this study to ensure that the results would be credible (Pugach, Mukhopadhyay, & Gomez-Najarro, 2015).

### **Data Analysis**

Data analysis and data collection took place simultaneously. After each interview, I reviewed my notes and personal observations and began to reflect upon what was observed. I become familiar with each interview through using the audio recordings, transcripts, and reflective notes that I recorded. I also listened to each interview on more than one occasion so that I was familiar with the content of each interview (Gale et al., 2103).

As each interview was transcribed, I read the transcription thoroughly so as to begin looking for emerging themes. The first process of analyzing qualitative data is emergent, thereby allowing the analysis to follow the nature of the data itself (Vaismoradi, Bondas, & Turunen, 2013). I read the responses during each phase of the analysis, sometimes rereading each transcription to improve my understanding of the content. To gain essential meaning, I analyzed each interview for emerging themes. I was

then able to add further questions to subsequent interviews to gain more information and therefore create a rich, in-depth study.

I analyzed the data by means of an open-ended coding scheme. After I became sufficiently familiar with each interview, I coded the transcripts separately and then collectively to identify emerging themes. Throughout this process, I read each transcription carefully line by line and assigned a label or code to specific lines that were particularly relevant to the study. The codes that I created initially changed as more data emerged through each subsequent interview. The objective of the coding process was to gather information from the data and continually compare emerging themes after each interview. I attached specific codes to segments of the narrative that contained information related to the research questions, for easier retrieval when needed at a later date (Glaser & Laudel, 2013).

Codes do not contain information. Instead, codes indicate where in the text certain information can be found (Miles, Huberman, & Saldana, 2014). The coding process in this study was systematic, and it followed a rigorous process structured into several phases. Within the first phase I began coding a large amount of data in each of the transcripts. During this first phase, I thoroughly read and made note of any similar phrases or words that participants used during the interviews. Next, I reorganized the codes through axial coding and open coding for further examination, and I placed these reorganized codes under more general types of codes. By the end of the analysis phase of the study, I was able to narrow the set of codes to about 10 distinct codes. During this

second phase of coding, I examined the existing codes and used structured lists and categories.

I completed the coding process through selective coding so that I could narrow down the categories, thereby improving my understanding of the study (Glaser & Laudel, 2013). Through this additional step, a narrative of the data began to develop. All codes were placed into tables to enable me to identify recurring themes, phrases, and words related to the research questions. Through these themes, I was able to write a narrative, the story of the participants, which allowed me to understand the lived experiences and personal feelings of each teacher who participated in this study (Creswell, 2013).

### **Trustworthiness**

Researchers in the constructivist and naturalist paradigms tend to move away from traditional definitions of validity and reliability (Denzin & Lincoln, 2005; Wolcott, 2005). In an effort to enhance credibility and reliability in this study, I provided sufficient detail so as to enable readers to make their own judgments regarding the credibility and validity of the study (Elo et al., 2014; Loh, 2013; Pugach et al., 2015). I used purposeful sampling to choose participants, and I collected data in a systematic way. I analyzed the data thoroughly to promote accuracy and credibility. I used member checking to verify accuracy after the transcription process was complete (Birt, et al., 2016). I also ensured credibility by using persistent observations and peer debriefing (Lincoln & Guba, 1985; Seale, 2002).

I used auditing to determine the reliability and dependability of the study (Cope, 2014; Lincoln & Guba, 1985). I documented every aspect of the study so that the study

could be examined and deemed adequate by outside reviewers. This process encouraged me to be critical of all research and to be objective in compiling results (Seale, 2002; Kornbluh, 2015). Following such steps did not ensure that the study was completely unbiased and trustworthy, but I took steps to ensure that I was largely free of bias and preconceived notions in my interpretation of the data. Readers will determine if the results of this research are sufficiently valid and reliable for use in their own settings.

Regarding the assumptions of this study, I assumed that all participants provided honest and accurate responses to the interview questions and were forthcoming in all answers. In addition, I assumed that the interviews and observations were adequate forms of data collection to solicit information needed to examine the training, perceptions, and teaching methods and intervention strategies used with children with autism by general-education teachers in the inclusion classroom. Finally, I made an axiological assumption that characterizes qualitative research (Lincoln, Lynham, & Guba, 2011). The axiological assumption involves positioning myself within the study, as the participants did also. Assumptions cannot be completely guaranteed (Hatch, 2002; Creswell, 2003; Kornbluh, 2015).

### **Project Limitations**

This study had several limitations. Certain limitations are inherent in qualitative, case-study research. These limitations included a small sample size. I interviewed only seven participants. As a result of these limitations, the findings of this study were not generalizable to a larger population. Although the findings may be transferable, depending on the insights that readers may find valuable, the results would be difficult to

replicate. I addressed the disadvantages of the small sample size by creating thick description so that readers would be able to confirm that the findings were unbiased, credible, and dependable.

The particular type of community in which the study was conducted limited the study. The sample consisted of seven general-education teachers in an inclusion setting within three different school districts in a predominantly Caucasian, suburban community. The community was not diverse in ethnicity, race, or income level. The findings may not be applicable to communities of different compositions.

The focus of the study was on the inclusion of children with autism in the general education classroom. Other learning disabilities, physical disabilities, and additional exceptionalities were not included. However, qualitative research can allow the voices of the subjects to be heard in a realistic setting and holistic manner (Leko, 2014). In this way, it may be possible for individuals working in general-education settings in a variety of settings to gain beneficial insights from this study.

### **Research Findings**

The purpose of this qualitative case study was to understand the ways in which teachers can effectively include students with autism based on their training, attitudes, perceptions, and use of strategies within the classroom. In this study, I examined effective educational practices that allow students with autism to have a positive experience in the general education classroom. As a university faculty member responsible for educating preservice and graduate level teachers, it was important for me to examine how educators currently teaching in the inclusion classroom contribute to this body of information.

There were 7 participants in this study, teaching at 4 different schools in 3 local school districts. All were female. Years of teaching experience ranged from 2 to 24, with all but two participants having more than 10 years of teaching experience each. Table 1 shows the demographic distribution of the participants.

Table 1

*Demographic Distribution of Participants*

Participant	School	Age (y)	Grade taught	Length of teaching experience (y)
1	1	48	4	24
2	2	26	4	4
3	2	44	4	20
4	4	24	2	2
5	3	43	3	21
6	1	40	2	18
7	2	47	3	11

Several themes emerged from the research questions. Following is a restatement of the first research question: In what ways do teachers perceive that they are prepared or unprepared to instruct students with autism? Five themes emerged for this research question: (a) preservice teacher preparation (b) ongoing professional development (c) support of administration and staff, (d) needed resources, and (e) training of paraprofessional staff. Following is a restatement of the second research question: How do teachers believe that their attitudes and perceptions affect the inclusion of students with autism? One theme emerged from this research question: (f) teacher-student relationships. Following is a restatement of Research Question 3: Which teaching methods and intervention strategies do teachers perceive to be most effective in helping students with autism advance academically and socially in the inclusion setting? Three

themes emerged from this research question: (g) social interaction, (h) communication, and (i) teaching strategies. Following is a discussion of each of these themes.

### **Theme 1: Preservice Teacher Preparation**

The first research question focused on teachers' perceptions of their own educational experiences as preservice teachers. As of this writing, few universities offered an autism endorsement, and, because of the lack of specific instruction for educating these children, many teachers completed their teacher preparation programs underprepared to teach students with autism (Brock et al, 2014; Morrier, Hess, & Hefflin, 2011). None of the participants in this study held an autism endorsement. Throughout the interview process, all participants answered this question in essentially the same manner. Although each teacher was licensed to teach in the state of Ohio, none reported feeling adequately prepared to teach students with autism. Participant 3 appeared passionate about the need for preservice teachers to receive more coursework in the area of autism inclusion. When asked to discuss her preservice training in the area of autism, she simply stated, "None whatsoever."

Participant 7 stated, "I think we touched on it. Just in different classes. Nothing formal." Participant 4 stated, "Not specifically in autism. When we talked about disabilities, I feel there was one student who was consistently talked about, but I did not have any specific training... General disabilities, yes." Participant 3 stated, "I was prepared to treat all students with special needs as individuals, that each child needs their own set of boundaries. But I was not specifically prepared to deal with these certain needs." Participant 7 stated,

For example, one student needed cuddling for a second. Sometimes when he's having an episode, how to restrain him... He had to wear a vest, and little things I would never even think of... if I hadn't had that experience. Things like pressure and tactile handheld things. Every student is so different in their level of autism. Little triggers and learning those triggers and knowing how to communicate that with parents, too. I just don't feel like I got the correct training, but I was luckily in an experience that allowed me to do that.

### **Theme 2: Ongoing Professional Development**

Participants suggested that professional development was a factor in their perceptions of feeling prepared and successful in the classroom. Nevertheless, several reported that professional development in this area was greatly lacking. Participant 2 stated that her district was excellent with the professional development of teachers, but not in the area of autism or of working with students with disabilities. Teachers mentioned that sessions were useful for learning about testing and district policies but not particularly useful in giving them meaningful information that could be used with exceptional students.

Participant 6 stated, "I have had no formal training. I was not prepared. I have prepared myself through my own readings, my own experiences, and discussions with doctors." Participant 5 stated, when asked about her professional development experiences, stated: "From time to time we have professional development regarding students with special needs, but nothing about autism. I meet with the guidance counselor

about specific needs, but there has been no formal training.” The teacher explained that she received a packet about autism before a student with autism entered her classroom.

In sum, all participants reported that they currently felt prepared to teach students with autism. This sense of preparation, however, was due to personal experience and research, rather than preservice preparation or ongoing professional training.

### **Theme 3: Support of Administration and Staff**

I asked the question: “Do you have the needed support and resources to teach a child with autism effectively?” While this question is not directly tied to the first research question, it is indirectly related in regards to the perception of preparedness and needed support. Participants noted their perceptions regarding the support and needed resources to make them feel prepared and supported to teach in the inclusion environment.

Throughout the interviews, participants spent much time discussing the amount of support that teachers of children with autism need and how much they actually received in their current placements. When asked about support from administration, each of the seven participants responded positively. Participant 4 said,

Absolutely! The administration is fabulous. Our counselor will help us find information. We have an IEP [Individualized Education Plan] overseer who will help us out if we have particular needs within the classroom. We have an intervention specialist who will record data and share it with me. This data will demonstrate if particular goals are met. I feel very supported here.

Another teacher spoke of her positive experiences with support staff and faculty. “We have an amazing speech pathologist. We have great intervention specialists. They are a support for our kids.” Participant 7 stated,

If you’re like, ‘I don’t know what to do with this kid!’ your principals are all on board to help you out. And the counselors are really good. We have a person who oversees IEPs so that we have data to demonstrate if their goals are met or not. She works pretty hard.

In sum, all participants reported feeling supported and positive about their relationships with other faculty members and support staff.

#### **Theme 4: Needed Resources**

Another theme that emerged through the question “Do you have the needed support and resources to teach a child with autism effectively?” was related to the kinds of classroom resources that teachers had available to them and whether the teachers believed that these resources were adequate. Participant 1 stated, “Oh, yes. Absolutely. At my former school we had a sensory room. Here we have no sensory room, but we have sensory objects available. We also have an amplification system in the classroom.” Participant 2 stated,

We do have follow-along aides for some of the more severe students. We do have some kids who receive pull-out. Students go out for physical therapy. We have a sensory room. That is a big help! Students can walk around the building square with an intervention specialist. I do have a disk in my room that children can sit on. It gives them stability and allows them to focus on balance. I have bands

around the bottom of one student's desk so he can kind of bounce around. It soothes him.

Participant 5 stated, "I have a lot of things in here. He likes the beanbags in here. He will pull a bean bag over and sit on it."

Participant 7 stated, "It would be nice to have tools – even little things for them to play with when they are sitting down." Participant 1 discussed some of her resource needs:

Some of them need more sensory items, whether it's fidgets or a yoga ball. Some need cushions they sit on and so forth. I don't even know that it's necessarily the kids with autism. I'm finding more and more kids that just need something. Just need a little something else. So if it works for the general population, it's going to probably work for the kids with autism, too.

Most of the participants in this study expressed the need for more sensory items within the classroom. To improve the ability of their classrooms to accommodate the students, the teachers were generally purchasing items with their own funds. Only one of the four schools whose teachers were selected for this study had a sensory room for children to use. Teachers who wanted to allow the children sensory experiences within the classroom had to find their own ways to accomplish this goal. However, the findings showed that the administrators and support staff members seemed willing to help with this process, thus making teachers feel more prepared to teach in the inclusive setting.

**Theme 5: Training of Paraprofessional Staff**

Although no particular interview questions included questions about paraprofessional aides, the theme of training paraprofessional staff members, known as *follow alongs*, continually arose throughout the interview process. This question was tied to the first research question regarding teacher preparedness. Participant 7 stated,

I worked with a teacher who had training with students with autism and I think that was very helpful, but ... follow alongs, usually to be honest, are just follow alongs. Sometimes you get the luck of the draw and you have a really great person who loves kids, who works well with kids, who just knows how to support those children specifically. Sometimes you just have a person who is assisting them and following them along. To be honest, I don't feel like we have the correct supports for follow alongs.

