Exploring How General Education Elementary Teachers Who Have Had Experience Teaching Students with ASD Successfully Support Students Instructionally and Environmentally: A Qualitative Interview Study

by

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ABSTRACT

This basic qualitative interview study explored the perceptions and experiences of elementary general education teachers regarding their capacity to integrate successful support of students with ASD into their curriculum. The study aimed to gather data on perceptions and the factors that influenced those perceptions. It analyzed teachers' attitudes and experiences to identify factors that contributed to their sensemaking.

One specific question guided this inquiry:

1. Given general education teachers' perceptions, how does the general education teacher successfully support students with ASD in the classroom instructionally and environmentally?

The results indicated that through the conceptual cycle of sensemaking teachers interpreted successful support of students with autism spectrum disorder (ASD) through prior experiences, refining their understanding through social interactions, and internalized learning that strengthened their self-efficacy. This process demonstrated that teachers entered from multiple entry points depending on experience and the refinement of their practice as they engaged with students with ASD, leading to a great sense of competence in implementing the successful support of students with ASD in the general education classroom.

This qualitative interview study emphasized the need to design professional learning and teacher training that recognizes teachers' varying levels of experience, allows adequate time for implementation of successful support, and fosters confidence. Future implications for sensemaking around successful support include providing intentional instructional and environmental support to students with ASD through

academic/instructional learning support, building positive relationships, teacher collaboration, social/emotional needs, and teacher preparedness.

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CHAPTER I: INTRODUCTION

Overview

This dissertation is based on a qualitative interview study of teachers' environmental and instructional perceptions of the inclusion of students with autism spectrum disorder (ASD) in the General Education or Tier I classroom. All students, specifically including those with ASD in the regular education classroom, are part of IDEA 2004 which gives students' rights to Free and Appropriate Public Education (FAPE). The reauthorization of the Individuals with Disabilities Education Act (IDEA) and the establishment of the No Child Left Behind Act (NCLB) necessitates the instruction of all students in the general education classroom whenever possible.

Statement of Problem

The number of students with ASD taught in inclusive classrooms is increasing (Wong et al., 2014, p. 1). The statewide prevalence of ASD from ages 3-21 years of age ranged from 1.5% in Tennessee and Wisconsin to 2.3% in Arizona. More boys than girls had ASD at all sites, with male to female ratios ranging from 3.5% (Utah) to 4.7% (Minnesota) (Shaw et al., 2023).

There are many benefits and challenges of creating and sustaining inclusive classrooms, including access to general education curricula and opportunities for numerous peer interactions, the inclusive classroom can present multiple challenges for students with ASD and their teachers. Due to deficits in social communication and interaction, navigating peer relationships and other classroom social situations can be very difficult for students with ASD (National Research Council, 2001). Moreover, this range of obstacles and variance in severity around these myriad challenges of ASD can

make it difficult for teachers to adapt their instruction and environments to help students with ASD.

According to CDC (2021), 1 in 44 children are identified with autism spectrum disorder (CDC, 2021). In 2000, it was unknown why the prevalence of autism was increasing at such a rapid rate compared to previous years (Rushworth, 2016). Currently, the development of the identification of autism resources, the advancement of research and technology, and the ability to detect autism at an early age are all contributing factors to the prevalence of autism spectrum disorder increasing (CDC, 2021).

Further, according to Tan et al., (2017), teachers can also be reluctant in the face of the aforesaid challenges, to work in classrooms with students with ASD. Teachers have expressed their belief in the concept of inclusion while simultaneously declaring their reluctance to teach in inclusion classrooms (Farrell, 2000; Gordon, 2006, Damore & Murray, 2009). Reluctance generally revolves around a fear of unknown disabilities, lack of training, perceived loss of time with general education students, and insufficient support staff to assist the more challenging students (Daane, Beirne-Smith, & Latham, 2000; Gartin & Murdick, 2005; Goodman & Williams, 2007). More research is needed on how general education teachers interact, include, and accommodate students with ASD. (Syriopoulou-Delli et al., 2012; Wangsgard & Cardon, 2018). Current research focuses on teachers' attitudes toward students with ASD and its effects on the delivery of their instructions in general education classrooms (Hernandez et al., 2016; Wangsgard and Cardon, 2018).

Across all settings and placements, educators who serve students with disabilities are increasingly encouraged to use research evidence to inform their instructional practice (Yell, Shriner, & Katsiyannis, 2006). Evidence-based practices (EBPs) are defined as

instructional strategies, interventions, or teaching programs that result in consistent positive student outcomes when tested experimentally (Mesibov & Shea, 2011). In consistent findings, Hsien et al. (2011) suggested high-level training in special education fostered positive attitudes toward inclusion among teachers; however, some researchers argued teachers needed a support system in general education settings to improve instruction delivery.

Study Context

The purpose of this qualitative interview study is to explore general education elementary teachers' instructional and environmental perceptions of the inclusion of students with ASD and the successful instructional and environmental support. The context for this qualitative interview study was a school district in the southern geographical region of the U.S. The qualitative interview study will emerge in the school districts of the Middle Tennessee region of the United States. The district, located in a city with approximately170,000 residents, consists of twelve schools, ranging from kindergarten through sixth grade, with about 9,000 students. For purposes of this qualitative interview study, the school district that was selected consisted of 9,340+ students. Each school in the district has a principal and one to two assistant principals, depending on the size of the school. During the interview study three schools will be chosen. A series of open-ended interview questions will be asked of each interview participants and results will be based on each teacher's response. School one is a public elementary school serving K-6th grade. School two is a public elementary school serving K-6th grade. School three is a magnet elementary school serving grades K-6th. Teachers

will currently have students with ASD in their general education classroom at least 80% of the time or more. Schools within this district have been identified teachers for having at least one student with ASD in their classroom. From these three schools, teachers who have students with ASD with minimal to moderate levels of support in their general education classrooms at least 80% of the time or more will be invited to join the study and participate in a semi-structured interview.

The context of the research study is a qualitative interview study. An interview study involves "interviews are the primary mode of inquiry, although other data sources are often used as additional data sources" (Bhattacharya, 2017, p.26). Within the interview study, the researcher will examine the perspectives of elementary teachers' perceptions including students with ASD in the general education classroom and the successful support instructionally and environmentally. The participants will be involved in teacher interviews, and the researcher will examine teacher beliefs, previous experiences, mindsets, challenges, fears and strategies for supporting students with autism spectrum disorder in the general education classroom. The interview study will examine how the participants make meaning of their daily experiences by using a constructivist view (Bhattacharya, 2017).

Statement of the Problem

According to Tan (2017), general education teachers are resistant to work with students with autism spectrum disorder (ASD). General Education teachers' mindsets are still evolving about including students with ASD in the general education classroom. Teachers are often overwhelmed with the students on their roster and the range of needs within their classrooms. Adding students with ASD poses a challenge on how to incorporate these students into the general education classrooms, provide for their

individual needs, and successfully support instruction and environmental needs so that these students receive an equitable education.

Purpose of Study

My study aims to explore the elementary general education setting for the inclusion of students with autism spectrum disorder, and the elementary teachers' instructional and environmental appropriate level of support, professional development, and training to be effective in teaching students with ASD. This qualitative interview study aims to add valuable insights related to key challenges found within ASD literature such as communication and social interaction, and restricted and repetitive behaviors in autism spectrum disorder and its impact on alterations or abnormalities. (DSM5, APA 2013). According to Robbins et al. (1996), children with ASD need to be integrated as early as possible into the same educational environment and to participate in the same activities as neurotypical children, to facilitate the development of social interactions between peers. When there is an understanding of the characteristics of autism spectrum disorder "studies have shown that providing teachers with professional development specifically designed for serving students with ASD has a positive impact on student outcomes" (Browder, Trela, & Jimenez, 2007; Jordan, 2003; Koegel, Robert, Koegel, Frea, & Green-Hopkins, 2003).

There has been an abundance of research around inclusive education and the impact on students with and without disabilities, and we know that inclusive education is a good thing for all students. As prevalences increase, teacher shortage is also increasing, meaning we have less qualified teachers maintaining certifications from a traditional route. Potentially resulting in more students with extensive support needs with less teacher experience and expertise in supporting diverse students with exceptionalities.

Significance of Study

This qualitative interview study aims to provide helpful insights into how and why general education elementary teachers provide for the needs of and support their students with ASD instructionally and environmentally. The qualitative interview study also aims to understand these teachers' level of preparedness to give students with ASD the equitable education they deserve. General Education teachers and their impact on the learning of students with ASD is important to understand. In the context of other relevant literature, this project's implication for teacher perception and preparedness is significant because "there is a compelling need to improve the preparation of teachers required to serve these students" (Busby, Ingram, Bowron, Oliver, & Lyons, 2012, p. 29). While other studies have focused on placement in the general education classroom, this qualitative interview study focuses on drawing from these educator insights to make meaning and provide strategies for implementing successful inclusionary practices that are known and less known. (Harrison et al, 2005).

The research plan of this interview study is to examine elementary teachers' instructional and environmental successful supports and perceptions regarding the inclusion of students with ASD. The interview study begins with analyzing research on inclusive classrooms and teacher experience working with students with ASD in the general education classroom. Interviews with classroom teachers will identify potential teacher previous experience, beliefs, mindsets, challenges, frustrations and perceptions for including students with ASD along with peers in the general education classroom. The next phase of the interview study will include interviews with the elementary teachers in the classroom who will explore their successful instructional and environmental strategies

working with students with autism spectrum disorder. The researcher will interview teachers throughout the study while keeping a reflective journal to record anecdotal notes to record common themes, gestures, and feelings that emerge from each participant interviews. During the coding cycle, the interview data and journal entries will be examined to allow the researcher to make connections and clarify the findings.

Definition of Terms

Throughout this qualitative interview study, several key terms will be presented that relate to the general education teachers' instructional and environmental perceptions in working with students with ASD. It is essential to recognize these terms in correlation with the research and the understanding of these terms.

Inclusion: one that integrates students with special needs with other students in regular education (Vaidya,1997).

Instructional: informing children what to do rather than what they need to understand (Allison et al., 2015).

Environmental: The behavioral and personal aspects of classroom experience.

Autism Spectrum Disorder: Autism spectrum disorder (ASD) is a group of neurodevelopmental disorders characterized by challenges in social interactions, communication, and restricted and repetitive behavior (Wang et al., 2022).

Conclusion

General education teachers are important factors to the success and growth of the students with ASD in their classroom. Teachers' perceptions about their preparedness of having what it takes to provide an environment conducive to learning and deliver rigorous instruction to all students is essential. Teachers' perceptions matter when it comes to

including students with autism spectrum disorder in the general education classroom. Teacher perceptions of students with ASD in the general education classrooms will contribute to the experience of the student with a disability.

The chapters presented in this qualitative interview study provide a framework for the research, along with the findings, limitations, and potential opportunities for future research. Chapter 2 will present an overview of the history of inclusion and teachers' perspectives of students with ASD in the general education classroom. Chapter 3 justifies specific components of the actions that will be implemented to complete the research study by using the qualitative method to analyze the data obtained from the interview participants. Chapter 4 expounds on the findings that have been acquired from triangulated qualitative data through teacher interviews and reflections. Finally, Chapter 5 recommends how this research could be further developed in subsequent investigations, along with the limitations the researcher went through during the research process.