Participant 2 spoke of her negative experience with a paraprofessional aide:

I was assigned an aide to help a child with autism in my classroom. She was very territorial with this student. She would defend him to the other children. She would do tasks for him that he was able to complete on his own. She wrote everything down for him instead of coaching him to do the work for himself. At one point I had to speak with her concerning her treatment of the other students in my classroom. She was speaking harshly to them and did not practice good classroom management strategies. It was a very uncomfortable situation for me as the classroom teacher. I felt as though she needed much more training before she was placed in a classroom with any children, let alone the child with autism.

My conversations with teachers indicated that paraprofessionals aides, also known as follow alongs, needed more extensive training before working with some of the most vulnerable students in the classroom. Participants differed as to whether having an aide was the most effective way to assist students with autism.

### **Theme 6: Social Interaction**

When I asked about the social interactions that occurred with the classroom, I heard many positive responses from the teachers. Participant 1 discussed her experiences with having a child with autism in her classroom. She stated,

Students get a chance to practice social skills with the speech pathologist. She will have a lunch bunch periodically. Students with autism can interact with each other and with typical peers. This seems to lessen the anxiety of making new friends and talking to others. The speech pathologist is there to guide their conversations, providing them with prompts and furthering discussions in a positive way. They get to interact with other third-graders. They get to have discussions with peers in a safe environment that is supported with typical peers. It's a positive experience.

Participant 4 spoke about a particular child in her classroom. She said, "It was difficult to try to find ways for him to connect with people in social settings. It was really interesting seeing him in second grade working with a group." She then continued,

Then in third grade he would slowly start giving his input... It is nice to see him grow, but he is just a little behind some of his peers in the sense of working within a group, being able to take criticism or compliments well. Knowing that he is in

third grade, it might kind of look like a kindergartener's way of dealing with a social issue.

The teacher then mentioned that this child needed much modeling and much patience. She spoke fondly of the student and seemed truly to enjoy having him in her class.

Participant 1 proudly spoke of her class and of how the other students treated a student with autism. She stated,

They are very empathetic. This is like gold! I hate to brag about it, but the kids really just are like gold. They realize that there's something different. They also realize what sets him off and they're very reassuring with him, telling him it will be okay. And not just with the kids with autism. Just in general. I've been very fortunate in that aspect at least, especially at this age level.

The participant was proud of how well her students treated others with differences.

Participant 7 spoke of the social interactions within her classroom. She mentioned,

Peers are very sweet. They will help out when needed. They enjoy working in groups. This helps build social skills. They work with typical peers in paired work, too. I have one student who does exhibit head banging. The students are kind of used to it. They are very sweet. It [the head banging] is reduced when he is with a follow along.

Participant 3 discussed that she grouped students with autism together with typical peers, as well. She said,

I am very careful not to always group them with the same students. It can be challenging to be paired with a child with autism. I try to prep the students. I make them aware of the situation so it can help them deal with behaviors. This is an important part of helping them to be empathetic. I encourage them [typical peers] to be sweet. Not to ask the students [with autism] any questions about the disability.

This theme was tied to the third research question, “Which teaching methods and intervention strategies do teachers perceive to be most effective in helping students with autism advance academically and socially in the inclusion setting? Throughout the interviews, teachers discussed their views regarding social interactions and how they played a role in this interaction.

### **Theme 7: Communication**

Communication was a recurring theme in this study: communicating with the students, communicating with families, communicating with other professionals. Each of the teachers deemed communication invaluable. According to Participant 7, “I honestly think the biggest help to me has been in talking with the parents.” Participant 1 stated, “Typically by this age the kids are pretty good if you just tell them ahead of time that today’s not going to be like a normal day. Communication is probably the most helpful with those kids. Even the parents know ahead of time when those days are coming. The parents are very helpful as well.”

Participant 4 had one boy with autism in her classroom. She emphasized the importance of communicating with all support staff and the principal. She mentioned that

she talked regularly to each stakeholder in this child's life so that she could offer him the best instructional support in her classroom. Participant 6 was emphatic about the need for communication, especially when teaching a child with autism. She stated,

Communicate with parents every day. Every...single...day! Have a communication log for your students with autism. Let the parents know what is going on. Their children can't communicate effectively about what is happening at school. Most parents are in tune with what is happening with their children. Parents are the best advocates for their children. Listen to the parents!

This theme correlated with the third research question regarding teaching methods and strategies. The use of appropriate communication in the classroom emerged as an effective strategy that many teachers used.

### **Theme 8: Teaching Strategies**

Each participant in this study offered several helpful teaching strategies that allowed students with autism within their classrooms to experience academic and social success. This theme was directly tied to the third research question. Participant 6 noted that students with autism tended to struggle with reading comprehension and retelling of stories. The participant noted that many students tend to become anxious if they did not know what activity is coming next. She and several other teachers discussed the need for picture schedules and many visual images. According to this teacher, when the students know what to expect, their anxiety levels lessen and they can focus on the task at hand. Participant 2 stated, "I have a daily checklist taped to their desks. This allows students

with autism to see what is coming next. It allows them to predict any changes in schedule or routine. It can be very reassuring.” She also stated,

We use a lot of graphic organizers. Some of the students with autism need more scaffolding. I may fill out part of their organizer ahead of time. The graphic organizers help children who tend to be more visual. Many children with autism rely heavily on visual clues.

Participant 1 also made use of graphic organizers because children with autism tend to struggle with writing. The teacher noted that she would modify the workload to be more manageable. Participant 3 spoke of the struggle with writing, as well. She mentioned that she would often give a child with autism writing papers or graphic organizers that are partially completed so as to offer them support.

Participant 7 spoke about her evolution over the last 11 years as a teacher of students with autism. One strategy that she used and found successful was keeping a journal. She stated,

I’ve been through a lot. I’ve changed. I reflect a lot. I keep a journal. Change in the moment. If your lesson is not going well, stop it! Move on to something else. Do brain breaks with your kids. They can’t sit for a long period of time. Don’t be afraid to change and adapt to their needs.

Participant 4 mentioned the importance of breaking assignments into smaller pieces. She said of one particular child in her class,

You show him only three problems. Then you show him another three. It’s small pieces at a time because he is just easily frustrated, easily overwhelmed. I mean,

I'd give him the same assessment, but he would do two problems and then take a break. Breaks were very big.

Participant 6 noted that students with autism could vary greatly from one another and that each child from day to day could be very different. She said,

I don't have any tried and true strategies because I have noticed it also depends on the day! It also depends on the situation... You have to be willing to go with the flow and be sensitive and realize how they function. Flexibility is the biggest thing.

A veteran educator discussed a strategy that seemed to work well with many of her students with autism. She ensured that one wall in her classroom was very simple. The wall was painted white or a neutral color and was used as the background where she held most of her lecturing and group discussions with students. She stated, "This allows the students to focus on me and what I am saying rather than on a distracting background." She suggested that this simple strategy could help even typical students stay focused.

Interestingly, no teacher mentioned popular methods such as ABA, TEACCH, or RDI by name. Nevertheless, each participant spoke of many strategies suggested within popular models of education. I noticed an eclectic approach to the teaching strategies mentioned. Several participants discussed conducting their own research through organizations such as Autism Speaks to find available help. This varied approach to teaching strategies seemed to relate directly to the lack of formal training in the area of autism. The teachers were simply researching and trying new approaches to discover

what worked with each child. There was no allegiance to a particular program or theory. The participants all discussed their desire to do what was best for each individual student with autism.

### **Theme 9: Teacher-Student Relationships**

The final theme that emerged from the interview process was the relationship between the teacher and the student. This theme related to the second research question regarding teacher attitudes and perceptions. Each participant spoke of her students with fondness and true concern. As was discovered in the theme of social interaction, for students lacking the skills to communicate effectively and express emotion properly, relationships can be challenging. However, all participants discussed ways in which they tried to engage and interact with their students with autism.

Participant 1 discussed the importance of modeling a positive relationship for the other students. She stated,

I consistently model to the class that we're all different and show them how we care for people. We love them in spite of their differences and have patience. If I model more patience and understanding, that's how the class is going to respond.

It really came down to me and what my tempo was with him.

Participant 7 spoke fondly of a child in her classroom: "I love his humor. His humor is like no other. He just tells it like it is. It's just pretty funny. He makes me laugh." She then discussed both boys in her class with autism. She said, "From Day 1 to now, you wouldn't believe it. It's night and day. Just from the first week to now. It's amazing how much progress they have made. I'm really proud of them." As we spoke, I

was able to see her positive feelings toward the two students. It was encouraging to see how the positive relationship was helping the students move forward in their academic progress as well as socially.

Even though participants did not all explicitly discuss their relationships with the students with autism, the fondness and a desire for the students to succeed were apparent. Not one participant spoke negatively about a student or even about their experiences in finding the necessary help. I noted a general positive feeling toward the students based on their facial expressions, body language, and tone of voice when discussing the students with autism. Each of the participants seemed to welcome the challenge of teaching a child with autism. This allowed me to understand how teacher attitudes and perceptions can directly affect the inclusion process for students with autism.

The preceding themes emerged from the data and allowed me to answer the research questions related to this study. The first research question asked, “In what ways do teachers perceive they are prepared or unprepared to instruct students with autism?” The collected data from this study have revealed that participants did not initially feel adequately prepared at the preservice level. Each of the participants stated that they had not received any specific training in teaching students with autism prior to entering the classroom. Several participants noted that they became more prepared by furthering their own education by reading journals, meeting with other professionals, and attending professional development. Teachers also noted their feelings of preparedness were related to the support of colleagues and administration and acquisition of needed classroom resources and materials. The second question asked, “How do teachers believe their

attitudes and perceptions affect the inclusion of students with autism?” The results of this study have shown that teachers do feel their attitudes can affect the inclusion process positively or negatively. The teachers in this study discussed several ways in which they attempt to foster positive relationships with their students. These positive relationships allow the students to feel included in the classroom environment. Several participants discussed how their personal actions affect the actions of the typically developing students in the classroom. When teachers model positive interactions toward students with autism, their peers tend to follow the lead of the teacher, thus allowing for a more inclusive and accepting environment. The third research question asked, “Which teaching methods and strategies do teachers perceive to be most effective in helping students with autism advance academically and socially in the classroom?” It was interesting to note that each of the participants responded very similarly. The data revealed that no particular strategies are listed as effective for all students in general. However, each participant mentioned different strategies that work well for individual students. The participants discussed things such as the use of social stories and picture schedules as basic strategies that work well for many students with autism. Several participants noted having lunch or cooperative learning groups with the student with autism and typically developing peers in small group sessions to build relationships and practice social skills. Other participants made mention of using alternative seating during work time. These were a few of the strategies mentioned in the data. It is important to note that each participant stressed the importance of teachers getting to know each student as an individual and trying different strategies to see what works best for each child.

## **Conclusion**

The purpose of this qualitative case study was to understand the ways in which teachers can effectively include students with autism based upon their training, attitudes, perceptions, and use of strategies within the classroom. During data analysis, the following nine themes emerged: (a) preservice teacher preparation, (b) ongoing professional development, (c) support of administration and staff, (d) needed resources, (e) training of paraprofessional staff, (f) social interaction, (g) communication, (h) teaching strategies, and (i) teacher/student relationships. These factors were identified as contributing to effective educational practices and the inclusion of students with autism.

This study has supported the need for further training of teachers. The participants in this case study noted feelings and experiences that aligned with the research questions of this case study. Teachers agreed that specific training regarding the needs of the student with autism must take place at the preservice level. Teachers noted a need for support and resources in order to make them feel more prepared to teach in such a unique setting. Another theme, although indirectly tied to question 2, was regarding further training of the paraprofessional aide assigned to teachers and students with autism. This lack of training is also affecting the inclusion process, therefore showing to a need for improvement within schools. Teachers discussed their own perceptions of students and noted a direct connection between their own attitudes and the attitudes of students with autism and their typically developing peers. Relationships and communication were

noted to improve with more training and staff support. Teachers made mention of specific strategies that allowed the instruction of academic and social skills to improve.

In light of findings from the case study, the need for a specific training course at the preservice level was evident. Based upon Bandura's Theory of Self Efficacy (1994), an online university course entitled *Teaching Students with Autism* was developed. Participants noted the need for more training, yet also noted a lack of time and resources to attend workshops or enroll in university courses. In response to this need, I developed an online course that will address the needs highlighted in the literature and subsequent case study. This course will be offered as an elective course to preservice university students. As an elective course, this will not entail any additional tuition cost for students, yet will allow them the opportunity to gain crucial information regarding the characteristics of students with autism and how those students can effectively be included into the classroom. The online option has been chosen so that students will not have to physically attend class and will have the freedom to visit online modules in their home setting. Another reason for this online format was the potential for this course to possibly be offered to those teachers who have already obtained licensure and are currently teaching or enrolled in a master's program. With the online format, preservice and licensed teachers will have the opportunity to complete coursework when they are afforded time within their own busy schedules. Initially the course will be offered to university students with the intent of advertising it to others within the community.