Research Questions

This qualitative interview study will explore how general education elementary teachers who have had experience teaching students with ASD successfully support students instructionally and environmentally in the curriculum and explore individual teacher's perception of the successful support integration. I will explore the prior knowledge and professional learning teachers have at the time they encountered successful support of students with ASD. Finally, I will consider the impact of the internal and external influences that supported and guided teachers in their sensemaking toward their capacity to implement the integration of successful support of students with ASD

into their elementary general education curriculum. The following research question serves as the driver of this qualitative interview study:

RQ1: Given general education teachers' perceptions, how does the general education teacher successfully support students with ASD in the classroom instructionally and environmentally?

Summary

According to ACT, (2025), disability is a natural part of human experience. In the United States, there are 45 million adults that have a disability and 7.9 million students ages 3 through 21 that receive special education and related services under the Individuals with Disabilities Education Act (IDEA) in the 2023-2024 school year, representing 15 percent of all children enrolled in public schools. IDEA requires that every free and appropriate public education eligible child with a disability receive an individualized education program (IEP) that includes information on how the child's disability affects the child's inclusion and progress in the general education curriculum (i.e., the same as for nondisabled students) and includes goals that meet the child's needs to enable the child to be involved in and make progress in the general education curriculum.

At the same time, the Elementary and Secondary Education Act (ESSA) requires that state and local Education Agencies (LEA) apply the same challenging state academic standards to all public schools and public school students, including student with disabilities in the state (except for the students with the most significant cognitive disabilities for whom the state may define alternate academic achievement standards aligned with the states content standards) (ACT, D.E., 2025, p.1).

Students diagnosed with ASD are included with these legislative protections. According to ACT, D. E. (2025), in the 2023-2024 school year approximately 7.9 million (15 percent) of students in American K-12 schools are diagnosed with ASD. There continues to be a lack of guidance for administrators, teachers, and families on how to make decisions regarding inclusive placements for students with ASD. (Falkmer et al., 2015; Sansosti & Sansosti, 2012). Falkmer et al. (2015), stated that a “challenge remains about how best to define, implement, and evaluate inclusive schooling” (p. 3) for this population.

CHAPTER II: REVIEW OF LITERATURE

Introduction

According to CDC (2021), 1 in 44 children are identified with ASD (CDC, 2021). In 2000, it was unknown why the prevalence of autism was increasing at such a rapid rate compared to previous years (Rushworth, 2016). Currently, the development of the identification of ASD resources, the advancement of research and technology, and the ability to detect autism at an early age are all contributing factors to the prevalence of autism increasing (CDC, 2021). Nearly 45 million adults in the United States (U.S.) have a disability, and almost 7.9 million students ages 3 through 21 received special education and related services under IDEA in the 2023-2024 school year, which represents 15 percent of all children enrolled in public schools (IDEA, 2004).

From 2006 to 2015, the percentage of students with disabilities educated inside the general education classroom for 80% or more of the day increased from 55.2% to 62.7% (U.S. Department of Education, 2018). According to De Matthews (2021), schools' leadership undoubtedly has been a factor in the growth of inclusive placements demonstrated over the past decade. Principals play an important role in creating inclusive schools. As Salisbury (2006) noted, "Schools that function inclusively do so for a reason . . . [and] the principals in these schools were the reason" (p. 79). Principals shape budgets, distribute resources, provide professional development, hire and evaluate teachers, and set expectations (Leithwood et al., 2008).

Evidence from multiple countries suggests that teachers generally support the concept of inclusive education but question their own ability to teach in an inclusive classroom (Chiner & Cardona, 2013). For example, two surveys in Spain found that

although teachers approved of inclusion in theory, few were willing to include students with disabilities in their own classrooms (Cardona, 2000; Fernández, 1999). Many teachers attribute their hesitation to include students with disabilities to a lack of proper training. A large study conducted in the United States indicates that around one-fifth of general education teachers who teach students with disabilities report that they do not have adequate support, and one-third feel that they were not adequately trained to support students with disabilities in their classrooms (Blackorby et al., 2004).

What is autism spectrum disorder?

According to Harris (2018), Dr. Leo Kanner a child psychiatrists in the early 1940's, observed children with what he termed as autistic disturbance behaviors which included a lack of communicative use of language, preservation of sameness, restricted interest in activities, and stereotypical and repetitive patterns of behavior, such as hand flapping and spinning, were subsequently replicated in new cohorts of children (p. 1). He focused on "neurodevelopmental disorders and argues that 'these children have come into the world with an innate inability to form the usual, biologically provided contact with people' (Harris, 2018, p.1). In this paper the author explores ASD in the context of a neurodevelopmental diagnostic term introduced in psychiatry identified by key features. Further, Baron-Cohen (2015) states that Dr. Hans Asperger, a pediatrician, saw these children as a "wide range of individuals—what today would be called the "autism spectrum"—he placed special emphasis on those he likened to "absent-minded professors," who showed precocious interest in systems and how things work, despite their social awkwardness and difficulties in social understanding" (Baron-Cohen, S., 2015, p. 1329-1330).

The World Health Organization (1994), defined ASD as a behavioral syndrome which is neurobiological in origin, and which involves atypical developmental dysfunctions in the brain (see, e.g. Courchesne, Townsend, and Saito, 1994). The three basic areas in which people with autism face difficulties are social interaction, communication and imagination; Lorna Wing calls these the triad of impairments (Happé, 1994; Wing, 1992). These diagnostic features are included in the Diagnostic and Statistical Manual of Mental Disorders IV (DSM-IV: American Psychiatric Association, 2001) and in the International Classification of Diseases (ICD-10: World Health Organization 1994).

According to Georgiades et al. (2022), a study examined the trajectories of autistic symptom severity in an inception cohort of 187 children with ASD determined across four time points from diagnosis to age 10 (p. 393). Trajectory groups were obtained using multivariable cluster analysis. Two trajectory/cluster solutions were determined. Adjustments in trajectory slopes disclose a *turning point* marked by plateauing in symptom reduction during the period of transition to school (age 6) for one of the two trajectories. “Trajectories were labelled: *Continuously Improving* (27%) and *Improving then Plateauing* (73% of sample). Children in the two trajectories differed in levels of symptom severity, language, cognitive, and adaptive functioning skills. Study findings can inform the development of more personalized services for children with ASD transitioning into the school system” (p. 392). Findings also show that children who followed continuously improving trajectories had lower ASD symptom severity and better cognitive, language, and adaptive functioning skills at diagnosis (Gotham et al., 2012; Kim et al., 2018; Szatmari et al., 2015; Venker et al., 2014).

History of Autism Spectrum Disorder

According to Evangelho et al. (2021), the scientific community generally assumes that the etiology of ASD is complex, influenced by a multifactorial mechanism involving genetic and environmental factors (Evangelho et al., 2021; De Leeuw et al., 2020). In Brazil, there seems to be a consensus among scientists regarding the causes of autism as a complex set of genetic and environmental factors (Chaste & Leboyer, 2012; Freitas et al., 2014; Sandin et al., 2014). The authors Kubota et al. (2012), Loke et al. (2015), and Constantino & Marrus (2017) reinforce that autism is caused by a combination of genetic and environmental factors.

ASD, according to the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV), first published in 1994, includes criteria in three categories: qualitative impairment in social interaction; qualitative impairments in communication; and delays or abnormal functioning in either social interaction language as used in social communications or symbolic or imaginative play with onset prior to age three. The difference between autism and autism spectrum disorder is to be diagnosed as having ASD, a person must have a set number of characteristics in these categories from a defined list of possible symptoms. The term “spectrum” in autism spectrum disorder refers to the wide range of symptoms and severity.

Currently, the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders DSM-5; American Psychiatric Association, APA, 2013) recently revised the diagnosis. Under the DSM-IV-TR (APA, 2000), ASDs were separated into five subtypes: autistic disorder, Asperger's syndrome (AS), childhood disintegrative disorder (CDD), Rett's syndrome, and pervasive developmental disorder-not otherwise specified (PDDNOS). The newly revised DSM-5 lists one single category of autism spectrum

disorder (ASD). However, the three main features of ASD continue to be impairments in social interactions, impairments in verbal and nonverbal communication, and restricted and repetitive patterns of behavior (APA, 2013). The DSM-5 criteria are more stringent than DSM-IV-TR. The DSM-5 criteria for ASD that must be met for a diagnosis of ASD include: (a) persistent deficiencies in social communication and interaction across settings; (b) restricted and repetitive behaviors, interests, or activities; (c) symptoms must be present early in childhood (but may be delayed to a later age when social demands exceed the limits of the child); and (d) symptoms limit and impair functioning daily (APA, 2013).

Further (CDC, 2020), characteristics of children with ASD are described as exhibiting social and behavioral deficits. Behaviors can include perseverating, stimulatory behaviors, not responding to their name, not making eye contact, and becoming frustrated when routines change (CDC, 2020). Children with ASD exhibit challenging behaviors at school as well as outside of school. These behaviors include aggression and tantrums lasting for a significant amount of time sometimes leading to self-injurious behaviors. Students with autism have deficits in cognitive skills, fine motor skills, adaptive (Karal & Riccomini, 2016).

Over the past decade, the literature reports having seen an increasing trend in the number of children diagnosed with ASD (Chakrabarti & Fombonne, 2001; McDonnell, 1998; U.S. Department of Education, 23rd Annual Report to Congress, 2001). In addition, there has been a parallel increase in the number of these children who are served in inclusive, general education settings (U.S. Department of Education, 1994–2001).

Many children with autism demonstrate challenging behaviors that interfere with their ability to learn and be successful in general education classrooms (Gonzalez-Lopez & Kamps, 1997; Weiss & Harris, 2001). Unfortunately, general education teachers often have limited knowledge and skills related to this disorder, and they are not typically able to intervene effectively to decrease challenging behaviors and successfully include children with ASD in general education classrooms (Scott, Clark, & Brady, 2000). As a result, the inclusion of children with autism in general education classrooms has often posed problems for teachers and administrators in inclusive settings (Mesibov & Shea, 1996).

The ASD community has alerted the scientific community about the dangers of focusing research solely on the genetic causes of autism, as this may lead to the medicalization of autism, conceptualizing it as something that needs to be prevented or cured, and may obscure the understanding of the lived experiences of autistic individuals. Focusing exclusively on biological factors risks ignoring the social, environmental, and behavioral aspects of ASD that are vital to daily life. This reductionist view can lead to the dehumanization of individuals with ASD, simplifying their identities and experiences to mere genetic codes or neural patterns (Pellicano & Stears, 2011). This occurs partly because there is a notable gap between the funding of autism research and the priorities of the autistic community, which emphasizes the need for research that impacts daily life (Pellicano, Dinsmore & Charman, 2014). In examining the ASD in the context of general education teacher perceptions, the history of ASD suggests general education teachers need more knowledge and skills related to the disorder to intervene effectively.

Evolution Over Time

Harris (2018) notes that “some believed that these children’s presentation to be an early manifestation of schizophrenia, an early onset infantile psychosis. This lack of clarity led to autism being classified in DSM-II as an infantile psychosis under the diagnostic umbrella of childhood schizophrenia. Early infantile autism was defined as having an onset before 30 months of age, pervasive lack of responsiveness to others, deviant language development, unusual responses to the environment, and the absence of hallucinations and delusions as present in schizophrenia” (p.5).

Today, Kanner is best known for his classic 1943 paper on Autistic Disturbance of Affective Contact, which was the first systematic description of this unique neurodevelopmental disorder (Kanner, 1943,1968). Although Kanner’s conclusion that infantile autism was an innate disorder it eventually set the stage for modern genetic studies. At the time his paper was published, the focus in psychiatry, especially in psychoanalysis, was on the role of psychosocial factors as causative in the etiology of psychiatric disorders. Moreover, at that time eugenic beliefs were current leading to people with intellectual disabilities being stigmatized. In Nazi Germany, legislation had been passed to enhance racial purity through sterilization of people with psychiatric disorders and intellectual disabilities (Strous, 2007).

Further, Harris (2018) also stated **“**in 1971 Kolvin published seminal research that clarified the distinction between autism and schizophrenia” (Kolvin, 1971; Rutter, 1972, 1978). These findings were pertinent in defining the new DSM III category early infantile autism, which was classified as a pervasive developmental disorder distinct from schizophrenia and consistent with Kanner’s initial description. The study is valuable in

that it provides significant insights into how general education teachers provide successful support to persons with autism and its impact on the classroom instruction and environment.

ASD is a spectrum disorder, and about 30% of nonverbal students who require extensive support need while the other half are very highly functioning. It is estimated that between 48% of individuals diagnosed with ASD have IQ's below 70 (Bertrand, Mars & Boyle, 2001) leaving the other 52% of people diagnosed with ASD in the high functioning range. This qualitative interview study will focus on the 52% of the population of people diagnosed with ASD that are high functioning.

Defining Inclusive Classrooms

According to Bakken et al. (2016), the purpose of inclusive education was to ensure that students with special needs are "integrated in the general education setting for as much of the day as possible, with the supports they need to be successful. Inclusion strategies can include co-teaching, consultative services, paraprofessional support, modifications to curriculum or testing, accommodations for specific disabilities, and other services allowing an individual student to access the district curriculum in the general education classroom" (p.4).

"With the passing of public law 94-142, Education of All Handicapped Children Act, all students with disabilities were eligible to a free and appropriate education" (Bakken et al., 2016). Many different placement options emerged where students with disabilities could be educated. In the beginning, some students were served in special schools and "not allowed in the general education setting because of their disability" (p. 2). In the public school system, special education is developed as a specialized program separate from general education. Students were served in "pull-out' programs or special

classes, this was seen as the best means for avoiding conflicts for providing specialized instruction for students (Gerber, 1996).

Further, the basic premise of inclusive communities is that schools are about belonging, nurturing, and educating all children and youth, regardless of their differences in language, culture, ability, gender, ethnicity, and class (Ferguson, Kozleski, & Smith, 2003; Saldana & Waxman, 1997). According to Bakken et al. (2016), students were pulled into resource rooms for specialized instruction. These resource rooms offered individualized instruction from a special education teacher, students could complete exams in a quieter environment, and students received more individualized instruction to meet their academic deficits. Students were also served in self-contained rooms, which had lower teacher-student ratios and students would receive specific instruction from a special education teacher in a specific content area (Bakken et al., 2016, p 2).

Rose, Meyer, and Hitchcock (2011) define inclusion as a philosophy and not a place of education. Inclusion is a movement seeking to create schools that meet the needs of all students by establishing learning communities for students with and without disabilities, educated together in age-appropriate general education classrooms in neighborhood schools (Ferguson, 1996). An inclusion classroom is defined as one that integrates students with special needs with other students in regular education. This does not mean eliminating special education; preferably, it entails incorporating the best special education has to offer with regular education for the benefit of all students (Vaidya,1997).

Inclusive education requires that all students be educated in the general education classroom to the greatest extent possible regardless of ability (Avramidis et al., 2019; Hind et al., 2019; Kauffman et al., 2018; Krischler et al., 2019). While experts have many

views on inclusion in special education, inclusion will be defined in this study as an opportunity for students with disabilities to interact, to the greatest extent possible, with their non-disabled peers in a general education setting with accommodations and modifications in place to meet their needs (Francisco et al., 2020).

Two federal laws that support inclusion of students with ASD are the Education of Children with Disabilities and the Elementary and Secondary Education Act of 1965 (ESSA) and the Individuals with Disabilities Education Act (IDEA), which were signed into law in 1965, and 1975 respectively. In conjunction, the ESSA and IDEA deliver the system and structure to ensure that children with disabilities have access to learning environments that meet their individual needs (ACT.D. E, 2025).

Inclusion classrooms are part of IDEA. Every student with a disability who receives special education services in the United States public school system is entitled to a free and appropriate public education (F.A.P.E) under the Individuals with Disability Education Act of 2004 (IDEA, 2004). IDEA clarifies this as an equitable education process that ensures a student will make progress within his or her own disability-related needs and circumstances (Dieterich et al., 2019). Further, as a part of F.A.P.E, students with disabilities are also considered for placement in the least restrictive environment (LRE) to support their learning needs. F.A.P.E emphasizes the importance of special education and related services designed to meet the child's unique needs and prepare the child for further education, employment, and independent living (Jameson et al., 2020).

In accordance with IDEA (2004), professionals on the Individual Education Plan (IEP) team make LRE decisions for individual students. This means professional individuals hold the power to determine how much access will be granted to all students with disabilities, including those with significant support needs (Ruppar et al., 2020).

Despite research indicating inclusive placement has multiple benefits, the Least Restrictive Environment (LRE) varies by disability category and location (Wehmeyer et al., 2021, Williamson et al., (2020). IDEA requires that every free and appropriate public education-eligible child with a disability receive an Individualized Education Program (IEP) that includes information on how the child's disability impacts the child's involvement and progress in the general education classrooms curriculum (i.e., the same curriculum as for nondisabled students) and includes goals that meet the child's needs to enable the child to be involved in and make progress in the general education curriculum (ACT.D. E, 2025).

The Least Restrictive Environment (LRE) is used in the Individuals with Disabilities Education Act (IDEA) as education for a student with disabilities in the same environment as his or her non-disabled peers to the greatest extent possible based on the needs of the child (ACT.D. E, 2025). This is determined by an Individualized Education Plan (IEP) team for each child when discussing what services will be needed for a student to achieve academic success and where the services will be provided (Yell & Prince, 2022).

According to ACT, D.E. (2025), the Elementary and Secondary Act (ESSA) of 1965 was signed into law by President Lydon Baines Johnson, who believed that "full educational opportunity" must be "our first national goal." The law focused on advancing equity and sustaining critical protections for America's students from disadvantaged backgrounds through its requirements, programs, and funding. Likewise, President Gerald Ford signed into law the Education for All Handicapped Children's Act, the predecessor statute to the IDEA, his response was to the systematic exclusion of

students with disabilities from public schools, which only educated one in five students with

disabilities at that time (p.3). The Elementary and Secondary Education Act (ESSA) requires that States and Local Educational Agencies (LEAs) apply the same challenging State academic standards to all public schools and public school students, including students with disabilities, in the State (except for students with the most significant cognitive disabilities for whom the State define alternate academic achievement standards aligned with the State's content standards) (ACT.D. E, 2025).

While national analyses show promising evidence, inclusive practices are not evident in all educational contexts. The disproportionate identification and segregation of low-income students of color is a well-documented phenomenon spanning decades (Blanchett, 2006; Blanchett et al., 2005; Dunn, 1968; U.S. Department of Education, 2018). Recently, the National Council on Disability (2018) described the problem in detail: Students with disabilities, in particular students of color and students in urban settings, as well as students with specific disability labels (such as ASD or intellectual disability), continue to be removed from general education, instructional, and social opportunities and to be segregated disproportionately . . . the opportunity for students to participate in their neighborhood school alongside their peers without disabilities is influenced more by the zip code (De Matthews et. al. 5) they live, their race, and disability label, then by meeting the federal law defining how student placements should be made. (p. 9).

Budget shortfalls during the Great Recession and a lack of school-family rapport have also made inclusion more difficult (Banks, 2017). Many districts are unable to hire,

train, and retain teachers committed to inclusion or with the cultural competency needed to recognize their own biases when working with students of color (Grissom et al., 2015; Skiba et al., 2006). An incremental improvement perspective understands the primary outcome for special education as the successful post-school adaptive functioning of individuals with disabilities in addition to increasing individual knowledge and skill levels. According to Barnett et al. (1998), “no clear definition emerged, but principals generally viewed inclusion as most appropriate for students with mild disabilities. Additionally, results indicated that teachers were not adequately prepared to implement inclusive practices. Significant differences between the extent of use and perceived effectiveness of 13 educational practices were found. Findings raise issues related to administrators' awareness of practices that facilitate inclusion and how prepared they are to implement and support inclusive education (p. 181).”

According to Isreal (2023), the information based on a computer science (CS) case study reveals that “the lack of attention to students with disabilities has resulted in a lack of accessible computational tools, limited understanding of specialized instructional approaches that address the needs of students with disabilities, and reduced commitment to the inclusion of students with disabilities in K-12 computer science education” [23]. This lack of inclusion not only denies students with disabilities their right to access the general curriculum but also excludes them from a subject area meant to prepare all students to become computationally literate citizens in a digital world (Israel et al., 2022).

Participants expressed that focusing on the ‘‘big picture’’ of inclusion could lead to a positive classroom climate, free of limitations for all students. According to Isreal et al. (2022), another large group of learners receive accommodations and support under Section 504 of the Rehabilitation Act of 1973, a civil rights law prohibiting

discrimination against people with disabilities. It is important to note that most of these learners are educated in general education settings alongside their peers (p. 27:2). Inclusive education has occupied a central role in educational planning especially over the last two decades of the 20th century. When understood broadly, the inclusive education debate concerns people who have been historically excluded from the cultural, social, and economic benefits of formal education or of formal quality education (Bisol et al., 2015).

Israel et al. (2022), states "another large group of learners receive accommodations and support under Section 504 of the Rehabilitation Act of 1973, which is a civil rights law prohibiting discrimination of people with disabilities. It is important to note that most of these learners are educated in general education settings alongside their peers" [35]. A teacher who provides computer science (CS) instruction will possibly have students with disabilities in their classrooms. Not considering their instructional needs during CS education consequently results in a deficit of access to the general curriculum and prolongs the stigmatization and unrepresentativeness of these learners (p. 2).