Based on the literature review and case study findings, Section 3 presents a proposed online course designed to meet the education needs of teachers of students with autism in the inclusion setting.

### Section 3: The Project

#### **Introduction**

The purpose of this project study was to investigate the educational practices of teachers and the inclusion process of students with autism. Owing to the growing number of students diagnosed with autism and the practice of the full inclusion model, teachers are expected to educate many children with diverse needs in the classroom full of typically developing peers. Because of the demand for highly qualified teachers who can meet these demands, educator preparation programs must begin to examine their course offerings to ensure that teachers are well prepared to teach students with autism in the confines of the traditional classroom setting.

This project study involved interviewing and observing seven local teachers who have experience in teaching students with autism. Participants' candid responses regarding their own educational experiences, their needs in the classroom, their attitudes and perceptions, and their teaching strategies have inspired me to develop a course that will encapsulate the findings of this case study. Based on the challenges surrounding teaching students with autism, I formulated a proposal for an online university course entitled *Teaching Students With Autism*. Upon completion of the course, the teacher candidate will be able to:

1. Define autism spectrum disorder.
2. Describe characteristic of students with autism.
3. Apply current research regarding students with autism.

4. Use acquired skills to support the development of social skills in students with autism.
5. Practice effective social communication interventions.
6. Develop awareness for available treatment options for speech, language, and motor delays.
7. Adapt classroom environments and use sensory integration.
8. Use positive behavior supports in the inclusion classroom.
9. Instruct students with autism to use replacement behaviors and expand their functional communication.
10. Implement effective classroom structure and schedules.
11. Use visual supports and implement academic modifications.
12. Encourage peer support between students with autism and typically developing peers.
13. Effectively communicate concerns with families.
14. Support families through the IFSP/IEP process.
15. Provide community support and resources to families with a child with autism.

### **Rationale**

As a university professor, I am profoundly aware of the need for teacher candidates to be educated in effective ways to include students with autism in the regular education classroom. Because of this persistent need and problem, a case study was developed to determine how teachers perceive the inclusion process, how much

preservice training they have received, how much professional development has occurred since the initial license was issued, and specific strategies that have been effective. Based upon the results of this case study, several common themes were identified as contributing factors to effective inclusion of students with autism. Best practices regarding inclusion, teacher perceptions, and teacher development were identified from a review of the literature that addressed the findings of this study. The results of this case study highlighted the need for additional training of future and current educators and support of administration. The need for extensive training in specific teaching strategies and classroom management were shown to be reoccurring themes throughout the study. However, a lack of time to attend trainings or self-educate were noted as barriers to furthering the knowledge base regarding students with autism. The project chosen to address this problem is an online university course in which teacher candidates and licensed teachers may enroll.

The online format was chosen due to the time constraints of preservice and licensed teachers. While initially being offered as an undergraduate elective, a long-term goal is for this course to be offered to licensed teachers as a tool for professional development and license renewal requirements. This online course addresses each of the themes identified within the case study, which will allow the course participants to gain necessary information regarding the effective practice of inclusion and students with autism.

## **Review of the Literature**

A focused search of the literature was performed to address the main themes that would drive this project: teacher perceptions regarding the inclusion process, preservice training and professional development, and best practices and teaching strategies in the inclusion classroom. Databases used included Academic Search Complete, ERIC, Sage Premier, Education Research Complete, and the Oxford Education Bibliographies. Key words used in the search included *teacher perceptions, autism inclusion, effective teaching strategies, preservice teachers, teacher training, professional development, online professional development, barriers to teacher training, students with autism, best practices, teacher attitudes, inclusive education, behavioral interventions, classroom management, positive behavior supports, academic modifications, peer support, disability, academic interventions, and teacher mentoring.*

### **Teacher Perceptions**

Research data showed that perceptions of teachers and preservice teachers regarding students with autism could have a great impact on the inclusion process. Findings from the literature found in section one revealed that teachers who feel they have been adequately trained have a tendency to feel more positively about including students with autism. The literature also suggested that teachers with more exposure to students with autism during preservice experience expressed more positive feelings about the inclusion process. Findings from the second literature review discussed the relationship with sufficient training and overall positive feelings toward the idea of

inclusion. Common ideas regarding teacher perceptions and attitudes are discussed below.

A common theme of positive perceptions revolved around the ideas of teachers receiving the adequate training prior to licensure and sufficient mentoring during the first few years of induction to the classroom (Hemmings & Woodcock, 2011; Lane, & Ray, 2012; Rayner & Fluck, 2013; Zeng, 2016). Each of the studies varied, but a common theme was evident. Zeng's study (2016) discussed the needs within the inclusion classroom and the importance of student teachers learning to use different teaching styles to accommodate for the differences needs of individual students. Candidates were assessed on their perceptions of different teaching styles and how particular styles may affect their future students. Wormnaes, MKumbo, Skaar, & Reseth (2015) in their study of preservice teachers, teacher candidates were asked to formulate concept maps based upon their perceptions of teaching students in the inclusion classroom. These concept maps were used to identify gaps that teacher candidates may have in their general knowledge of students with disabilities and to identify perceptions and attitudes they may harbor toward students who may be included. It was noted that pessimistic views of teachers might be a barrier to the successful inclusion process. Teacher candidates noted a hesitancy to include students until the conditions were optimal for learning, such as proper training and needed materials. The study concluded with the premise that teachers are the driving force behind a successful inclusion programs thus teacher attitudes and perceptions must align with those of the full inclusion model.

Beacham and Rouse (2012) explored the relationship between student teachers and their beliefs and perceptions regarding inclusion. Their study questioned 216 student teachers on their perceptions regarding inclusion before an inclusion course and after. Of the students surveyed, the majority noted positive feelings before the start of the course. By the end of the course, the majority of the students were in favor of inclusion, yet noted their hesitancy in implementing particular strategies and student groupings. It was also noted that elementary student teachers answered more favorably than did their middle school and high school counterparts. Their study also suggested that the younger teachers are, the more flexible they will be in their thinking, thus more likely to embrace the idea of including students with autism into the regular classroom.

A second theme of teacher perceptions focused around the aspect of the school environment and peer mentoring. Jordan, Glenn, & McGhie-Richmond (2010) discussed a project known as the Supportive Effective Teaching Project that supports the idea that inclusive teaching practices are directly tied to teachers' beliefs about their students' abilities and disabilities and about their roles as teachers. This project discussed how the school environment could play a major role in shaping the belief system of young teachers. The study suggested that teachers do not know enough about particular disabilities and they are in need of more basic understanding. If the school environment is supportive of a novice teacher through positive peer mentoring for the first three years of teaching, the inclusion process will be enhanced through a mind shift in the belief system and confidence levels of new teachers. Ko and Boswell (2013) suggest that mentoring can determine how teachers feel about the inclusion process. During the early stages of

teachers' careers they begin to formulate their own ideas about inclusion should work and they begin to develop their own perceptions of students with disabilities and their place in the regular classroom. This is an impressionable time for beginning teachers.

The school environment must be perceived as supportive in order for novice and veteran teachers alike to be successful when including students that are often viewed as challenging. In a study conducted by Loaicano and Palumbo (2011) only 62.5% of building principals felt confident enough in their own understanding of autism to support teachers and conduct evaluations. Urton, Wilbert, and Hennemann (2014) conducted a study regarding attitudes toward the inclusion process. It was found that the attitudes of the principals were a major factor in the attitude of the teachers. When teachers feel confident in the skills of their leaders and witness positive attitudes, their perception of the inclusion process is most likely to be more favorable.

A third theme that was prevalent throughout the literature was the perceived behaviors of students with autism. Several studies indicated that many teachers perceive the behaviors of students with autism to be unacceptable for the inclusion classroom (Humphrey & Symes, 2013; Sansosti & Sansosti, 2012; Soto-Chodiman, Pooley, & Taylor, 2012). This perception is in part due to the lack of fieldwork with students with autism during their preservice teaching experience and a lack of education in this area (Arthur-Kelley, Sutherland, Lyons, MacFarlane, & Foreman, 2013). Some teachers also noted that including students with autism may have a negative effect on their typically developing peers due to constant interruptions, outburst, and unacceptable behaviors that distract students from their work (Lindsay, 2013; Liu, 2013). In a study conducted by

Karal and Riccomini (2016), a group of special education teachers and general education teachers were given the Autism Attitude Scale for Teachers to measure their perceptions and attitudes regarding including students with autism. The study showed that the general education teachers had positive attitudes and perceptions overall, but the special education teachers scored higher in their receptiveness to the challenges that students with autism bring to the classroom. Research suggests that special education teachers may have scored higher thus noting more positive perceptions due to their specialized training in the area of autism (Kosmerl, 2011).

The views and attitudes of teachers do vary greatly based upon their level of expertise, the amount of preservice and post licensure training received, and upon personal experiences. Research points to greater differences in perceptions especially for teachers with an educational background in autism inclusion and those without. The results of a study of educated and non-educated teachers in Greece (Syriopoulou, Cossimos, Tripsianis, & Polychronopoulou, 2012) showed a vast discrepancy in teacher perceptions and beliefs. Over 80% of teachers with previous autism training believed that students with autism can achieve academic excellence, whereas only 54.5% of teachers without training believed that same statement. The majority of teachers with previous training believed that students with autism should be treated through special education and behavior modifications, however, non-educated teachers believed that drug therapy was the best option for dealing with students with autism. The study concluded with the statement that majority of all teachers believed that with proper education, any teacher could educate a child with autism in the inclusion classroom.

Self-efficacy as defined by Bandura (1997, p.3), is “the beliefs in one’s capabilities to organize and execute the course of action required to produce given attainments.” This idea of self-efficacy in online professional development is crucial because the teacher candidates must believe in their abilities to be successful in the online learning environment. If these teacher candidates believe they are capable of acquiring crucial information regarding students with autism, then they are more likely to attain the knowledge required to successfully include students with autism (Howard, 2013). Engaging in meaningful online interaction and specific research-based instruction may enhance self-confidence of teachers in the inclusion classroom.

In summary, teacher perceptions and beliefs are directly tied to proper implementation of inclusion programs. This portion of the literature review focused on several key areas in which teacher perception and beliefs have impact upon the inclusion process: adequate training, school environment and peer mentoring, behaviors of students with autism. These aspects were discussed in detail within this section regarding perceptions, but these perceptions then lead to other areas of the literature review.

### **Preservice Training and Professional Development**

The qualifications that teachers possess have a direct effect on how they best include students with autism into the regular classroom (Mustafa, Niazy, Hassan, & Ahmed, 2013). Research has shown that teachers who are not adequately prepared may have misconceptions regarding students with autism and may have greater difficulty in managing behavioral and academic challenges (Billingsley & Smith, 2011; Eikseth, 2010; Gulec-Aslan, 2013). Due to the greater demand on teachers to educate students

with autism, teachers need to have adequate knowledge and skills prior to entering the inclusion classroom (Vuran & Olcay-Gül, 2012). It is crucial for teacher preparation programs to begin implementing specific training for general education teachers and special education teachers that would include specialized instruction in the area of autism inclusion. However, since few teacher preparation programs are including this topic in required curriculum, school districts must supplement teacher knowledge through targeted professional development that includes instruction on knowledge specific to autism and effective inclusion practices (Gulec-Aslan, 2013). Yet due to lack of time and resources many schools are not providing this type of specialized training for teachers (Surhheinrich, 2015). Training of teachers in evidence-based practices within the public school setting continues to be a challenge in the field (Stahmer, et al., 2014). Several researchers have indicated that teachers need intensive instruction to effectively include and instruct students with autism (Odom et al., 2013; Wong et al. 2013). Those teachers who do receive training may not fully implement learned practices due to receiving limited initial instruction without ongoing professional development and feedback on their performance (Ruble, Dalrymple, & McGrew, 2010; Stahmer et al., 2014).

### **Benefits of Online Professional Learning**

As a result of the increased numbers of students with autism, the field of education has changed drastically. The learning expectations of students have greatly increased and thus the expectations of the classroom teacher have greatly increased. A result of this change has led to a greater need for teacher education. A barrier to teachers receiving such education is the availability of quality professional training for teachers

who have busy schedules and may live in rural areas (Jiminez, Mims, & Baker, 2016). Researchers have found that educators in rural communities with limited access to professional development resources have responded well to online professional development to enhance their education for students with significant disabilities, such as autism (Erikson, Noonan, & McCall, 2012). Online learning is now considered by many universities to be a crucial part of the higher education experience. Teacher candidates and licensed teachers need training options that are flexible and make use of multimodal types of instruction (Gosselin, et al., 2016).

The use of online professional development can allow educators to interact and collaborate with peers in an online learner-centered environment through the use of discussion boards and community forums (Choo & Rathbun, 2013). This type of collegial interaction with peers and the instructor may not be possible in a traditional workshop setting with a presenter.

In summary, this portion of the literature review has highlighted a need for specialized training in the area of autism inclusion. Lack of training before initial licensure, lack of ongoing professional development once entering the field, and lack of feedback on teacher performance have been indicated as needs for improvement in autism inclusion. Due to this need for further specialized training, an online learning course for teacher candidates was developed to address the varied learning needs of teacher candidates in a flexible, collaborative learning environment.