Consequently, the basis for the instructional and environmental perceptions of elementary school teachers on including students with ASD is teachers lack expertise in inclusive CS pedagogies (Israel et al., 2022, p.2). When considering the implications of students with autism spectrum disorder, teacher perceptions are significant because inclusive classrooms educate, it becomes clear that "most students with ASD are educated in general education settings alongside their peers" (Bisol et al., 2015). Although inclusive classrooms' contribution to the literature how teachers support students instructionally and environmentally is limited, it provides valuable insights into teacher instructional strategies and environmental preparedness. Defining inclusive

classroom adds to the existing literature by increasing students with disabilities participation inside the general education classroom for 80% or more of the day.

Attending class alongside a student with a disability can yield positive impacts on the social attitudes and beliefs of non-disabled students. A literature review by Staub et al. (1995) describes five benefits of inclusion for non-disabled students: reduced fear of human differences, accompanied by increased comfort and awareness (less fear of people who look or behave differently); growth in social cognition (increased tolerance of others, more effective communication with all peers); improvements in self-concept (increased self-esteem, perceived status, and sense of belonging); development of personal moral and ethical principles (less prejudice, higher responsiveness to the needs of others); and warm and caring friendships (Staub et al., 1995, p. 37). These changes in attitude are predicted by the Contact Hypothesis, a term referring to the reduction of hostility, prejudice, and discrimination between groups (e.g. non-disabled versus disabled) through increased inter-group contact (Allport, 1979, p.3) Inclusive classrooms provide many of the conditions necessary for reducing discrimination under the Contact Hypothesis, which include 1) group members having equal status, 2) cooperation in pursue of common goals, 3) fostering the development of close personal relationships, and 4) institutional support (Allport, 1979).

Definitions Across Time

The words inclusion and diversity are often used interchangeably. To create clear diversity and inclusion strategies, it is important to understand the difference between the two. Diversity includes any dimension used to differentiate groups and people from one another. When talking about diversity in a school or workplace setting, we focus on

respecting and appreciating what makes people different in terms of age, gender, ethnicity, religion, disability, sexual orientation, education, and national origin (SMARP, 2019).

Inclusion, on the other hand, includes organizational efforts to make individuals of all backgrounds feel welcomed and equally treated. An inclusive organizational culture makes people feel respected and valued for who they are as individuals or groups. People who feel welcome are often much more committed to their work, are more motivated, and have higher levels of engagement. The process of inclusion focuses on making people feel valued and important for the organization's success. When people feel valued and appreciated, they function at full capacity and feel part of the organization's mission and values (SMARP, 2019).

An inclusive classroom climate is one that embraces diversity and creates an atmosphere of respect for all members. The Center for Integration of Research, Teaching and Learning advocates for educators to capitalize on the rich array of experiences, backgrounds, and skills that diverse faculty and students bring to the classroom to the benefit of all (Center for the Integration of Research, Teaching and Learning, 2020).

Competing Definitions

Lord (2009) states that in recent years, conceptualization of autism has changed considerably from that of primarily non-verbal, severely learning-disabled children with obvious handicaps to a much broader spectrum of disabilities that includes highly specific social-cognitive deficits in individuals with otherwise relatively normal non-verbal skills. Autism can be reliably diagnosed in children as young as 2 years of age, although diagnoses are less stable in children under 3 years than at any other time in development (Lord et al, 2009).

The definition of Asperger's syndrome, a part of the spectrum of ASD, which is no longer a stand-alone diagnosis is "in ICD-10 and DSM-IV, which requires excluding individuals who meet criteria for autism, results in such a small number of cases that many investigators and clinicians have simply created their own diagnostic criteria" (Klin et al, 2005).

Links to Autism Spectrum Disorder

ASD is characterized by alterations or abnormalities in two main areas of development: communication and social interaction, and restricted and repetitive behaviors (DSM5, APA 2013). Nonetheless, according to Robbins et al. (1996), children with ASD need to be integrated as early as possible into the same educational environment and to participate in the same activities as neurotypical children, to facilitate the development of social interactions between peers. These children have difficulty with social interactions, particularly in understanding the nuances of social behavior; indeed, they may give the impression that they are uninterested in interaction with others (BaronCohen & Tager-Flusberg, 1994; Kasari & Sigman, 1996; Schopler & Mesibov, 1995).

Moreover, some of their behaviors and/or behavioral excesses may also interfere with positive relationships with others. One factor examined with typical children has been the behavioral problems exhibited by the child in the classroom. Researchers generally find that teachers have closer and less conflictual and dependent relationships with children who have fewer behavioral problems (Birch & Ladd, 1998; Pianta & Nimetz, 1991; Pianta & Steinberg, 1992). Children with ASD vary with respect to behavioral problems, and these likely also vary in the classroom. Thus, we expect that

included children with autism with more behavioral problems in class will also have poorer quality relationships with their teacher (Robertson et al., 2003, p. 128).

According to Robertson et al. (2003), a study based on the relationships between general education teachers and students with autism classmates were asked to complete a social inclusion measure to examine students' perceptions of the social environment of their classroom. Social inclusion measures included all the participating children in the class, including the student with autism. Children's level of social involvement was measured by their affiliation with peers. Results indicated considerable variability in reports of relationships of included students with autism, children's level of behavior problems, degree of social inclusion and associations between these factors (p. 126).

Benefits of Inclusive Learning

Hehir (2016) points to both academic and social-emotional benefits of inclusion for students with disabilities and those without. Students with disabilities who are in inclusive classrooms have stronger reading and mathematics skills, better attendance, decreased likelihood of behavioral problems, and increased likelihood of completing secondary school than students that have not been in inclusive classrooms (Hehir, 2016). Moreover, "the benefits of inclusion for students with disabilities extend beyond academic results to social connection benefits, increased post-secondary education placement and improved employment and independence outcomes" (Hehir, 2016, p. 3). Inclusion also positively affects neurotypical peers, improving their "social-emotional growth and positive perceptions of" and comfort with different abilities without adversely impacting their academic achievement (Oliver-Kerrigan, Christy, & Stahmer, 2021, p. 158).

In the area of academic progress, Waldron et al. (2001), reports that more students without disabilities made comparable or greater gains in math and reading when taught in inclusive settings versus traditional classrooms where no students with disabilities are included. This suggests that inclusive classrooms provide greater access to the general education curriculum that benefits all students (Waldron, 2001). During the last 40 years

it has become apparent that inclusion has positive benefits and it promotes: (a) achievement of the students individualized education program objectives (Brinker & Thorpe, 1984), (b) communication and interactive social skills development (Cole, Meyer, Vandercook, & McQuarter, 1986), (c) generalization of skills to new environments (Billingsly & Kelley, 1994), and (d) post school integration into jobs and housing in the community (Chadsey-Rusch, 1990). Inclusion can be effective and produce positive outcomes for students with disabilities.

Tracing the History of Teacher Knowledge, Involvement and Training Around ASD

According Fuch et al. (2015), teachers who currently have minimal time to spare, work with students with disabilities in inclusive settings (Fuchs et al. 2015; Powell, Fuchs, and Fuchs 2013). These teachers need knowledge of how to differentiate instruction and adapt assignments and assessments without decreasing the rigor of the standard (Saunders et al., 2013) and may not have the training in their teacher preparation programs or know how to approach this task (Allday, Neilsen-Gatti, and Hudson 2013;Forlin and Chambers, 2011; Kim 2011; Maccini and Gagnon, 2006; McCrimmon (2015).

According to Bakken (2016), research revels “teachers reported a lack of confidence regarding IEP requirements, but those teachers that had training on IEP development were more confident in their abilities” (p. 5). To best support students with ASD, it is essential that general education teachers, related services providers, administrators, special education teachers, and parents collaborate to better understand the unique strengths and needs of students with ASD. While each student with ASD is unique, their strengths and needs will certainly differ (Brewin, Renwick, & Schormans, 2008: Ferraioli & Harris, 2011).

Harrison et al. (2005) identified the specifics of implementing successful inclusionary practices were not well known. When implemented ineffectively, placement in the mainstream environment frequently resulted in students with ASD feeling overwhelmed in a larger setting, with more distractions. It was often noisy and chaotic, especially during transitions (Pellicano et al., 2018). McKenna et al. (2019) provided a different perspective compared to Harrison et al. which “discussed that inclusion pointed to increased access in the general education curriculum and is often shown to improve access in the general education curriculum and is often shown to improve adaptive behaviors, peer relations, and more positive transitional outcomes” (Mckenna, 2019). Parents, administrators, educators, and support personnel agree that interventions addressing the social skills deficits of students with ASD are needed if students are expected to attain increase independence and success (Brown, Odom, & Conroy, 2001; US Department of Education, 2003), research suggests general education teachers do not feel prepared to implement such interventions. In fact, some general education teachers do not support an inclusive model of teaching citing their own lack of training preparation for teaching in inclusive settings (Ross-Hill, 2009).

While causation is up for debate, what is clear is that prevalent trends indicate a need for a better understanding of the population to ensure appropriate educational service delivery (Bakken et al., 2016, p. 115). There is a continual need for more research on inclusion for students with ASD (Falkner, Anderson, Joosten, & Falkmer, 2012; Ferraioli & Harris, 2011; Osborne & Reed, 2011). Without a deep understanding of how to increase academic achievement for students with ASD (Ferraoli & Harris,

2011; Sansosti & Sansosti, 2012) the educational placement may be premature (Bakken et al. 2016) Brown, W. H., Odom, S. L., & Conroy, M. A. (2001). An intervention hierarchy for promoting young children's peer interactions in natural environments (*Topics in early childhood special education*, *21*(3), 162-175).

There continues to be a lack of guidance for administrators, teachers, and families on how to make decisions regarding inclusive placements for students with ASD (Falkmer et al., 2015; Sansosti & Sansosti, 2012). Falkmer et al. (2015) stated that a "challenge remains about how best to define, implement, and evaluate inclusive schooling" for this population. Additional support was viewed as a barrier if the presence of the additional adult in the classroom affected the teachers feeling of responsibility for student learning (Falkmer et al., 2015; Star & Foy, 2010).

In one study, both elementary and secondary general education teachers voiced concerns about their lack of confidence teaching in an inclusive classroom and feelings of low self-efficacy in working with special education students (McCray & McHatton, 2011). Even after taking a course in inclusionary practices, the pre-service teachers stated that the courses were helpful, however they still required more support in instructional strategies and understanding characteristics of students with different types of disabilities (Able et al., 2015, p. 46).

In addition to continued concerns about their lack of preparation, some teachers noted they do not receive adequate support within their schools (Ross-Hill, 2009). Specifically, teachers have reported a desire for collaboration to support inclusion (Finke et al., 2009). Although personnel between general and special education teachers is beneficial, teachers lament the lack of planning time, the incompatibility of teachers, lack of training, varying student skill levels, and lack of administrative support (Scruggs, Mastropieri, and McDuffie, 2007).

Once students with disabilities are placed in general education, their teachers play a critical role in enabling and facilitating inclusion practices that promote equal access to the curriculum, as well as social opportunities in the classroom (Individuals with Disabilities Education Act, 1990, 2004). Research suggests that general education teachers may not be actively employing inclusion strategies in their classrooms. Segall and Campbell (2012), found that while general and special education teachers similarly understood the importance of inclusion, general education teachers were less likely to report using best practices of inclusion education for students with disabilities. This study, as well as extent research, suggests that effectiveness of inclusion is largely influenced by teachers' opinions of disabilities and their receptivity toward inclusion (Avramidis & Norwich, 2002; Robertson et al., 2003; Segall & Campbell, 2012; Syriopoulou-Deli et al., 2012). That is, unfavorable perceptions of students with disabilities and/or inclusive practices may negatively impact teachers' willingness to accommodate students with disabilities and their confidence to effectively integrate these students into classroom activities (Bolourian, 2021, p. 3978).

A large body of teacher training research indicates that teacher knowledge of ASD is crucial for promoting positive school experiences. A study in the U.K. reported that fewer than half of 176 youths surveyed reported being happy at school; importantly,

60% expressed that the main factor that would make school better for them is having a teacher who understands their autism (APPGA, 2017). One study, 60 percent of the students on the autism spectrum identified that the “main factor that would make school better for them is having a teacher that understands their autism” (All Party Parliamentary Group on Autism [APPGA], 2017).

Falkmer et al., (2015), found that general education teachers were the main facilitators and barriers to successful inclusion. Training (Burack et al., 1997; Falkmer et al., 2015, Lindsey, Proulx, Thomas, & Scott, 2013; Osborne & Reed, 2011; Rodriguez, Saldana, & Moreno, 2012; Sansosti & Sansosti, 2012; Symes & Humphrey, 2011), feelings of self-efficacy (Osborne & Reed, 2011), and personal characteristics (Ferrraioli & Harris, 2011; Osborne & Reed, 2011; Rodriguez et al., 2012) were corroborated as critical to teacher facilitation of successful inclusive classroom experiences. The interconnectivity of these constructs further complicated the discussion since teacher attitudes are influenced by experience, training and perception of available resources and supports (Rodriguez et al., 2012).

General education teachers and the university professors who train them are convinced that they need to become knowledgeable about all disability diagnoses and to be trained in specialized pedagogy (Gabel 2002). Nilholm and Göransson (2017) argued that the rise of inclusion and inclusive practices should rid society of practices that promote segregation between disabled and non-disabled persons. It is common for general educators to be convinced that they have little to offer students with complex support needs or severe intellectual disabilities (e.g. De Boer, Pijl, and Minnaert, 2011). Beliefs among educators and administrators about students with intellectual disabilities

affect their expectations for these students and often serve as justification for providing their education in segregated settings (Lalvani and Broderick 2015). General educators feel that the change needed to include students with significant disabilities is overwhelming and will require extended time and specialized training.

Training Over Time

As outlined above, general education teachers need ongoing, high-quality training to help best support students with ASD. Professional development for general education teachers to learn about ASD and best practices first began in Teacher training is another aspect that is very important to the success of students with disabilities in an inclusive environment. According to Bakken (2016) some important questions that need to be asked before students with ASD participate in the general education environment are 1. What training does the general education teacher has working with students with disabilities? 2. How might the special education teacher support the general education teacher and the student with disabilities? These are characteristics that also need to be examined when putting a student with disabilities into the general education environment. A child receiving special education services may participate fully in the same program as the general education children with support from the special education teacher, or may participate in a limited way, as they are able (Bakken, 2016, p. 7).

Paraeducators support students in a range of school settings and with varying disabilities, with nearly 80% supporting students with autism spectrum disorder (ASD) according to one report (Carter et al., 2009). Although notable advances have been made in identifying effective practices to support students with ASD (e.g., Hume et al., 2021), paraeducators may not be adequately prepared for their roles and responsibilities in

assisting teachers and other educational professionals in implementing these practices (Fisher & Pleasants, 2012; Massafra et al., 2020).

A predictor of students with autism's success in the classroom is the presence of a paraprofessional, particularly a 1:1 aide. General education teachers report that the presence and proximity of paraprofessionals create an opportunity for them to avoid responsibility for the education of students with students placed in the classroom. Burack et al. (1997), explains that "teacher and staff training in ASD are essential for students' success. In fact, without support and training, only 33% of teachers expressed willingness to participate in inclusion (Burack et al., 1997). According to Frederickson, Jones, & Lang, (2010), a primary characteristic that leads to the exclusion from the general education environment is inappropriate behavior "targeted training for teachers and staff is in behavior intervention strategies is key. When teachers and support staff were trained and experienced in working with students with ASD, they were able to identify the behavioral triggers in the environment rather than rely on the eventual occurrence of a temper tantrum (Frederickson, Jones, & Lang, 2010, p.9).

IDEA and ESSA have common achievement goals for improving academic achievement through high expectations and high-quality education programs. These goals are achieved by focusing on challenging state academic standards and accountability systems that are designed to measure students' performance, providing support for educators and resources for a proportioned education, and emphasizing evidence-based instruction; the IDEA regards those efforts on how best to support disabilities, individually and within ESEA systems (ACT.D. E, 2025).

The research states that the goal of inclusion is to facilitate positive interactions between children with disabilities and typical learners (Lamport et al., 2012). The

teacher-child relationship can affect the child's social status within a classroom, thus further elevating the importance of the teacher-child relationship. Children who have warm, close, and communicative relationships with their teachers are considered better adjusted and have better subsequent relationships with teachers and with peers (Copeland-Mitchell, Denham, & DeMulder, 1997; Howes, Hamilton, & Matheson, 1994; Pianta Steinburg, & Rollins, 1995).

Elementary Teacher Perceptions/Perspectives

According to Daniel et al. (2018), a teacher's perception of students with ASD in their general education classrooms can have enduring effects on their students' academic success. While the teacher may not directly articulate these perceptions, the effects remain. Some of these perceptions may be due to their lack of adequate pre-service training (Daniel & Cooc, 2018). Research suggested that when a teacher is not explicitly trained to instruct students with ASD, their perception of students is often biased (Boujut et al., 2016; Chung et al., 2015). Moreover, the teachers limited training might negatively impact their experience and perception of providing instruction to students with ASD in the inclusion classroom setting (Chung et al., 2015). Steinbrenner et al. (2015) and Liu et al. (2016) support these assumptions by implying that teachers who lack the understanding of the characteristics of students with ASD, and the knowledge needed to meet their academic and social needs, often experience a lower sense of self-efficacy and are therefore less effective in the inclusion classroom. Their perceptions of students with disabilities, such as ASD, may ultimately influence their ability to meet the student's academic needs (Wangsgard & Cardon, 2018, p.2).

It follows then that providing training for teachers can influence teachers' attitudes towards inclusion. Multiple studies have found that teachers who have received

training on inclusion are more likely to have positive attitudes towards the inclusion of students with disabilities (Chiner & Cardona, 2013; Sharma et al., 2008). For example, research conducted in South Africa regarding barriers to inclusion highlighted teachers' concerns with the challenges presented by increasing student diversity in the classroom. Teachers remarked that they lacked adequate knowledge, facilities, skills, and training.

These concerns shaped teachers' perceptions of inclusion. After receiving training, teachers felt more positive about including students with disabilities. Pre-test and posttest scores showed that teachers who participated in the study increased their teaching skills and knowledge of inclusive education (Oswald & Swart, 2011). Similarly, a study of teachers in Uganda found that those who had some form of training in inclusive education held more positive and willing attitudes towards inclusion than those without any form of training in inclusion (Ojok & Wormnæs, 2013).

When examining the perceived relationships between general education teachers and students with high functioning autism one factor with typical children has been the behavioral problems exhibited by children in the classroom. There are gaps in the research when it comes to the teacher's perceptions of the delivery of instruction to students with autism. According to Robertson et al. (2003), there is also limited research examining the nature of the relationship between general education teachers and children with autism.

Transition Into Primary School

According to Lee et al. (2014), few recent studies have examined challenges and successes in transitioning young children with ASD and their families to primary school. Challenges include lack of information about the transition process and school program choices, barriers to parental advocacy, and non-individualized transition practices and support (Lee et al., 2014; Nuske et al., 2019; Quintero & McIntyre, 2011). The National

Research Council recommends early entry into an intervention program — as soon as a child is suspected of having an autism spectrum disorder. The council recommends these programs provide systematically planned and developmentally appropriate educational activities focused on identified objectives (Godek, 2008).

According to Godek (2008), a school district in Vermont is committed to serving the diverse needs of students that require a range of approaches, including applied behavioral analysis, or ABA, treatments, speech and language therapy, occupational therapy and instruction to improve social interaction, communication and development of academic and functional skills. Some students need supports beyond the school program, so wraparound services with mental health agencies and families may be necessary. Because these students present a wide variety of characteristics, strengths and challenges, no single program addresses every student's needs. There are, however, fundamental components to all programs for children with autism. We are committed to providing "a consistent coordinated model of service that ensures an equitable and efficient distribution of resources and includes these fundamental components" (p.3). This early intervention greatly improves our ability to meet the child's needs in the district on a long-term basis. The staff and family develop a keen awareness of student needs and, as a result, the students' skills steadily improve.

Best practices and Approaches in Supporting Students with ASD

Across all settings and placements, educators who serve students with disabilities are increasingly encouraged to use research evidence to inform their instructional practice (Yell, Shriner, & Katsiyannis, 2006). As school districts shift their emphasis to measuring student outcomes and using student outcome data to determine teacher

effectiveness, the use of evidence-based practices (EBPs) becomes especially critical for special educators' success (Brownell, Sindelar, Kiely, & Danielson, 2010; Greenwood & Maheady, 1997).

The National Governors Association (NGA; 2005) Task Force on School Readiness described children's school readiness as manifested in five areas: health and motor skill development (e.g., vision, hearing, gross and fine motor skills), socioemotional development (e.g., self-regulation, establishing reciprocal relationships with peers and adults), motivation to learn (e.g., persistence, sustained attention to educational tasks), language and early literacy skills (e.g., listening and story comprehension, phonemic awareness, print concepts), and conceptual knowledge and application (e.g., vocabulary, reasoning, associations, problem solving). All of these domains are important to build a foundation for learning (Fleury et al., 2015, p. 71).

According to Fleury et al. (2015), evidence-based practices used to improve school readiness included antecedent-based intervention, differential reinforcement, exercise, discrete trial teaching, functional behavior assessment, functional communication training, modeling, parent-implemented intervention, prompting, reinforcement, response interruption and redirection, scripting, technology-aided instruction and intervention, time delay, video modeling, and visual support (p. 8).

According to Marder et al. (2015), appropriate training on EBPs for all special educators, specifically in the field of autism, is warranted. Higher Education Institutions also need to assess current coursework specific to ASD and ensure that EBPs are discussed consistently across coursework and there should be significance placed "on reviewing, evaluating, and understanding current research on EBPs. In addition, training for educators needs to go beyond didactic instruction on EBPs; there should be an

emphasis on training educators to practice these strategies through data collection using fidelity checklists that include direct feedback and repeated measures on implementation of strategies in classroom settings (during coursework and internships experiences)" (p. 10).