### **Best Practices and Teaching Strategies**

Two predominant intervention methods appear throughout the literature review—comprehensive treatment models and focused intervention practices (Smith, 2013). In a comprehensive review by Odom et al. (2010), 30 comprehensive treatment models were found to exist in the United States. These models generally take place in a community placed setting and focus on the comprehensive treatment of an individual with autism. The focused intervention practices model targets specific needs and skills of the student with autism. These models tend to be used more within the school and classroom setting. Teachers may use these kinds of interventions when formulating goals for the student. This has been referred to in literature as the technical eclectic approach (Odom, Hume, Boyd, and Stabel, 2012). After an extensive study conducted by Wong and his colleagues, 27 focused intervention practices met all of the criteria required to be classified as evidence-based practices (Wong, Odom, Hume, et al. 2013). These focused intervention include evidenced-based practices such as cognitive behavior interventions, exercise, modeling, scripting, structured playgroups, technology aided instruction, and video modeling.

Cognitive behavioral intervention has shown to be effective for elementary and high school aged students. It addresses social, communication, behavioral, cognitive, and mental health issues (Drahota, Wood, Sze, & Van Dyke, 2011; Singh, Lancioni, Manikam, & Wynton, 2011). Exercise has been shown to be an effective intervention with 3-5 year olds and 12-14 year olds. It addresses issues with classroom behavior, prepares students to learn, focuses on academic skills, and focuses on fine motor and

gross motor skills (Cox, 2013). Modeling is an effective strategy for children aged birth through two years and for 19-21 year old students. It involves demonstrating desired behaviors for students to imitate. It can be used to address social skills, school readiness, academic skills, and vocational skills (Cox, 2013; Landa, Hohlman, O'Neil, & Stuart, 2011). Scripting is a strategy that works best with 3-5 year olds and 15-18 students with autism. The strategy introduces a script for students to read and anticipate what may occur and will allow them to respond in an appropriate manner. The script is used until the student can model the desired behavior without prompting or support. This intervention strategy is used to reinforce skills such a school readiness, appropriate play and group interaction, social skills, and vocational skills (Fleury, 2013).

A structured playgroup is a strategy best used with students in elementary grades. An adult leads a group of students with autism and selected typical peers to encourage appropriate social skills and interactions in a guided setting. This allows students with autism to observe and practice appropriate social skills and communication skills with typically developing peers (Odom, 2013). Technology aided instruction is the use of any type of technological device that may assist the classroom teacher in instruction, modeling, or communicating with the students with autism, This type of intervention works best with preschool age students up through adulthood. Targeted skills such as communication, social skills, and academics can be directly addressed through technology interventions (Mechling & Savidge, 2011; Richter & Test, 2011; Odom, 2013; Watkins et al., 2015). Video modeling is another effective intervention strategy in which the teacher video records desired behaviors and targeted skills for the student to

view and practice. It can also be used for the teacher to record the student performing inappropriate actions and then view with the student to practice the desired skills and behaviors. This has shown to be effective from birth through adulthood (Buggey, Humes, Sherberger, & Williams, 2011; Plavnick, 2013).

In conclusion, the types of interventions that have been identified are vast number (Hume & Odom, 2011; Wong et al., 2013). Teachers will need to research evidence-based practices in order to select the proper interventions for the students within their own classrooms. This literature review has contributed to the knowledge base that led to the creation of the proposed course *Teaching Students with Autism*. In this course, teacher candidates will be receive instruction regarding evidence-based teaching strategies and will be encouraged to research strategies that will assist students with autism.

### **Project Description**

This project consisted of the development of an online training module entitled *Teaching Students with Autism*. This course will be offered as an elective 15-week course to teacher candidates who are seeking initial licensure. Since the state of Ohio does not require a course specifically regarding autism, the university has not considered including this course as a part of the required teacher education sequence. Based upon the case study and literature review, this course was developed to meet the needs of the preservice teacher. Bandura's Theory of Self-Efficacy has been the conceptual framework upon which this project has been based (1997). Throughout the interview portion of my case study, I was made profoundly aware of the lack of training that inclusion teachers receive prior to entering the classroom. It was alarming that not one teacher reported receiving

any formal training in the area of autism inclusion, yet each of the teachers were required to include students with autism into their general education classrooms. Since I am employed at a university that offers a teacher education program, I felt compelled to add an elective course that could give teacher candidates the option of taking a course that could better prepare them for the challenging classroom situations they may inevitably face upon obtaining a teaching position.

Implementation of this project will begin with the dissemination of the results of the case study to and literature review to faculty and administration in the Department of Education. Key stakeholders must first understand the problem and how this problem directly affects teacher candidates. This discussion will take place at a department meeting and will hopefully include discussion of how this project can resolve some of the problems that our department has recognized in regards to the topic of autism. The proposal for the online course will then be presented to faculty. An implementation timeline was established and a proposed start date would be Spring 2017. This timeline for implementation has been selected to give undergraduate students time to enroll in the course and complete the training before obtaining their initial teaching license in July 2017.

### **Potential Resources and Existing Supports**

Resources are readily available for the online training module for this project. The university currently has an online learning platform established. I have already developed online courses and have the necessary skills to formulate and implement the module. All students have access to this platform through their student portal. Many of our students

have taken online coursework and have become familiar with the learning platform. Technology support is readily available through our IT department either through Chat Support, email, or face-to-face meetings. Several classrooms and conference rooms throughout campus are available for meetings when needed. Faculty and administration understand the need for further training in this area. Our faculty members are devoted to ensuring that our students receive a quality education that will prepare them for the classroom. Several faculty members have expressed their support of adding this elective course into the existing curriculum. Dialogue regarding supporting our teacher candidates and better equipping them through the inclusion process have already taken place.

The cost for implementing this project should be budget neutral. Our department already has the necessary components in place to ensure this project can take place. I am conducting research and managing this project in addition to my course load so no other faculty would need to be acquired for full implementation.

### **Potential Barriers**

Potential barriers could include resistance from administration to add additional coursework to the already demanding load students are taking. Many of our teacher candidates are also athletes and have additional responsibilities related to their sporting events. Students live very busy lives and may not want to enroll in an additional education course. However, if this elective course is presented in a way that is shown to be thoughtful and meaningful, there will most likely be little resistance from administration (Tokarski, 2011). The course will be online so that busy students can access it at any time of day.

Another potential barrier is the technology department not wanting to assume more responsibility. However, if the administration agrees that this course is a necessary addition to the coursework, then the technology department must accommodate our requirements for the coursework of teacher candidates.

### **Project Evaluation Plan**

The end product of this project study was an online course entitled, *Teaching Students with Autism*, designed for teacher candidates who are seeking initial licensure. A continuous evaluation design for this project study will be outcomes based. Course participants will be expected to successfully complete all assignments with 80% accuracy. Success of any online course also involves remaining open to continuous feedback of the users. Formative evaluations will be used, as well as a summative evaluation once teacher candidates complete the course.

One goal for this project is that all teacher candidates will complete the course prior to obtaining initial licensure. Another goal is that students will complete the course with at least a grade of 80%. After the first group of students completes the course, I will evaluate the course. Other faculty members and administrators will evaluate the course, as well.

It is imperative to highlight the key objectives of this course so that learners know what they need to accomplish (Murray, 2015). Project outcomes were established for the course entitled *Teaching Students With Autism*. Upon completion of this course, the teacher candidate will be able to:

1. Define autism spectrum disorder.

2. Describe characteristic of students with autism.
3. Apply current research regarding students with autism.
4. Use acquired skills to support the development of social skills in students with autism.
5. Practice effective social communication interventions.
6. Develop awareness for available treatment options for speech, language, and motor delays.
7. Adapt classroom environments and use sensory integration.
8. Use positive behavior supports in the inclusion classroom.
9. Instruct students with autism to use replacement behaviors and expand their functional communication.
10. Implement effective classroom structure and schedules.
11. Use visual supports and implement academic modifications.
12. Encourage peer support between students with autism and typically developing peers.
13. Effectively communicate concerns with families.
14. Support families through the IFSP/IEP process.
15. Provide community support and resources to families with a child with autism.

The key stakeholders for the successful implementation of this project include education faculty and administration, undergraduate students, and the technology department. Participants of this program will have an opportunity to evaluate each aspect

of the course. Likert scale evaluations will be provided after each module is completed. Upon completion of the entire course, students will be given an open-ended questionnaire to ensure each student may effectively evaluate the course. Course and curriculum evaluations will be administered and monitored each semester.

### **Project Implications**

#### **Local Community**

This project has the capability to directly impact the needs of teacher candidates, current classroom teachers, and students with autism. Based on data collected from the case study, analysis and theme identification, and literature findings, a comprehensive online learning module was developed to potentially impact the knowledge level of teachers who will be teaching students with autism in the inclusive classroom setting. This project focuses on classroom teachers gaining the required knowledge and skill set to effectively include students with autism. Preservice teacher candidates will be the focus of this course. Teacher candidates will be exposed to the characteristics of students with autism so they understand the nature and needs of students with autism. Teacher candidates will also be given the opportunity to learn effective teaching strategies and therapy options for their future students.

By expanding the knowledge base of teacher candidates prior to entering the classroom, it is anticipated that this project will improve skills of teacher candidates and allow for more positive attitudes and perceptions regarding students with autism, which in turn will improve the inclusion experience for students with autism. Focused and intentional teaching regarding autism inclusion has been positively associated with

perceived success in the inclusion classroom, yet few teacher candidates receive this type of intentional training prior to entering the inclusive classroom (Cramer, 2014). The importance for reforming the educational practices of teacher preparation programs to support the inclusion model has been recognized by many experts in the field (Barned, Flanagan-Knapp, & Neuharth-Prichett, 2011; Forlin, Loreman, & Sharma, 2014). Rieser (2013) reported that:

The providers of education for preservice teachers around the world are still largely operating from a teacher-centered pedagogy and have little recent and relevant experience. They do not teach inclusive education principles. When children with disabilities are covered it is in discrete courses based upon the old deficit medical model approach. Student teachers and their educators have little practical experience in inclusive settings. Teacher educators have low status and little scrutiny of what they are doing and how effective it is. There is a reticence amongst the more progressive academics to use categorical approaches to impairment for fear of regressing into segregative medical model approaches (Reiser, 2013, p. 136)

It is therefore understandable why teacher candidate may feel fearful and apprehensive when entering the inclusion classroom. Researchers have indicated that insufficient training has been linked to feeling of low self-efficacy (Forlin, Sharma, & Loreman, 2013; Gravett, Henning, & Eiselen, 2011; Loreman, Sharma, & Forlin, 2013).

By increasing the level of training that teacher candidates receive prior to classroom teaching, it is anticipated that feelings of self-efficacy will improve within

teachers and will allow for a more positive teaching experience and thus improve the inclusion process. In 2014, the number of students enrolled in schools in the state of Ohio rose to 17, 698 (OCECD, 2015). With this number increasing each year, it is imperative that teacher candidates receive quality training to effectively include students with autism.

### **Far- Reaching**

The success of this online teaching module could lead to the replication of this program by other schools of education in order to further the education of preservice teachers and graduate students across the nation. Dissemination of the results of this program is planned after 2-3 years of data have been collected. It is anticipated that increasing the level of training of preservice teachers and currently licensed teachers will lead to improved advocacy for social justice in the field of education across the United States.

Adequately prepared teachers are educated to effectively include students with autism. Increasing the amount of training in autism inclusion for preservice teachers will lead to improved self-efficacy of teachers, improved perceptions regarding the inclusion of students with autism, and improve the overall quality of inclusion programs across the United States. Few newly licensed teachers possess the time and resources needed to locate and fund their own training (Evers, van der Heijden, Kreijns, & Vermeulen, 2016). It is presumptuous that school districts will provide such training to licensed teachers who should have been adequately prepared to enter the inclusion classroom. It is imperative that teacher education programs take the lead in this area (Braunsteiner &

Mariano-Lapidus, 2014). Increasing the amount of preservice autism training at the university level will allow teacher candidates to acquire the necessary skills before they obtain an initial license, and thus potentially improve the inclusion experience for students with autism (Colombo-Dougovito, 2015; Corkum, et al., 2014; Goodall, 2014; Gravett, Henning, & Eiselen, 2011).

### **Conclusion**

Section 3 provided an overall description with goals and projects outcomes for this project design. Rationale with supporting literature for an online learning module was discussed. An implementation plan with a reasonable time frame was presented. Supports and barriers to the success of this online learning module were identified along with a plan to minimize potential barriers to the success of this project. An outcomes-based evaluation plan to ensure future success of the program was described. Key stakeholders and implications for the local and national community were discussed.

Section 4 will provide reflections of the project including strengths and limitations, recommendations for alternative approaches, scholarship, project development, leadership and change, the importance of the work, and implications for future research.

## Section 4: Reflections and Conclusions

### **Introduction**

The purpose of this project study was to address the need for further education for teacher candidates in the area of autism inclusion. Based on the results of the research, I developed an online course entitled *Teaching Students With Autism*. Through implementation of this course, the levels of teacher self-efficacy are expected to rise, therefore improving the inclusion of students with autism in their future classrooms. The strategies presented within these modules follow best practices as noted in the literature, which include topics such as characteristics of students with autism, current research regarding autism, supporting of social skills in the classroom, effective behavioral strategies, and communication and collaboration with families.

In this section, I discuss strengths and limitations of the project. I present personal reflections on the project and my thoughts on the importance of scholarship, leadership and change, and social implications of the work at large. I also address implications and directions for future research.

### **Project Strengths**

Research identified multiple factors contributing to the attitudes and perceptions of teachers in the autism classroom, which ultimately lead to ineffective inclusion of students with autism. I developed this project study based on those findings, as well as evidence-based practices that contribute to the successful inclusion of students with autism (Ahsa, Sharma, & Deppeler, 2012; Clench & King, 2015; McGillicuddy & O'Donnell, 2014; Ruble, Usher, & McGrew, 2011; Savolaine, Engelbrecht, & Malinen,

2012). The strengths of this study come from past and current research and findings from the case study. This research project may improve the inclusion process for students with autism, thus improving their overall educational and social experience in the classroom.

A strength of this project is that this proposed online course could ultimately improve the education and skill level of preservice teachers in northeast Ohio before entering the inclusion classroom. It also has implications to assist teachers in northeast Ohio who have already obtained licensure but are struggling to effectively include students with autism. Research has indicated that teacher candidates and first year teachers do not feel adequately prepared to teach students with autism (Soini, Pietarinen, Toom, & Pyhalto, 2015). This project study was initiated based on the immediate need for further training in the area of autism inclusion. Project strategies followed best practices found within the literature to improve the level of education of teacher candidates and the necessary skills to allow them to transition into the role of inclusion teacher.

A second strength of this project is the development of an online course entitled *Teaching Students With Autism*. This program is unique in that it will be offered to students prior to obtaining their initial licensure. With this course being offered online it will allow busy students and first year teachers to access the course materials at their own convenience without having to physically attend class sessions on campus. This course will allow the teacher candidates more time to focus on their current studies while adding key knowledge that will assist them in their own classrooms. One initial goal of this program is that every teacher candidate will enroll in this module and complete with a

passing score before graduation. Based on interest and feedback from teacher candidates this course can then be offered to graduate students. This second goal will be implemented in second year of the program.

### **Limitations**

Two limitations were identified for this project. The first limitation is the fact that teacher candidates will have to embrace the notion of enrolling in an elective online course. With this addition not being a current requirement for graduation and licensure, teacher candidates may view this as a course that does not require their full attention and interest. Motivation can be a factor for traditional university students who have an already full schedule.

A second limitation is the fact that I worked alone in my development of this project. Prior to implementation of this course, I plan to discuss plans for implementation and strategies for success with colleagues and interested stakeholders. The early childhood education committee on which I currently serve may be able to contribute more ideas for successful implementation of this project.

### **Recommendations for Alternative Approaches**

The proposed project is one way that I have addressed the need for further training in the area of autism. Another approach I could take would be offering a face-to-face model of the same content. I could propose a professional development program for current educators that could be used within local school districts. This proposal would involve creating and fostering positive relationships within the local schools so that administration would welcome university faculty and that professors would have a

meaningful experience as well. University professors could present on topics of need and interest to current teachers. I would propose beginning with a workshop on autism inclusion and offer follow up sessions based upon expressed needs of the teachers. Workshops on other topics could be presented throughout the school year and summer. This partnership is one that could be mutually beneficial. Local school districts could offer free or low cost professional development while the university could potentially gain students who choose to pursue a graduate degree. This would allow current teachers the ability to see the value of further education while allowing the university to have access to teachers for potential recruitment to the graduate program.

Another potential benefit to utilizing this type of face-to-face training held on school sites is the ability for professors to take undergraduate university students to these trainings. While on site, undergraduate teacher candidates could have the opportunity to attend the workshops while forming partnerships with current teachers. Teacher candidates could be directly involved in field experience work in these classrooms, thus giving them much needed experience in the inclusive setting.

A second approach to address the problem is for university faculty to realize that change is essential. The idea of full inclusion is still not widely accepted by current teachers and teacher candidates across the world. This idea of inclusion, whether for students with autism or other areas of need, is an idea that must be viewed in a positive way. The university at which I am employed offers several service learning trips for undergraduate students each year. Many of these trips focus on educational needs in impoverished countries. Teacher candidates can be exposed to schools other countries

and cultures who do not encourage inclusion of students with exceptionalities. If students witness perceived social injustice and exclusion of students, it may spur them on to make a positive change in their own thinking. Teacher candidates may potentially have a greater value of the current system of inclusion that is established in our local school district after visiting schools that clearly do not value inclusion. Such a change in mindset could potentially have a positive influence on the students and teachers they may encounter within North East Ohio, across the nation, and even globally.

While many approaches to addressing this problem may exist, I feel that my proposed project of an online course will be a positive experience that is easily accessible and cost effective for teacher candidates and the university.

### **Scholarship**

Prior to entering this doctoral program, I had taken several courses that included research. During my master's program I completed a thesis regarding technology and student testing. I conducted research and wrote a paper that consisted of several chapters. I remember that process being grueling as I was teaching full time and taking classes. As a licensed teacher I have been required to take graduate level courses to renew my license. I have always enjoyed being a lifelong learner. I have always taken great pride in my ability to write well and convey information clearly to my audience. Having taught k-12 students for 10 years and now having taught college students for 9 years, I have developed an even greater understanding of the importance of scholarship.

Finding a topic or problem to address was a relatively simple task. I encountered students with autism in my classroom for the very first time and I felt overwhelmingly

underprepared. I had taken courses regarding teaching students with various special needs, but I had never learned specifically how to teach a child with autism. Several of my peers were experiencing the same kinds of feelings. I realized that this area was a problem that could use benefit from further research. Through my research I found that few universities across the nation offered undergraduate level courses that educated future teachers regarding effective practices for teaching students with autism. I was quite surprised that even with the increasing number of students being diagnosed with autism, the topic is not being addressed at the undergraduate or even graduate level. This was an apparent problem. Teachers are spending valuable time and resources to locate training to better prepare themselves for the students they are currently teaching.

I currently teach in a teacher education program that does not offer a course on teaching students with autism. Offering a course to prepare future teachers could help remedy some of this problem for students who complete our education program. I chose to develop a project that could address the problem of the lack of educator training to teach students with autism in the inclusion classroom.

After completing the first literature review, I began to realize that several factors could influence the inclusion process. Factors such as teacher training and teacher perception were very clear throughout the literature. As a result of this literature review and much discussion with my committee, I decided that a qualitative case study would be the best approach to gain insightful information from participants. I chose to interview 7 local teachers for my extended case study.

Throughout the process of gaining approval for this study, I learned that the doctoral study is a process that requires time and patience. I was assigned a committee chair that retired during this process. My next chair reassigned his students to other faculty members due to family illness. I became very frustrated and discouraged and even wondered whether or not I would actually be able to complete this study. However, I have been extremely blessed with my current chair who has guided me every step of the way.

I have realized that the IRB process take much time. I submitted several changes to my original plan due to issues surrounding the rights and responsibilities of the researcher. Some of the items that I changed in order to gain approval were things that I had never even considered. I learned much about the process of working with participants and being cognizant of their needs and rights.

The interview process was one that I greatly enjoyed. It was so insightful speaking with the teachers who participated in this study. I was encouraged with their apparent love and devotion to their students with autism and to their typical students. I gained a renewed passion to learn from them and transfer that knowledge back to my own college students. The process of transcribing interviews was very time consuming. It took several hours to transcribe each interview. As I transcribed each interview, I began the process of coding. In order to find codes throughout the data, I read each interview transcript multiple times. As I read each transcript, I was able to find common themes. I then coded each theme into charts and graphs and further narrowed down the themes. I was better able to focus on the gathered data for use in formulating a project.

The project that I have chosen will allow faculty members and teacher candidates the opportunity to learn more about effective teaching practices when including students with autism. With best practices in place, the professional development project should be successful. I will need to continually reevaluate the information presented and continue to update my presentations so the training will be relevant and useful for those who are currently teaching students with autism.

Throughout this process I have been reminded of the idea that I am a lifelong learner. This is a concept that I reiterate to my students each semester. It has been beneficial for me to be on the receiving end of learning and the active side of researching so that I can remain relevant to my own students. I am committed to the process of being a scholar in my field.

### **Project Development and Evaluation**

The development of this project began with my own experiences that allowed me to identify a major problem. This problem affects teachers in the inclusion classroom as well as the students with autism and their typical peers. Teachers who do not receive adequate training or teachers are forced to research best practices when they should be focusing their time on educating students in the classroom. Teachers are expected to locate resources and experiment with strategies that might work within their classrooms. Many articles regarding best practices exist, but teachers have limited time and energy to read and find ideas to assist them in their teaching. Educators today are so overwhelmed in dealing with the everyday challenges of meeting the needs of students with autism and meeting the needs of the entire class. This can begin to lead to negative attitudes toward

students and lack of energy and optimism for the challenging tasks that they face every day. This problem has been addressed in literature, but still very few universities have addressed the education and inclusion of students with autism. Preservice teachers are not adequately prepared upon graduation. Teachers currently in the field are learning by trial and error. The participants in my study mentioned countless times that they have made mistakes along the way simply because they did not have the knowledge before entering the classroom. A more effective method of training teachers can result in a positive change.

Throughout my doctoral journey I have learned the importance of data driven decision-making. This is a concept that I stress with my university students. We need to research and find effective strategies and methods prior to teaching our students. It is unethical to use trial and error with children, especially with those students who are the most vulnerable. This online course was based upon action research that has revealed the need for greater education on the area of autism inclusion. This has been created so that faculty members and university students have an accessible online course. Graduate students who are already in the field, but did not receive the proper training prior to entering the classroom can also consider enrolling in this course. Implementation of this project should improve the quality of teaching and thus improve the inclusion process for students with autism.

### **Leadership and Change**

Throughout this journey, I have learned that that in order to be an effective leader I must continually grow and change. Just as American education is changing on a regular

basis, I must be willing to conduct research, listen to teachers in the field, and constantly improve upon my own teaching methods. I must continue to be a lifelong learner. To become an effective leader, I must be willing to be innovative in my thinking and practice so I can better prepare our future educators (Hoyes, 2014). My end goal is to prepare educators who are also innovative and creative in their thinking so together we are able to make a positive impact on students in today's ever-changing classroom (Pin Goh & Chua, 2015).

Through reading several pieces of contemporary work on the subject of educational leadership, the value of a collaborative leadership approach and the value of change emerged as common themes. This type of collaborative leadership has been given different names such as the metamorphosis model, the ecological model, and the adaptive model (Gialamas, Pelonis, & Medieros, 2014; Murphy, J., 2015). Each of these models expresses the need for shared leadership and change as their primary tenets. These new models of school leadership promote the idea that organization leadership from the top down should no longer dominate our schools and our classrooms. Shared leadership within a community and professional workplace can only strengthen the organization as a whole.

Northouse (2012) stated, "Leadership is a process whereby an individual influences a group of individuals to achieve a common goal" (p. 6). He went on further in his work to state that leadership can be defined as a trait, ability, skill, behavior, and a relationship. I have learned through my work as a researcher and as a practitioner that each of these definitions is true in educational leadership. To become an effective teacher

leader I must possess the traits, abilities, and skills associated with great leaders. I must also be willing to work hard with my colleagues to achieve these goals together. My behavior will be affected by understanding of the needs of my students and other faculty members. However, these characteristics are not going to be nearly as effective if I do not take the time to develop positive relationships. Throughout this study I have read countless articles and spoken with several practitioners that have verified this in my own life. In order for those whom I am teaching or working with closely in decision making roles I must display my commitment to social change in the classroom and in the community at large. An effective leader who makes the biggest social impact is deeply connected to her cause (LeFasto & Larson, 2012). I am deeply connected to the cause of educational reform and this doctoral study has reignited that connection.

Gialamas, Pelonis, & Medieros (2014) state “a primary role of an educational leader (and also of the classroom teacher) is to inspire individuals in the learning community to embrace change and to mitigate their fears by creating a professional community in which risk taking is permitted and encouraged and which allows for failure.” This type of leadership is crucial in today’s classroom in which teachers are expected to differentiate instruction for every type of learner that may enter their classrooms. Educators must be given the freedom and the opportunity to think innovatively and try new strategies. I want to be the type of leader who encourages such risks and creative thinking. Effective leaders must be agents of social justice and social change. I want to develop future educators who respect students and their differences and

want to ensure social justice within their schools. Teachers must be willing to care and serve others so that their students in turn want to replicate those same behaviors.