CHAPTER III: METHODOLOGY

METHODOLOGY

Research Purpose and Questions

Elementary teachers' instructional and environmental perceptions of students with autism spectrum disorder (ASD) in the general education classroom is an important and ongoing area of study that is supported by many teachers (Tan, 2017). However, general education teachers' mindsets are still evolving about including students with autism spectrum disorder (ASD) in the general education classroom. Teachers are often overwhelmed with the students on the class roster and the specific needs within their general classrooms. Adding students with ASD poses a challenge for teachers on how to successfully incorporate these students into general education classrooms so that they receive an equitable education.

The purpose of this qualitative interview study in research is to capture the perspectives of general education elementary teachers in a suburban southern school district and their instructional and environmental supports for students with ASD. The study covers two components: Teachers in the Tennessee region's perceptions of students with autism spectrum disorder (ASD) in the general education classroom and the teachers instructional and environmental impact on students with autism spectrum (ASD) in the general education classroom.

A specific question will guide this inquiry:

1. Given the general education teacher's perceptions, how does the general education teacher successfully support students with autism in the classroom instructionally and environmentally?

Subjectivity/Positionality Statement

This study aims to investigate the general education classroom setting, and the perception of general education teachers' inclusion of students with autism spectrum disorder (ASD), and the elementary teacher's perception of students with ASD in the general education setting along with the environmental and instructional supports provided.

I want to uncover the elementary general education teachers' perceptions of students with ASD in the general education classroom and how and why teachers are providing support to students instructionally and within the general education classroom environment. My research is influenced by my previous career as a special education teacher and my current career as a general education teacher, and the many interactions with my colleagues in both the special education, and the general education settings. Throughout my experience, teachers have been both motivated and disregarded on the topic of inclusion. When reflecting on the inclusion of students with ASD, special education teachers' delivery of instruction to students in the special education classrooms versus delivery of instruction by general education teachers in the general education classrooms are different.

Curriculum expectations and rigor in special education classrooms often vary in delivery of instructional from those in the general education classroom. Special education teachers mainly work on students' individual skill deficiencies, based on students' Individualized Education Plan (IEP) goals, in smaller classroom sizes, with a lot smaller group work. Rather the general education teachers teach the students on grade level standards, students work toward mastery of skills, instruction is delivered in whole and small group. Due to the level of responsibilities for the general education classroom teacher, I am driven to know how general education elementary teachers are bridging instructional gaps for students with ASD coming from an environment where students were taught based on individualized skills to improve their skill deficits to supporting students to meet the rigorous curriculum expectations of the general education grade level, as well as how they are preparing the classroom environment to support students with ASD.

In my experience, one observation I made about general education teachers' perceptions of students with ASD is their willingness to include students with ASD in the general education classroom for small amounts of time. Students are placed in the general education classroom for various amounts of time according to the percentage of time written in their IEP. Teachers ask questions about having students with ASD in their classrooms because they wanted to be prepared to receive the student with ASD into the classroom. General education teachers initially believe in all students' capacities to learn. I had the opportunity to conduct a mock interview with two general elementary teachers last year during summer school. The first candidate was a first-year teacher; the second candidate had eight years of teaching experience. Before launching the interview study, I

conducted informal pilot interviews with these two teachers to help inform the direction of my study. During the interview, both teachers believed that all students had the capacity to learn, and they welcomed students with ASD into their classrooms until they were met with environmental challenges, and instructional disruptions, etc.

Both teachers mentioned preparing the students in their classrooms to engage with students with ASD by explaining some of these students' strengths and areas that were challenging for them. These teachers mentioned how caring, understanding and accepting students in the general education classroom were toward the students with ASD. When behaviors arise from students with ASD, these teachers would explain to the general education students in their classroom reasons for the behaviors and teachers would tell students to be kind and understanding toward the student with ASD. A key question that these teachers had around the inclusion of students with ASD was: How do they support students with ASD in the general education classroom? What are these students' abilities? What are they expected to know by the end of the school year?

General education teachers realized that their brief collaboration with the special education teachers at the beginning of the school year was insufficient for what general education teachers were being expected to do in including students with ASD in general education classrooms. General education teachers needed a clearer understanding of the strengths of students with ASD in comparison to their grade level peers and the level of expectations for the students with ASD while working on grade level curriculum and standards. General education teachers also need to be clear of what to expect for grade level growth based on behavior and academic outcomes for students with ASD.

As a Kindergarten general education teacher, I now have these same questions. I currently have a student in my classroom with ASD. My brief interaction with the special

education teacher was when special education services were provided to the students with ASD. My perception of students with ASD in the general education classroom is clearer because of my background as a special educator. However, there are still areas that I need more clarity.

Conceptual Framework

The conceptual framework for the qualitative interview study is grounded in students with autism spectrum disorder (ASD) and the general education teacher's perceptions working with these students in their classrooms. Teachers' perception, including students with ASD in the general education classroom, creates opportunities for more preparation, professional development, and collaboration for these general education professionals. Perceptions vary among individuals' teachers as they are based on factors such as prior experience, gender, attitudes, economics, and cultural norms (Todorovic, 2008; Rock & Palmer, 1990; Wagemans et al., 2012; Westheimer, 1999). An individual's behavior is often based on their perception of reality. It is when an individual encounters circumstances and provides meaning based on their previous experiences. Norman (2002) asserted that perception could be defined in numerous ways (p. 88). However, perception is mostly defined as the mindfulness of the objects and experiences in an individual's life (Grossman, 2011, p.4). Likewise, perception includes the conscious and unconscious consequences of the motivation that the behavior produces.

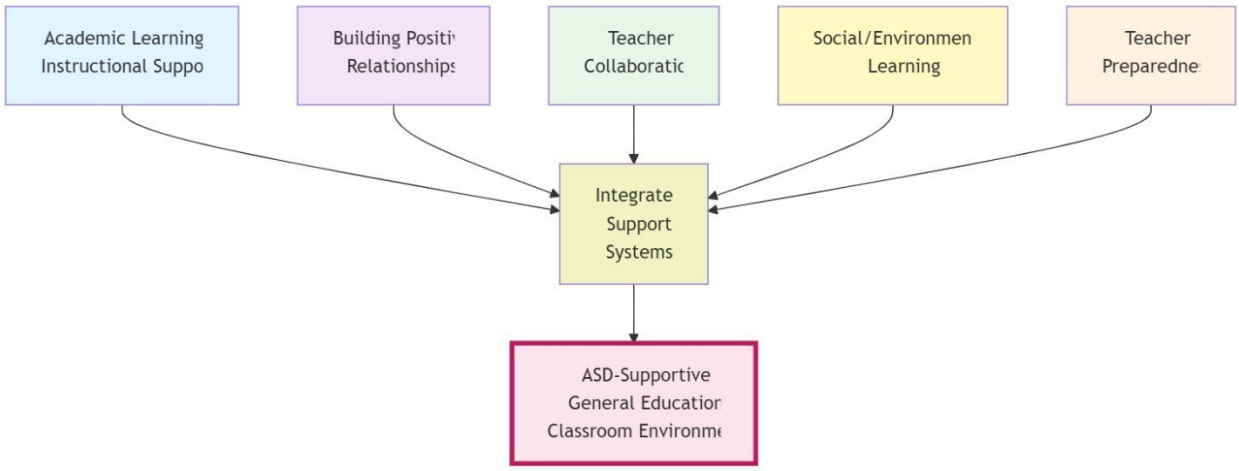

Figure 1. Conceptual Framework

The purpose of this qualitative interview study is to capture the perspectives of general education elementary teachers in a suburban southern school districts and their instructional and environmental supports for students with ASD in the general education classroom. According to Kukner and Orr (2016) they have suggested the narrative inquiry model to develop intellectual shifts in preservice education to a more inclusive philosophy. Four components of reflection and narrative inquiry require the candidate to reflect upon past experiences with their discipline to determine their preconceived conceptions of what it means to teach. Preservice educators need tools to explore person disposition toward inclusive education, skills in collaborating with colleagues, frameworks for developing inclusive lessons, and practices for implementation within the discipline (Bakken, 2016, p.15).

I will use the above framework in my study by allowing teacher interviewees to reflect on their dispositions of how they see themselves as educators in follow up questions. The interviewees will discuss the framework for inclusive schools based on the seven pillars of inclusive support as a guide. According to Loreman (2007) there are seven pillars of support for inclusive education. Support consists of developing positive

attitudes, supportive policy and leadership, school and classroom processes grounded in research-based practices, flexible curriculum and pedagogy, community involvement, meaningful reflection, and necessary training and resources (pp. 3-12). Teachers will rely on current pedagogical practices being integrated in the general or content methods courses to support students with ASD. Interviewees will use their clinical practice i.e. students' teaching experiences to reflect on how they utilize high level practices in their classrooms with ASD students. An interpretation of general education teachers' perceptions of their abilities while working with students with ASD will be used as guidance in their training practices and can impact their ability to effectively meet the needs of students with disabilities.

Many students diagnosed with ASD are fully included in integrated general education classrooms. Research has recognized that a teacher's sense of self-efficacy (Bandura et al., 1997) impacts their performance and their ability to meet the needs of students (Tschannen-Moran and Woolfolk Hoy 2001), but more research is needed in exploring how general education teachers perceive their abilities when working with ASD students. "… General education teachers consistently report that they do not have the skills they need to effectively instruct diverse learners, including students with disabilities" (Blanton, Pugach, & Florian, 2011). Research supports collaboration as the core foundation and best practice for successful inclusion of students with an ELN (Barnes & Turner, 2001; Brownell et al., 2006; Cross, Traub, Hutter-Pishgahi, & Shelton, 2004; Kurjan, 2000; Pena & Quinn, 2003).

A much-needed component for successful inclusion is the availability of ongoing professional development (PD) to support inclusion teachers. Having ongoing PD is a pro-active approach to helping teachers feel competent and prepared as they take on new

roles and responsibilities in their inclusive classrooms (Bakken, 2016). Research supports collaboration as the core foundation and best practice for successful inclusion of students with an exceptional learning need (ELN) (Barnes & Turner, 2001; Brownell et al., 2006; Cross, Traub, Hutter-Pishgahi, & Shelton, 2004; Kurjan, 2000; Pena & Quinn, 2003).

Although general educators are experts at planning, instructing, and assessing in their specific content areas, collaborating with a special education teacher and others in these areas requires a willingness to take on new perspectives and an openness to different thoughts and ideas about planning for instruction, instructional delivery, and assessment. According to Johnson (2016), "believing that students with ELNs can learn and be successful in the general education environment is critical and is supported by Rosenthal's extensive research during the twentieth century" (Rosenthal, 1973; Rosenthal & Jacobson, 1968) and additional related research in the twenty-first century (Jussim &Harber, 2005; Kumar, Karabenick, & Burgoon, 2014). Teachers' beliefs and expectations of their students are significant factors for the success of students with ELNs in inclusive classrooms (Soodak, Podell, & Lehman, 1998).

Related to behavior is social acceptance. Inclusive teachers can promote and model acceptance of students with ELNs in the classroom. Lewis and Doorlag (2011) state, "The general education teacher must participate in developing and implementing a systematic program to improve the students' social skills and to increase their social integration" (p. 133).