In a study conducted within two primary schools, teachers and pupils were interviewed on the subject of social change within the school setting. The findings were very simple, yet very profound. This type of possibility thinking, as coined by Craft and Chappell (2016) has been the vehicle for social change in many British schools. The particular schools within this study noted several factors within their schools that encouraged social change (Craft & Chappell, 2016). Among those factors discovered in this possibility thinking framework were questioning, imagination, self-determination, and risk taking. These attributes in a school can lead to an inclusive environment in which students, teachers, and administrators can feel free to question, where dialogue is encouraged at all levels, and respect of students' differences and ideas are evident. This is the type of leadership that I hope to encourage. This type of possibility thinking can transform the classroom and the entire school. I want my future educators to embrace this type of leadership where they value questioning and diversity of students. If teachers can encourage this type of understanding and respect then students will be impacted and social change can occur.

Constructivist leaders are constantly in search of new research that will enhance their teaching. This framework provides teacher leaders with the understanding that scholarly research is a foundation on which new ideas are formed. Constructivist leaders are aware that each student learns differently and has unique abilities upon which we can build new knowledge and formulate new thinking. As a constructivist leader I can be a

vehicle for positive change by following the framework provided for me through Walden's course work. I have learned that social justice is an integral part of the education system. I have been made acutely aware of my responsibility to educate each of my students in constructivist principles so that they may also be agents of social change. I have learned how diversity in language and national origin can greatly impact the educational process. I have learned how to respectfully differentiate curriculum so that students can learn in the ways that are most meaningful to them. As a leader, I am profoundly aware of my responsibility to educate future teachers in the principles of respect for diversity.

Constructivist leaders value the importance of reciprocal relationships. I want to encourage questions and dialogue. I understand the need for trust within the classroom. It is my plan to continue to evolve and grow as a constructivist leader so that I can make a positive change (Lynch, 2012).

Throughout my study, I have come to realize the importance of Bandura's Social Learning Theory regarding self-efficacy and how it can effect positive social change (Bandura, 1977). I realize that children can believe they are capable of becoming effective learners and with support they can achieve greatness. I also am aware of the limitations of this theory if the families are not a part of the process. In Bandura's later writings, he stated that this theory of self-efficacy is behavior and context specific (1986) Appropriate goals must be set or the idea of self-efficacy can actually be dampened due to feelings of unattainability. In order to strengthen these goals and efforts with our students, we must involve the families in the process. Families can begin to feel

empowered in reaching their goals together. When families become empowered, they can reach their potential to grow and change (Bray, Pedro, Kenney, & Gannotti, 2014). As a leader in my community, I have the responsibility to engage families in the learning process and help promote social change through education.

As an effective leader who promotes social justice and social change, I must be visible and active in my community. I need to listen to the voices of teachers in the field and be aware of the changes taking place. Effective leaders must be involved in what is happening in their communities and not just in the organizations in which they are employed. I must maintain positive relationships with community partners so we can work together to educate the next generation. Positive relationships between educational leaders and community agencies can create more equitable opportunities for the students in those communities. (Green, 2015; Hands, 2014). I hope to be an effective leader who is able to develop and maintain positive relationships with community partners so I can assist in making positive social change within the schools in my own community.

### **Analysis of Self as Scholar**

Teachers are encouraged to reflect upon their practice on a regular basis so as to improve their instruction. This reflection allows us to analyze ourselves and examine our own performance and beliefs about education. The idea of self- efficacy can be a large part of this reflection process (Yoo, 2016). If an educator believes a certain goal is attainable, he or she is more likely to reach that goal. This process is evident in my life as a novice scholar. I am just beginning my role as a research scholar at my university. This process is relatively new to me and I sometimes feel inadequate. However, I believe that I

can become a better scholar and researcher with more experience. The theory of self-efficacy is already taking effect in my own practice. I have begun to think through ideas and problems through the lens of a researcher instead of strictly as an educator.

As an education professor I am constantly asking my own students to reflect upon the lesson they teach in the field. I ask them to reflect upon the positive and negative aspects of their lessons and projects so they may improve. I follow this same principle in my own teaching. As we self-reflect and examine ourselves we can improve our teaching and even our relationships with the students we encounter.

This doctoral coursework and subsequent doctoral study have allowed me to practice my research skills. As I researched my topic of interest and contemplated an appropriate study, I was forced to think differently than I have in the past. I prepare lessons and syllabi on a regular basis, but the process of being a scholar myself is one that will require me to conduct research and continue to read and stay relevant in my field.

I am self-motivated and very interested in stretching myself to become more of a scholar. I plan to take the findings of this study and present at a conference. I enjoy working and researching with students and colleagues and having the collegiality and accountability that accompanies working with a group. I look forward to seeing myself evolve even more as a scholar as a result of my time here at Walden.

### **Analysis of Self as Practitioner**

I began my career as a classroom teacher in grades 1-4. I was very passionate about teaching children and making a positive impact upon their lives. I enjoyed the relationships that I formed with the students, as well as with the parents. I truly enjoyed

parent teacher conferences as they gave me the opportunity to get to know the entire family. I enjoyed working with my colleagues to meet the needs of my students. It was a very rewarding role that prepared me for my current role as a teacher educator.

I was very passionate about working with students in the pk-12 arena, but I knew I was ready to pursue the next level. I had taught for 10 years and had the credibility needed for young future teachers to trust that I was capable of guiding them and molding them into educators. During my first 7 years teaching at a community college, I was able to practice my art of being a teacher of teachers. I learned how to best communicate with adult learners and understand their learning differences and needs. During this time I was given the opportunity to plan lessons and create syllabi to meet the goals and objectives set forth by my department. I felt confident that I was going to become a professor at a university some day, but I needed a terminal degree in order to attain that role. I have been blessed to now be teaching at the university level. Colleagues who have obtained doctoral degrees surround me. They value the ideals of scholarship and being a scholarly, research-based practitioner. I am encouraged daily to achieve my personal best. Pursuing this degree has been highly encouraged and supported by my fellow professors. With the completion of this program, I will be able to move into a tenure track position and continue to do my life's work and calling.

### **Analysis of Self as Project Developer**

As a teacher and teacher educator, I have been privileged to work in the development of new programs and projects. This has always been exciting for me. On occasion I have embarked on a project alone. This can be sometimes overwhelming and

sometimes a bit frightening. However, I have never been one to shy away from a challenge. With this project, I was the sole developer. I have consulted with my chair and committee, but this idea and execution has been my own undertaking.

As I began my research, I knew that problem existed and that I could possibly help with that problem. As I began to collect, I had not even considered that my ideas could possibly turn into something that could actually help colleagues and future teachers become more aware of the needs of students with autism and provide resources to help them in their endeavors.

After I collected data I considered how I could best assemble a project that could benefit the greater good. Literature that supported my finding was a great resource in beginning this project. The project needed to be based upon research and evidence based-practice. As I continued to work on this project, I brainstormed and discussed the possibilities with my colleagues. A need for quality professional development in this area exists. At this point, the state of Ohio does not offer an autism endorsement or certificate of any kind. There are no required courses in the area of autism in the current licensure requirements. However, at a time when many university students and their families are struggling financially I knew that it was not an option to add an additional course to their sequence that would cost them more money. The university also is not willing to approve a new course unless it is attached to a current major. Although, I desire to integrate a required course on autism into our required curriculum, I know that it is not an option at this time in Ohio or even at my university. I am hopeful that teacher candidates will

enroll in this course as an elective simply to improve their own schema regarding autism inclusion.

With my passion for this topic and the obvious need for more education in this area, I was not willing to stand by and continue to have my students graduate without the necessary tools to effectively educate those children with autism. I proposed the idea of an online course. I can encourage each of my students to register for this elective course so they can gain the necessary tools to be effective teachers.

As project developer, I understand that I will need to present this idea to my university department chair. I do not anticipate any resistance to the idea as it will not cost the university or students any money and it will be optional for students if they choose to enroll in this course. Strategies for implementation include gaining professional advice from the technology department and creating a realistic time line for the launch of the website.

As I continue to build this online course, I will work with community leaders and teachers to contribute their expertise. I want to produce a course that offers valuable information for future teachers. I hope to one day make this course available to the public.

As I develop this project, I must plan for 3 particular aspects of this project. First, I will most likely experience technical difficulty at some point. If this should occur I will need to contact the information technology department at my university for assistance. I realize that technology can often have unforeseen problems. This is something for which I must be prepared. Secondly, I must be willing to change the course frequently as state

standards may change and requirements of teachers may change. I want to remain current with research provided to users. Third, I must provide an evaluation of the course for potential users and faculty members. I must be willing to listen to their suggestions. If I am willing to listen to new ideas and proposed changes this project can provide a better professional development experience.

### **Reflection on Importance of the Work**

As I come to the end of this journey, I have learned many things about myself as an educator and as a scholar. One thing I have learned is that quality research takes time. The time that I spent with each of the teachers who participated in this study was very valuable. Their time is so precious and I am grateful that they were willing to meet with me to discuss their thoughts and perceptions regarding their own experiences with autism inclusion. As I reflect on the importance of this work, I am once again brought back to the astounding number of children dealing with the effects of autism on a daily basis. Just in the state of Ohio, over 15,000 children between the ages of 6 and 22 have autism (OCALI, 2016). The effects of an ever-increasing number of students with autism have reached the classroom and teachers are not adequately prepared.

This proposed course will give teacher candidates the tools they need to further their knowledge regarding autism inclusion. While originally designed as a means to better prepare my own future teachers, the importance of this project is too far reaching not to share with licensed teachers across the state of Ohio. A future goal is to offer this course to licensed teachers in the state of Ohio as a means of professional development. My hope is that teachers who are struggling for answers in meeting the needs of children

with autism in their classrooms will have access to a number of resources and strategies at their fingertips. They will not have to spend hours researching related articles, podcasts, and teaching tips. Future educators, current educators, and university faculty members can have the benefit of accessing the course developed through the ideas founded through this doctoral study.

Through this project I have learned that ideas do not have to remain ideas. I have learned that self-efficacy is my truth. I have formulated ideas based upon a problem that was dear to my heart and I am making those ideas a reality. I have learned that scholarly action research can bring about positive social change and I am excited to be a part of that process.

### **Implications, Applications, and Directions for Future Research**

The impact of students with autism in the inclusion classroom and the inadequate training of teachers to effectively teach these students can be witnessed in schools across the United States. With rising numbers of students being diagnosed, the demand for highly qualified, trained teachers has greatly increased, yet teachers do not feel as though they are ready to meet these high demands (Hansen, Schendel, & Parner, 2015; Baker, 2012). The demand for teachers that are highly qualified and adequately prepared is critical. Teacher preparation programs are not in the financial position to add more coursework to the already full course load that is required of students. As a result, many teachers graduate feeling ill prepared to meet the demands of teaching students with autism alongside their typical peers and experience anxiety and resentment toward the inclusion process (LaBarbera, 2015). Professional development particularly in the area of

autism inclusion has the potential to reverse some of the negative effects that many teachers are experiencing (Kaur, Norman, Awang-Hashim, 2016). The idea of professional development in an online format has the potential to reach a vast number of future educator and current educators with quick, easily accessible training in areas where they need immediate assistance (Clench & King, 2015; Suhrheinrich, 2015).

Findings from this research led to the development of an online course. Upon evaluation of this project, dissemination of this information gathered will provide greater understanding to the body of research existing on this topic. I plan to present the findings of this project to my colleagues at a faculty wide symposium this coming fall. I will also participate in a poster session and will present at a conference to other educators. I plan to submit a portion of this study for publication so this information can be shared with other teacher educators and licensed pK-12 teachers. This project could potentially impact the field of education as a whole.

Due to the flux in educational laws, school policies, and teacher licensure requirements, follow up research will be necessary. I will reevaluate the project each year by studying current licensure requirements and conducting qualitative surveys with project participants.

### **Conclusion**

The purpose of this project study was to develop an online course that will allow future educators the opportunity to gain knowledge about the inclusion of students with autism. Based on a review of the literature and the data results from this research, an online course was developed which includes several links to current research, peer

reviewed journal articles, and tips and strategies for teachers. After implementation of this course, it is anticipated that teacher candidates will feel equipped to teach students with autism in the inclusion setting, which in turn will improve the quality of instruction, relationships with students, and positive classroom experiences for teachers and students.

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## Appendix A: Teaching Students with Autism

## EDUC 4XX- Teaching Students with Autism

**Instructor Information**

Instructor: Chanda Rhodes Coblentz

**Textbook Information****Required texts:**

Aune, B. & Gennaro, P. (2010). Behavioral solutions for the inclusive classroom: A handy reference guide that explains behaviors associated with autism, Asperger's, ADHD, Sensory Processing Disorder, and other special needs. Austin, Texas: Future Horizons.

Boutot, A. (2017). *Autism Spectrum Disorders: Effective Practices*. Upper Saddle River, New Jersey: Prentice Hall.

Kluth, P. (2010). *"You're going to love this kid": Teaching students with autism in the inclusive classroom*. Second Edition. Baltimore, Md.: P.H. Brookes Pub. Co.