Viewpoint of the Study

The purpose of this qualitative interview study is to capture the perspectives of general education elementary teachers in a suburban southern school district and the

instructional and environmental supports used for students with ASD. The study is conducted to understand the meaning teachers have constructed around the inclusion of students with autism spectrum disorder (ASD) and the effects on the general education teacher's classroom instruction and environment in elementary schools. The qualitative interview study is derived from the constructivist theory. Constructivism means "that people construct their own meanings based on their interactions with the world' (Bhattacharya, 2017, p. 11). The research will explore the teacher's experiences with students with autism spectrum disorder (ASD) in the general education classroom with the use of interviews, and how they construct meaning of their experiences (Bhattacharya, 2017).

The paradigm for this study is interpretivism, which aims to have a deeper understanding of experiences (Bhattacharya, 2017). According to Goldkuhl (2012), "The core idea of interpretivism is to work with these subjective meanings already there in a social world; that is to acknowledge their existence, to reconstruct them, (p. 138). In this study, I will explore how elementary general education teachers in Middle Tennessee's perceptions of their daily interaction and instruction of students with autism spectrum disorder (ASD) in the general education classroom setting. Thus, the research will be conducted as a constructivist interpretivism study.

Research Design/Methodological Approach

The methodological approach will be a qualitative interview study. Bhattacharya (2017) describes qualitative study as conducting "in-depth inquiries within a small sample of the population" (p. 18). Qualitative research "usually work with interpreting people's stories, experiences, or specific discourses" (Bhattacharya, 2017, p. 18). An

interview study "is a type of research that involves in-depth contextual study of a person, people, issue and place within a predetermined scope of the study" (p. 26)). This qualitative interview study will involve interviews with elementary school general education teachers. The participants will be asked a series of open-ended questions about their experiences with students with autism spectrum disorder (ASD) in the general education classroom setting. "Conversations can be a form of interview that can range from informal chats to formal structured or semi-structured open-ended interviews" (Bhattacharya, 2017, p.51). This is relevant to my study since it will investigate the participants' stories and interpretation of their perceptions of the inclusion of students with ASD in the general education classroom.

Research Site

The interviews will be conducted in elementary schools in a suburban school district in Tennessee. According to the Tennessee Department of Education Report Card (2003), the district is comprised of thirteen schools, ranging from kindergarten through sixth grade, with around 9,000 students. The district general education teachers have diverse backgrounds and varying years of experience. The main objective of the school district is to retain highly effective teachers by accelerating student progress through excellence in achievement, equipping students and teachers, and engaging of all members of our education community" (TN Report Card, 2023). Attributable to the goals and varying levels of experience, this district will appropriately fit with the intended research of this study on teacher perceptions of students with autism spectrum disorder (ASD) in the general education classroom.

Participation Selection

Participants that will be selected for this study are general education teachers; they will be chosen to gain their perspectives of including students with autism spectrum disorder (ASD) in the general education classroom. Within every study, researchers need to "consider where to observe, when to observe, whom to observe and what to observe. In short, sampling in field research involves the selection of a research site, time, people and events (Burgess, 1982, p.76). The population for this study includes all general education teachers who instructed students with autism spectrum disorder (ASD) in the classrooms in a school district in the state of Tennessee. The targeted population will consist of 4 teachers in Grades K–6 who meet the specific criteria that included currently teaching students with ASD in the inclusion classrooms in public school, having at least one a full year of teaching experience, and being a general education teacher in a Tennessee school
district.

Types of sampling are probability and nonprobability sampling. "Thus, nonprobability sampling is the method of choice for most qualitative research" Merriam, 1998, p. 61). Purposive sampling infers that the investigator wants to discover, understand and gain insight and therefore must select a sample from which the most can be learned. It is a non-probability technique; researchers use their previous knowledge of the population (p. 61). During the interviews, I will ask teachers to share their instructional and environmental perspectives based on their experience as a classroom teacher supporting students that have autism spectrum disorder in the general education classroom.

In this study, four schools will be chosen based on teacher responses to a series of open-ended interview questions. Schools one through schools four will be a public elementary K-6th grade school. The four teachers will currently have at least one student with autism spectrum disorder in their general education classroom at least 80% of the time or more. Each school within this district has been identified as having at least 1student with ASD. From these four schools, teachers who have students with ASD in their general education classrooms at least 80% of the time or more or are in Tier 1 instruction will be invited to join the study and participate in a semi-structured interview.

Data Collection

According to Patton (1990**) "**Multiple sources of information are sought and used because no single source of information can be trusted to provide a comprehensive perspective…By using a combination of observations, interviewing, and document analysis, the fieldworkers is able to use different data sources to validate and cross-check findings" (p. 244). With the use of interviewing, I plan to engage in informal conversations with general education teachers in the classroom setting to inquire their perspectives on the inclusion of students with autism spectrum disorder. Participants will be asked a series of open-ended questions about their perspectives and experiences teaching students with autism spectrum disorder in the general education classroom. Open-ended interviews allow participants to share their stories and experiences (Bhattacharya, 2017). The main purpose of an interview is to obtain a special kind of information. The researcher wants to find out what is "in and on someone else's mind" (Patton, 1990, p. 278). My intention for the interviews is to offer each participant the opportunity to recall their personal story about their understanding as a general education teacher in an inclusive classroom. In this study, two schools will be chosen based on

teacher responses to a series of open-ended interview questions. School one and School two will be a public elementary K-6th grade school. Two schools within this district have been identified as having a population of students with ASD. From these two schools, teachers who have students with ASD in their general education classrooms at least 80% of the time or more will be invited to join the study and participate in a semi-structured interview.

The main objective of the interview is to acquire insight into the diverse viewpoints of the participants (Stake, 1995), making them semi-structured interviews. According to Merriam (1998), at one end of the continuum fall is highly structured, questionnaire-driven interviews; at the other end are unstructured, open-ended, conversational formats. Semi-structured interviews are halfway between the end of the continuum. They are open, and less structured. This format allows the researcher to respond to the situation at hand, to the emerging worldwide view of the respondent, and to news ideas on the topic (p. 74). Merriam further notes that interviewing is "necessary" when we cannot observe behavior, feelings, or how people interpret the world around them. It is also necessary to interview when we are interested in past events that are impossible to replicate" (Merriam, 1998, p. 72). To achieve this, I will ask a sequence of more flexibly worded, open-ended questions about the general education teacher's perceptions of including students with ASD in the general education classroom across various schools. (See Appendix A for the full interview protocol).

Each participant will have a single interview which is expected to last forty-five minutes to an hour. The interviews will be conducted in person and recorded to ensure the accuracy of the responses. I will begin by asking participants to tell me about their experience as a teacher and follow up with what are their beliefs about the statement all

students can learn, aiming to build background knowledge of the teacher's story. In addition, I will ask each participant: What do you believe most influences your instructional and environmental approaches in the classroom, so that I can get a picture of the planning aspect of teaching. The questions will be structured in approach for me to collect information about the teacher, understanding their role as a general education classroom teacher, and grasping their interpretation of their role as a teacher, before inquiring about their perceptions on students with autism spectrum disorder (ASD). Throughout the process, all data will remain confidential, the participants will remain anonymous, and each participant will be provided with a copy of the interview transcript and invited to review the transcript for accuracy.

After each of the teacher interviews, I will ask for documentation to refer to any plans or activities mentioned throughout the interviews as ways that support the general education teacher's perception of students with autism spectrum disorder in the general education classroom. Merriam (2001) refers to "physical material as a form of document, broadly defined, consists consist of physical objects found within the study setting. Anthropologists refer typically refer to these objects as artifacts, which include the tools, implements, utensils, and instruments of everyday living" (p. 117). I will ask for documentation related to any responsibilities teachers mention to demonstrate their responsibilities for students with autism spectrum disorder.

Data Analysis

According to Merriam (2001), "Data collection and data analysis are simultaneous activity in qualitative research. Analysis begins with the first interview, the first observation, the first document read. Emerging insights, hunches, and tentative

hypotheses direct the next phase of data collection", which generates the refinement or reformulation of questions, and so on. It is a collaborate "process throughout that allows the investigator to produce believable and trustworthy findings (p. 151). Analyzing data is an intuitive process, the researcher does not always have the ability to explain where the deep understanding of a person or things stem from or how relationships between the data were perceived. Data analysis has multiple approaches in qualitative research. Inductive analysis is the approach I will use. Inductive analysis occurs when "the researcher moves back and forth between various stages and processes" (Bhattacharya, 2017, p. 150).

Data analysis also involves coding, which "is nothing more than assigning some sort of shorthand designation to various aspects of your data so you can easily retrieve specific pieces of the data. Coding occurs at two levels-identifying information about the data and interpretive construct related to analysis" (Merriam, 1998, p. 164). The data analysis portion of my research will include multiple cycles of coding. "Each interview, set of field notes, and document needs identifying notations so that you can access them as needed in both the analysis and the write-up of your finding (p. 164). Coding allows time to reflect on interviews and make connections on the data collected, thus determining patterns and creating categories to interpret the meaning of the data (Saldana, 2013). The first cycle of coding will involve descriptive coding. Descriptive coding aligns best with the study's research questions, as it will provide a summary of the key points of the interviews and allow the discovery of patterns within them (Saldana, 2013). The second cycle of coding will involve pattern coding. The purpose of the second cycle coding is "recognizing and reanalyzing data coded through first cycle methods" (Saldana, 2013, p. 207). Pattern coding allows for the exploration of key themes derived from the data and helps provide explanations (Miles et al., 2014).

During the coding cycles, first I reviewed the participant manuscripts searching for frequent codes that were similar among all participants. These were groups of words, fragments, or phrases that were revealed during the data analysis phase of the research. I highlighted these phrases and placed them on index cards. After collecting these phrases, I compared the phrases to the manuscripts to develop a complete code. Next, after collecting the codes, I transferred them onto an online collaborative whiteboard tool that is a place for brainstorming called FigJam. Third, I placed the codes onto separate pages within the online whiteboard in different colors as categories began to emerge. Then, I utilized the categories and arranged them by hand into themes that were generated. I did five cycles of arranging categories into themes. Lastly, concluding with the final first 4 themes that emerged. The last theme emerged as I wrote my findings.

A cross case-case analysis will be conducted to inquire into the similarities and differences among the data and identify patterns and themes within the data (Saldana, 2013). Using cross-case synthesis, the findings will be synthesized from the individual cases to draw broader conclusions and gain insights into the multiple cases (miles & Huberman, 1994). A meta-matrix will be used to organize the data and allow the data to be partitioned and clustered for further analysis (Miles & Huberman, 1994).

Trustworthiness and Rigor

Trust worthiness and rigor relate to the level of assurance in the data and the accurate interpretation of the data (Stake, 1995). For qualitative research, trustworthiness includes four elements: credibility, dependability, confirmability, and transferability (Guba and Lincoln, 1982). Credibility is where the researcher evaluates whether the intended outcomes are accurately achieved (Shenton, 2004). Dependability refers to the reliability of the outcomes (Decrop, 1999). Confirmability is connected to the objectivity

of the findings (Decrop, 1999). Transferability evaluates how applicable the findings are to different contexts or settings (Guba and Lincoln, 1982). Member checking, reflective journals, and triangulation will be utilized to establish and maintain credibility, dependability, confirmability, and transferability for this study.