**Course Description:** This 15-week course is designed to introduce teacher candidates to the varied social and academic needs of students with Autism Spectrum Disorders (ASD) in the inclusive classroom. This course will provide a thorough grounding in the characteristics of autism spectrum disorder and will introduce the teacher candidate to

best practices in serving persons experiencing ASD in the inclusion classroom setting. (3 credit hours)

### Student Learning Outcomes

Course Objectives:

**The teacher candidate will:**

1. Define autism spectrum disorder
2. Describe characteristic of students with autism
3. Apply current research regarding students with autism
4. Use acquired skills to support the development of social skills in students with autism
5. Practice effective social communication interventions
6. Develop an awareness for available treatment options for speech, language, and motor delays
7. Adapt classroom environments and use sensory integration
8. Use positive behavior supports in the inclusion classroom
9. Instruct students with autism to use replacement behaviors and expand their functional communication
10. Implement effective classroom structure and schedules
11. Use visual supports and implement academic modifications
12. Encourage peer support between students with autism and typically developing peers

13. Effectively communicate concerns with families
14. Support families through the IFSP/IEP process
15. Provide community support and resources to families with a child with autism

#### Assessment Overview

Outcomes will be achieved and demonstrated through discussion forums, weekly written assignments, quizzes, and a research paper.

#### Requirements for Papers and Written Assignments

All papers and written assignments are to be double-spaced and in 11 or 12 point font. It must follow the guidelines as described in the 6<sup>th</sup> edition of the *Publication Manual of the American Psychological Association (APA)*. In addition, all written work will be assessed using an evaluation rubric which students are expected to use when completing the assignment.

#### Grading System and Scale

Grade points are assigned for each semester hour of credit earned according to the following grading system:

Grading Scale	Letter Grade	Explanation	Quality Points Per Semester Hour
100-94	A	Excellent	4.0
93-92	A-	Excellent	3.7
91-90	B+	Above Average	3.3
89-86	B	Above Average	3.0
85-84	B-	Above Average	2.7
83-82	C+	Average	2.3
81-78	C	Average	2.0
Below 78	F	Failing	1.7
	I	Incomplete	0.0

Students not completing the required work by the end of a course receive an Incomplete (I). It is the student's responsibility to make satisfactory arrangements with the instructor regarding course work. If the student is not successful in fulfilling the course requirements within 6 weeks of the end date of this course, the grade of Incomplete will be changed to No Credit.

### Calculating Course Grades

Assessment	Total Points
Discussion forum participation	75
Initial post	
Response to 2 peers	
Module activities	150
Assigned activities for each of the 15 modules	
Research paper	100
Module Quizzes	75
Total	400

### Topical Outline

#### Unit 1: Introduction to Autism Spectrum Disorders

##### Module 1: What is Autism Spectrum Disorder?

Module 2: Characteristics of Students with Autism

Module 3: Current Research Regarding Autism Spectrum Disorder

Unit 2: Communication and Language Interventions

Module 1: Supporting the Development of Social Skills

Module 2: Social Communication Interventions

Module 3: Available Treatments for Speech, Language, and Motor Delays

Unit 3: Behavior and Sensory Supports for Students with Autism

Module 1: Adapting the Environment and Sensory Integration

Module 2: Positive Behavior Supports

Module 3: Teaching Replacement Behaviors and Expanding Functional Communication

Unit 4: Classroom Management Strategies for the Inclusive Setting

Module 1: Classroom Structure and Schedules

Module 2: Visual Supports and Academics Modifications

Module 3: Peer Support

Unit 5: Communicating and Collaborating with Families

Module 1: Communicating Concerns to Families

Module 2: Supporting Families through the IEP/IFSP Process

Module 3: Providing Community Support and Resources

### Policies:

As current/future educators it is important that you begin to adopt a professional demeanor in your interactions with others. When interacting with parents and professionals as part of this course, whether in class activities or out of class assignments, you are to dress appropriately and act in a professional manner and abide by professional and ethical standards of confidentiality.

### Netiquette:

- \*Adhere to the same level of professionalism that you would follow in a traditional classroom setting.

- \*Please use professional language and spelling when addressing your instructor and peers in emails or discussion posts.

- \*Proper APA formatting should be used for references in your postings.

- \*Assignments are due on the date listed. Late assignments will be deducted points.

- \*Initial discussion forum posts are due by Wednesday at 11:55 pm. Replies to peers are due by Sunday at 11:55.

Course Schedule:


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Unit 1: Introduction to Autism Spectrum Disorder	Learning Activities:
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Module 1: What is Autism Spectrum Disorder?	<p>Read: Autism Spectrum Disorder fact sheet <a href="http://www.ocali.org/up_doc/ASD-Fact-Sheet-2016.pdf">http://www.ocali.org/up_doc/ASD-Fact-Sheet-2016.pdf</a></p> <p>Read: DSM 5 Fact Sheet: <a href="http://www.dsm5.org/Documents/Autism%20Spectrum%20Disorder%20Fact%20Sheet.pdf">http://www.dsm5.org/Documents/Autism%20Spectrum%20Disorder%20Fact%20Sheet.pdf</a></p> <p>Participate in online class discussion by answering the following and responding to the posts of 2 peers: Discuss any preconceptions you had regarding the basic facts of autism spectrum disorder. Reflect on the assigned fact sheets and discuss how those preconceptions have been affirmed or proven to be untrue. Please follow the provided rubric for online discussions.</p> <p>Read: “Knowledge and attitudes of early childhood preservice teachers regarding the inclusion of children with autism spectrum disorder” by Barned, N. E., Flanagan Knapp, N. &amp; Neuharth-Pritchett, S. (2011). <i>Journal of Early Childhood Teacher Education</i>, 32(4), 302-321.</p> <p>View: Video of textbook author, Amanda Boutot discussing autism. <a href="http://sk.sagepub.com/video/amanda-boutot-discusses-autism">http://sk.sagepub.com/video/amanda-boutot-discusses-autism</a></p> <p>Complete Quiz #1 based on assigned readings and video.</p>
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Module 2: Characteristics of Students with Autism	<p>View video: Autism 101 <a href="http://www.ocali.org/project/autism_101">http://www.ocali.org/project/autism_101</a></p> <p>View video: What are some of the behavioral characteristics of autism? <a href="http://monkeysee.com/what-are-some-of-the-behavioral-characteristics-of-autism/">http://monkeysee.com/what-are-some-of-the-behavioral-characteristics-of-autism/</a></p> <p>Design a word web/picture web to describe characteristics of autism. This web must have a minimum of 10 facts and must be submitted through the course page.</p> <p>Participate in online class discussion by answering the following and</p>
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responding to the posts of 2 peers: Discuss the characteristics of students with autism based upon the assigned readings and videos. Please follow the provided rubric for online discussions.

Complete Quiz #2.

Module 3:  
Current  
Research  
Regarding  
Autism  
Spectrum  
Disorder

Read: Lenne, B. & Waldby, C. (2011). Sorting out autism spectrum disorders: Evidence-based medicine and the complexities of the clinical encounter. *Health Sociology Review*, 20(1), 70-83.

Read: Odom, S., Cox, A., Brock, M., & National Professional Development Center on ASD, (2013). Implementation science, professional development, and autism spectrum disorders, *Exceptional Children*, (79)2, 233-251.

Read: Roberts, J. & Simpson, K. (2016). A review of research into stakeholder perspectives on inclusion of students with autism in the mainstream schools. *International Journal of Inclusive Education*, 20(10), 1084- 1096.

View video: Could early intervention reverse signs of autism?  
<http://www.cbsnews.com/news/early-intervention-could-reverse-autism-study-suggests/>

Begin compiling resources for use in the research paper due at the end of the course. Submit a working bibliography by the end of Module 3.

Participate in online class discussion by answering the following and responding to the posts of 2 peers: Share one current journal article regarding autism research and discuss your reasons for including this article in your bibliography.

Complete Quiz #3.

Additional Resource: The Mind Institute.

<http://www.ucdmc.ucdavis.edu/mindinstitute/research/>

UNIT 2:  
Communication  
and Language  
Interventions

Learning Activities:

Module 1:  
Supporting the  
Development of

View: Free Autism Skills Downloads

[https://www.youtube.com/watch?v=e6CL44\\_PzAs](https://www.youtube.com/watch?v=e6CL44_PzAs)

Visit: <http://autismteachingstrategies.com/free-social-skills->

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Social Skills	<p><a href="#">downloads-2/</a> and browse through available tools to assist students with autism in building their social skills.</p> <p>Participate in online class discussion by answering the following and responding to the posts of 2 peers: Choose one of the social skills discussed on the website <a href="http://autismteachingstrategies.com/free-social-skills-downloads-2/">http://autismteachingstrategies.com/free-social-skills-downloads-2/</a> and discuss how this tool might be useful to help students with autism in the inclusion classroom.</p> <p>View video: Social Skills with Preschoolers <a href="http://www.interactingwithautism.com/section/treating/abasoc">http://www.interactingwithautism.com/section/treating/abasoc</a> Read: What can Help Improve Social Interaction and Development? <a href="https://www.autismspeaks.org/sites/default/files/documents/family-services/improve_social.pdf">https://www.autismspeaks.org/sites/default/files/documents/family-services/improve_social.pdf</a></p> <p>Complete Quiz #3.</p>
Module 2: Social Communication Interventions	<p>View video: What is a Social Story? By Carol Gray <a href="http://carolgraysocialstories.com/social-stories/what-is-it/">http://carolgraysocialstories.com/social-stories/what-is-it/</a></p> <p>Visit the following website. <a href="http://carolgraysocialstories.com/social-stories/social-story-sampler/">http://carolgraysocialstories.com/social-stories/social-story-sampler/</a></p> <p>After reviewing several samples of social stories, compose your own social story that could be used in the inclusion classroom. Please submit online by the end of Module 2.</p> <p>Visit: <a href="http://researchautism.net/autism-interventions/types/behavioural-and-developmental/specific-functions">http://researchautism.net/autism-interventions/types/behavioural-and-developmental/specific-functions</a> Choose one specific type of social skills intervention from the provided list. Compose a 2-page detailed description of the intervention and discuss how this could be used in your classroom. Please submit online by the end of Module 2.</p> <p>Participate in online class discussion by answering the following and responding to the posts of 2 peers. In your initial post, share your social story as an attachment. Please visit the stories of two peers and give constructive feedback.</p> <p>Complete Quiz #2.</p> <p>Continue to read current research regarding autism inclusion and compile resources to be used in your research paper due in the last week of the course.</p>

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<p>Module 3: Available Treatments for Speech, Language, and Motor Delays</p>	<p>Visit: <a href="https://www.autismspeaks.org/what-autism/treatment/what-treatments-are-available-speech-language-and-motor-impairments">https://www.autismspeaks.org/what-autism/treatment/what-treatments-are-available-speech-language-and-motor-impairments</a> and review available treatments options.</p> <p>Choose one treatment option mentioned on the Autism Speaks website that interests you. Write a 2-page summary/critique of the method. Be sure to use APA formatting in your paper and reference list. Discuss how this treatment option might be applicable in your inclusion classroom.</p> <p>Visit the website: <a href="http://www.asha.org/public/speech/development/communicationdevelopment/">http://www.asha.org/public/speech/development/communicationdevelopment/</a> to view a list of developmental speech and language milestones for children in grades K- 5.</p> <p>Listen to podcast Using Video Modeling for Kids with Autism <a href="https://www.speechandlanguagekids.com/using-video-modeling-with-autistic-and-low-functioning-kids/">https://www.speechandlanguagekids.com/using-video-modeling-with-autistic-and-low-functioning-kids/</a></p> <p>Participate in online class discussion by answering the following and responding to the posts of 2 peers. After listening to the podcast about video modeling, discuss how this tool might be useful in your inclusion classroom. Discuss positive and negative aspects of this technique.</p> <p>Complete Quiz #3.</p>
<p>Unit 3: Behavior and Sensory Supports for Students with Autism</p>	<p>Learning Activities:</p>
<p>Module 1: Adapting the Environment/Sensory Integration</p>	<p>Visit the following websites regarding adapting classroom environments: <a href="http://articles.extension.org/pages/61260/specific-ideas-for-child-care-providers-to-help-children-with-social-and-emotional-disabilities">http://articles.extension.org/pages/61260/specific-ideas-for-child-care-providers-to-help-children-with-social-and-emotional-disabilities</a>; <a href="https://www.autismspeaks.org/sites/default/files/afyo_environment.pdf">https://www.autismspeaks.org/sites/default/files/afyo_environment.pdf</a> After reading and reflecting on the suggestions regarding adapting the inclusion classroom, in a 2-page paper, discuss how these suggestion may positively affect the experience of a child with autism in the inclusion classroom.</p>

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Read: Schaaf, R., Benevides, T., Mailloux, Z., et al. (2014). An intervention for sensory difficulties in children with autism. A randomized trial. *Journal of Autism and Developmental Disorders*, 44(6), 1496.

Visit Autism Speaks and read the following article:  
<https://www.autismspeaks.org/blog/2013/12/03/sensory-integration-changing-brain-through-play>

After reading the recommended selections regarding sensory integration, reflect upon ways in which this type of therapy may be useful and/or relevant in the inclusion. Please discuss your thoughts in the online discussion forum and reply to the posts of 2 peers by the end of Module 1.

Complete Quiz #1.

Continue to work on research paper that is due at the end of this course.

Module 2:  
Positive  
Behavior  
Supports

Visit Autism Speaks to obtain the “What are the positive strategies for supporting behavior improvement? Read the following pdf:  
[http://www.autismspeaks.org/sites/default/files/section\\_5.pdf](http://www.autismspeaks.org/sites/default/files/section_5.pdf)

Read: Neitzel, J. (2010). Positive behavior supports for youth and children with autism spectrum disorder. *Preventing School failure*, 54(4), 247-255.

<http://glenwood.org/wp-content/uploads/2013/06/article-positive-behavior-supports-for-children-and-youth-with-autism.pdf>

View “Positive Behavior Supports for Children with Autism Spectrum Disorder”: <https://www.youtube.com/watch?v=PQMuNtJegcw>

Utilizing the required readings and videos, and your personal experiences, compile a positive behavior supports plan that you could use in your inclusion classroom. This plan should be at least 2 pages and must include a reference page.

Participate in online class discussion by answering the following and responding to the posts of 2 peers. In your initial post, discuss your positive behavior supports plan. Please reply to the posts of 2 peers.

Complete Quiz #2.

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Module 3: Download and read the Challenging Behaviors Toolkit from Autism

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Teaching Replacement Behaviors and Expanding Functional Communication	<p>Speaks:  <a href="http://www.autismspeaks.org/sites/default/files/challenging_behaviors_tool_kit.pdf">http://www.autismspeaks.org/sites/default/files/challenging_behaviors_tool_kit.pdf</a></p> <p>View the slideshow “Learning Better Ways to Cope: Teaching Individuals with ASD Skills to Replace Challenging Behaviors:  <a href="http://www.albany.edu/autism/files/Learning_to_Cope_final.pdf">http://www.albany.edu/autism/files/Learning_to_Cope_final.pdf</a></p> <p>Read “Behavior Impedes Learning”:  <a href="https://doe.sd.gov/oess/documents/BehaviorI.pdf">https://doe.sd.gov/oess/documents/BehaviorI.pdf</a>          View the video “Social Communication for Behavior Challenges in Individuals with Autism Spectrum Disorder”:  <a href="https://www.youtube.com/watch?v=tBj0ZYkmGHY&amp;index=83&amp;list=PLAfZLiVQXYRD-4Q7vPtojXh9NgT2wIwUH">https://www.youtube.com/watch?v=tBj0ZYkmGHY&amp;index=83&amp;list=PLAfZLiVQXYRD-4Q7vPtojXh9NgT2wIwUH</a></p> <p>After completing the required readings and video, compose a slide show that illustrates the importance of teaching replacement behaviors and expanding functional communication. The slide show must consist of 6-8 slides and include a reference page in APA formatting. Please share this slideshow with your peers in the discussion forum. Be sure to comment on the work of 2 peers by then end of Module 3.</p> <p>Complete Quiz 3</p>
UNIT 4: Classroom Management Strategies for the Inclusive Setting	<p>Learning Activities:</p>
Module 1: Classroom Structure and Schedules	<p>Read: <i>You’re Going to Love this Kid!</i> By Paula Kluth          Complete a 2-page summary/critique of the assigned book, <i>You’re Going to Love this Kid!</i>          View video of Paula Kluth’s ideas on inclusion in high school:  <a href="https://www.youtube.com/watch?v=nsivrT4dX4M">https://www.youtube.com/watch?v=nsivrT4dX4M</a></p> <p>View video of Paula Kluth discussing inclusion:  <a href="https://www.youtube.com/watch?v=tpL39ApDsSE">https://www.youtube.com/watch?v=tpL39ApDsSE</a></p> <p>Visit Autism Helper for ideas on using classroom visuals:  <a href="http://theautismhelper.com/steps-setting-stellar-autism-classroom-visuals/">http://theautismhelper.com/steps-setting-stellar-autism-classroom-visuals/</a></p>

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Visit Education and Behavior's website for tips on setting up a classroom for students with autism

<http://www.educationandbehavior.com/how-to-set-up-the-classroom-for-students-with-autism/>

Read the following article by Susan Stokes, autism consultant:

<http://www.cesa7.org/sped/autism/structure/str10.htm>

After reading a wide selection of articles and tips, compose a 2-3-page paper discussing the importance of classroom structure and schedules with students with autism. Please include a reference page written in APA format.

Complete Quiz #1.

Module 2:  
Visual Supports  
and Academic  
Modifications

Read the following article by Harris at John Hopkins University:

<http://education.jhu.edu/PD/newhorizons/Journals/specialedjournal/Harris>

Read "Visual Supports and Autism Spectrum Disorder" at Autism Speaks:

[https://www.autismspeaks.org/docs/sciencedocs/atn/visual\\_supports.pdf](https://www.autismspeaks.org/docs/sciencedocs/atn/visual_supports.pdf)

View the video "Examples of Visual Supports"

<https://www.youtube.com/watch?v=i8iCzV34doE>

View the video "Understanding Autism: Classroom Supports":

<https://www.youtube.com/watch?v=MA-DdrymeAk>

View webinar "Using Visual Supports to help Individuals on the Autism Spectrum": <https://www.youtube.com/watch?v=fAi1TZP69-I>

Read "20 Classroom Modifications for Students with Autism":

[http://tcsps.sharpschool.net/UserFiles/Servers/Server\\_981069/File/Migrated%20Documents/20\\_classrm\\_modifications\\_for\\_students\\_with\\_autism.pdf](http://tcsps.sharpschool.net/UserFiles/Servers/Server_981069/File/Migrated%20Documents/20_classrm_modifications_for_students_with_autism.pdf)

After reading and viewing each of the resources in this module, compose a 2-page paper discussing the importance of utilizing visual supports and academic modifications. Please be sure to include a reference page in APA formatting.

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Participate in online class discussion by answering the following and

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responding to the posts of 2 peers. In your initial post, discuss one visual support that you plan to try within your inclusion classroom and justify your reasons for its use. Be sure to respond to the posts of 2 peers by end of Module 2.

Complete Quiz #2.

Module 3: Peer Support

Read the following article: Lindsay, S., M. Proulx, N. Thomson, and H. Scott. 2013. "Educators' Challenges of Including Children with Autism Spectrum Disorder in Mainstream Classrooms." *International Journal of Disability, Development and Education* 60: 347–362.

Read the following article: Kasari, C., Rotherman-Fuller, E., Locke, J. & Gulsrud. (2012). Making the connection: randomized controlled trial of social skills for children with autism spectrum disorders. *Journal of Psychology and Psychiatry*, 53(4), 431-439.  
<https://www.ncbi.nlm.nih.gov/pubmed/22118062>

Read the following article from the Hussman Institute for Autism:  
<http://www.hussmanautism.org/studies-suggest-peer-support-helps-children-autism-engage-class/>

Read the following article: McCurdy, E. & Cole, C. (2014). Use of peer support intervention for promoting academic engagement of students with autism in general education. *Journal of Autism and Developmental Disorders*, 44, 883-893.  
<http://link.springer.com/article/10.1007/s10803-013-1941-5>

View the following video "Students Helping Students"  
<https://www.youtube.com/watch?v=TkqvC9xwJ3E>

View the following video "Autism Documentary":  
<https://www.youtube.com/watch?v=WxB0yubFqFU>

Choose one of the assigned articles to summarize and critique. Be sure to use APA formatting in your paper and reference page.

Complete Quiz #3.

Unit 5:  
 Communicating  
 and  
 Collaborating  
 with Families

Learning Activities:

Module 1:  
 Communicating

View the following video "Helping Parents and Therapists Cope with Autism Spectrum Disorder:"

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Concerns to Families

<https://www.youtube.com/watch?v=JYPeOm5A8XQ>

Read the following article “Sharing Concerns if you suspect a developmental delay or autism, speak up!”

[http://www.ocali.org/up\\_doc/Sharing\\_Concerns\\_Speak\\_Up.pdf](http://www.ocali.org/up_doc/Sharing_Concerns_Speak_Up.pdf)

Read “8 Ways to Communicate with Families”

<http://www.autismclassroomresources.com/8-ways-to-communicate-with-families/>

Read the following article: Graf, W. (2015). Communicating early signs of autism to parents. *AMA Journal of Ethics*, 17(4), 310-317.

<http://journalofethics.ama-assn.org/2015/04/pdf/ecas3-1504.pdf>

View the following presentation regarding autism screenings, referral, and treatment: <http://childrensnational.org/~media/cnhs-site/files/healthcare-providers/cnhn/fop-2014/sinanturnaciogluautism6b.ashx?la=en>

Read the following blog post by a mother “From Denial to Acceptance”: <https://www.autismspeaks.org/blog/2015/02/19/autism-denial-acceptance>

View the following video of families discussing their experiences with receiving a diagnosis of autism for their children:

[http://raisingchildren.net.au/articles/asd\\_diagnosis\\_reaction\\_video.html](http://raisingchildren.net.au/articles/asd_diagnosis_reaction_video.html)

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Participate in online class discussion by answering the following and responding to the posts of 2 peers. In your initial post, discuss your reaction to the above video of parents discussing their reactions to a diagnosis of autism. Please reply to the posts of 2 peers.

Continue to work on your research paper, which is due at the end of this course.

Complete Quiz #1.

Module 2:  
Supporting Families through the IEP/IFSP Process

View the webinar “Addressing Social and Emotional Development in the IEP”: <https://www.youtube.com/watch?v=-hpZPIXyea0>

View “The IEP Process”:

<https://www.youtube.com/watch?v=bSm3wOjkkVw>

Read “Playing a Role in the IEP Process”

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<https://www.understood.org/en/school-learning/special-services/ieps/playing-a-role-in-the-iep-process>

Download and familiarize yourself with “The IEP Guide” provided by Autism Speaks:

[https://www.autismspeaks.org/sites/default/files/gp\\_iep\\_guide.pdf](https://www.autismspeaks.org/sites/default/files/gp_iep_guide.pdf)

View examples of IEP goals and objectives:

[http://www.naset.org/fileadmin/user\\_upload/Autism\\_Series/Examples\\_IEP\\_Goals\\_Objectives\\_for\\_ASD.pdf](http://www.naset.org/fileadmin/user_upload/Autism_Series/Examples_IEP_Goals_Objectives_for_ASD.pdf)

Read the following article “\*8 Steps to a Successful IEP Meeting”

<http://www.greatschools.org/gk/articles/iep-for-autism/>

Additional Resources: <https://www.gvsu.edu/autismcenter/iep-development-and-implementation-for-students-with-asd-94.htm>

Participate in online class discussion by answering the following and responding to the posts of 2 peers. In your initial post, discuss ways in which teachers can support families through the IFSP/IEP process. Please reply to the posts of 2 peers by then of the module.

Complete Quiz #2.

Complete Quiz #2.

Complete research paper by the end of Module 3.

Module 3:  
Providing  
Community  
Support and  
Resources

A list of websites to share with families:

<https://www.autismspeaks.org/family-services/resource-library/websites-families>

“10 Ways to Support an Autism Family”:

<https://www.autismspeaks.org/blog/2015/03/02/10-ways-help-and-support-autism-family>

Available US Government programs to assist families with autism:

<http://www.hhs.gov/programs/topic-sites/autism/autism-support/index.html>

View the following video “Help and Support Outside Your Family”:

[http://raisingchildren.net.au/articles/asd\\_support\\_video.html](http://raisingchildren.net.au/articles/asd_support_video.html)

List of community partners:

<http://www.raisingpecialkids.org/community-partners/>

Read the following article: Weiss, J., Wingsiong, A., & Lunsy, Y. (2014). Defining crisis in families of individuals with autism spectrum

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disorder. *Autism*, 18(8), 985-995.

<http://aut.sagepub.com/content/18/8/985.full.pdf+html>

Complete Quiz #3.

Submit research paper by the end of this module.

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Appendix B: Questions for Criterion Sampling

1. Do you hold a current teaching license in the state of Ohio?
2. Are you currently or previously employed as a teacher in the state of Ohio?
3. Have you previously or presently taught in an elementary general education classroom setting with students identified as having ASD (autism spectrum disorder, including Asperger Syndrome)?

## Appendix C: Interview Questions

1. Discuss your preservice training in the area of autism.
2. Discuss any graduate work/in-service work that has assisted you in teaching a child with autism.
3. How do you feel that your undergraduate work prepared you to teach a child with autism in the general education classroom? Please explain your answer.
4. What are/were your biggest fears in teaching a child with autism?
5. Do you have the needed support and resources (classroom personnel, administrative support and understanding, classroom resources, etc.) to effectively teach a child with autism?
6. What teaching strategies have you tried that seem to help students with autism in your classroom?
7. Describe one way that you have modified a lesson or activity to meet the needs of a student with autism.
8. How do you handle transitions in your inclusion classroom?
9. How do you handle behavior issues in your inclusion classroom?
10. Discuss the social aspect of teaching a student with autism. How do the typical students respond to the student with autism? How does the student with autism respond?
11. How do you encourage social interaction between students with autism and their typically developing peers?

12. Do you feel your classroom environment enables a child with autism to feel academic and social success? Please explain your answer.
13. Has your teaching in the inclusion classroom changed since the initiation of the Common Core State Standards? Please explain your answer.
14. Do you have any advice for new teachers?