Member checking will be used to maintain credibility during the study (Decrop, 1999; Guba and Lincoln, 1982, Shenton, 2004). After the interviews, the participants will be presented with the themes of the interviews as a means of member checking the data to ensure trustworthiness and rigor. Member checking involves sharing interview data with participants for approval and additional insights (Stake, 1995). This step holds significance as member checking enables participants to verify the accuracy of the collected data and helps researchers evaluate the precision of the findings (Creswell and Creswell, 2022).

Another way to establish trustworthiness and rigor is to "maintain a reflective journal" (Saldana, 2013) throughout the study. Reflective journals will be used to maintain credibility, dependability, confirmability, and transferability during the study (Decrop, 1999; Saldana, 2013). I will keep an ongoing journal documenting the feelings, emotions and gestures of the interviewees. Reflective journals/ commentary allows the researcher to identify emerging patterns and sustain consistency. During the study, a reflective journal will be utilized to record the thoughts, emotions, and observations of the researcher (Shelton, 2004). A reflective journal will serve as a valuable tool for analyzing data post-interviews.

Conclusion

The collective case study endeavors to explore elementary teacher perceptions of students with autism spectrum disorder in the general education classrooms in school districts in the state of Tennessee and inquire about Elementary teachers' instructional and environmental perceptions of students with autism spectrum disorder (ASD) in the general education classroom. The study will explore how elementary teachers' instructional and environmental perceptions of students with autism spectrum disorder (ASD) in the general education classroom and how the classroom functions in supporting the student with autism spectrum disorder (ASD). The next chapter will highlight the findings of the study, uncovering the different themes that emerge from the data.

CHAPTER IV: FINDINGS

Introduction

The purpose of this qualitative interview study was to explore the perceptions and experiences of elementary general education teachers regarding their experience successfully supporting students with ASD in the general education classroom instructionally and environmentally. The methodological approach was a qualitative interview study. Bhattacharya (2017) describes qualitative study as conducting "in-depth inquiries within a small sample of the population" (p. 18). Qualitative researchers usually "work with interpreting people's stories, experiences, or specific discourses" (Bhattacharya, 2017, p. 18). An interview study "is a type of research that involves in depth contextual study of a person, people, issue and place within a predetermined scope of the study" (p. 26). General education teachers were defined as all teachers, including special content area teachers (e.g. music, art, etc.), special education teachers, interventionist teachers, English second language (ESL) teachers who are part of the formal academic program and instruction of all elementary students.

The overall goal was to gather data on experienced teachers' sensemaking of successful instructional and environmental supports used in general education classrooms teaching students with ASD. I sought to explore how they understood and experienced successfully supporting students with ASD within the general education curriculum, the factors that influenced and shaped their sensemaking, and how sensemaking impacted their assessment of their preparedness to implement a change for growth while teaching students with autism spectrum disorder.

Data Collection

When we cannot observe how individuals interpret the world around them, conducting interviews becomes necessary to understand their thoughts (Merriam & Tisdell, 2016). Five interviews were conducted via a web conferencing platform, in accordance with the interviewee's preference. Each interview was conducted in February 2026 and ranged from 30 to 60 minutes in length. Reflective journals captured researcher observations and reflections during data collection. All interviews were recorded for transcription purposes. These transcripts will only be available to the researcher and will be destroyed five years after the completion of the study.

To ensure a precise constructivist interpretive study, open-ended interview questions were designed to explore the "experiences of individuals" (Creswell, 2009, p. 113). A semi-structured interview allowed the researcher to guide the conversation toward the specific information being studied and provided flexibility to modify the questions asked and probe other topics that arose from the interview process (Merriam & Tisdell, 2016; Bhattacharya, 2017). Semi-structured interviews were appropriate for this study because it investigated how teachers made sense of working with students with ASD in the general education classroom and the internal and external influences that impacted their sensemaking. Semi-structured interviews reveal meaningful patterns that are difficult to spot and usually concealed from direct observation (Hatch, 2002). Since each teacher interviewed had a unique set of experiences, their sensemaking was developed in ways that had to be discussed to be fully understood, which is why semistructured interviews were a useful method. The interview was guided by a protocol to ensure continuity between interviews (Creswell, 2009; Merriam & Tisdell, 2016).

RQ1: Given the general education teacher's perceptions, how does the general education teacher successfully support students with ASD in the classroom instructionally and environmentally?

Participant Profiles

Five teachers participated in this study, selected through purposive sampling. Participants were identified based on administrator selection of experienced general education teachers who met the criteria of successfully supporting students with ASD in the elementary schools' settings. The criteria involved teachers working with ASD students in general education settings that are in the Response to Intervention (RTI) tiers and/or have 504 plans that supported students in making growth.

Of the twenty-six people contacted via email, five expressed interests in participating, with five agreeing to eventually be interviewed. All participants were asked the same or similar questions from the Institutional Review Board (IRB)-approved interview protocol.

In addition, follow-up and clarifying questions were posed to each participant as needed. Participants represented three different elementary schools across the school district. To ensure confidentiality, I assigned each participant a pseudonym. Table 1 provides information about each participant, their teaching role, professional general education teaching experience, general education endorsement status, and if the school was a magnet school. Participants also describe their first year in the classroom and initial encounters with students with ASD.

Table 1

Overview of Participant Roles, General Education Experience, and Endorsement Status.

Name	Teaching Role	Education Level of Experience	General Education Endorsement Status
Kaylee Elderburg	2nd Grade Teacher	Veteran	Yes
Sophia Parsons	4th Grade Teacher	Veteran	Yes
Mila Dickens	4th Grade Teacher	Experienced	Yes
Joy Saunders	5th Grade Teacher	Veteran	Yes
Katherine Thomas	4th Grade Teacher	Experienced	Yes

Kaylee Elderberg is a veteran teacher who teaches second grade. She has more than fifteen years of experience teaching students. She is currently working on getting a reading specialist license, and last year she was awarded teacher of the year. Most of her time has been spent in the upper or secondary elementary grades. She began her career teaching in sixth grade for three years, then fourth and fifth grades, and the last three years were spent in second grade. She works with her after-school school running club and holds Wednesday morning prayer service for staff members that want to voluntarily join. She speaks about her first experiences teaching students with autism spectrum disorder. Elderberg describes her first teaching experience as a 6th grade math teacher, "I had a student who I vividly remember and will never forget. She was quite memorable. What a personality she was, and she liked things her way. She needed things to be the same every single day. The student was sensory driven, and socks were a big thing. She was super smart, brilliant, funny and just a cool kid."

Sophia Parsons is a veteran 4th grade teacher at a magnet school. She believes this is her twenty-third year as a general education teacher. Sophia has had the opportunity to work with lots of different children with ASD throughout the years, in different places,

and serving them in different capacities. She describes her first experience working with students who had autism spectrum disorder when she was a new teacher. Reflecting, Parson says, “I had a student who was autistic, but I did not know that at the time. I did the best that I could as a new teacher but probably didn’t do as much as I have learned to do, throughout my career. These teachers need knowledge of how to differentiate instruction and adapt assignments and assessments without decreasing the rigor of the standard (Saunders et al., 2013) and may not have the training in their teacher preparation programs or know how to approach this task (Allday, Neilsen-Gatti, and Hudson 2013; Forlin and Chambers, 2011; Kim 2011; Maccini and Gagnon, 2006; McCrimmon 2015).

The student had lots of behavioral and communication issues, says Parsons, she did not think his parents knew and understood what was happening. Therefore, the school tried putting some interventions in place. His behavior was escalating (i.e. being physical with other children in the classroom, etc.). The student with ASD was removed from the classroom more than he should have been removed, she says. “We definitely did not meet as a team to address his social-emotional needs.” Research suggests general education teachers do not feel prepared to implement such interventions. In fact, some general education teachers do not support an inclusive model of teaching citing their own lack of training preparation for teaching in inclusive settings (Ross-Hill, 2009). “Now, we do things across grade level, and so I see students in kindergarten who have very similar characteristics, and I see the approach that we take now, and how very different it looked 20 years ago”, says Parsons.

Mila Dickens, an experienced 4th grade-level teacher, explains that she started teaching after she received her master’s degree, so she did things a little differently. She

did not go through undergrad, so she's been teaching for about 8 years. Mila teaches at a magnet school where they get a lot of different students, some with twice exceptional skills, some have autism, some have attention deficit hyperactivity disorder (ADHD), and some have oppositional defiant disorder (ODD). Prior to teaching, she worked for four and a half years as a paraprofessional with students who had special needs. Mila worked one-on-one with students with autism and down syndrome. She also worked during summer school camps as a one-on-one for students with autism. Her first experience working with students with autism was in 2020, she says "teaching was different." Dickens says, I encountered a lot of different students…it was interesting." It was the year of COVID, and everyone wore a mask." She heard about a student that was going to be coming to her classroom. "I was little worried, but I ended up loving that student," she says. Dickens built such great relationships and connections with the child that she really enjoyed working with that student. Students diagnosed with autism, a lot of people tend to think they might be different, and "I think they're different, it makes them more unique. Not one student with autism is the same."

Joy Saunders, a veteran teacher who taught for seven years in another county, as a first-grade teacher before relocating and teaching in the county of my study. In 2019, she taught kindergarten students for 6 years and is currently in her second-year teaching 5th grade. In Saunder's first year, she had a student transferred into her classroom who was diagnosed with autism. He was moved from another classroom where it just was not a good fit for him. He had a lot of incidents with behaviors. There were some elopements that took place along with some altercations with other students in his previous classroom. "The student was moved to my classroom as a different placement and actually ended up doing really well" responded Saunders. The big thing for him was

"making sure that he had structure, and those set routines and procedures. If there were changes in routine, communicate with him what those changes were going to be. I used lots of visuals to explain the changes being made to the schedule. "He had movement breaks, which gave him the opportunity to get up and move as needed within the classroom," says Saunders.

Katherine Thomas is an experienced educator with eight years of teaching. She began teaching in 2018, primarily teaching in the 4th grade. Teaching is a second career for her. She says, "I went back to school and got my master's degree in education, which was way past me getting my bachelor's degree." In her current school, last year she was teaching third grade, and that's the only year she moved classrooms at her school. She has taught in self-contained classes and departmentalized classes once with 4th grade teaching math and science. This year she is again departmentalized, teaching ELA and Social Studies. "My very first year I had a student who was on the spectrum, I'm trying to remember because it's been so long ago. What I can remember is he had breaks downstairs with the resource teacher at certain times of the day. He had emotional outbursts and he was very high functioning. I feel like I did everything wrong", says Thomas.

Reflexive Journal Notes

During the interviews and coding process, I maintained a reflexive journal to record my thoughts, observations, and reflections after each interview. This served as a space to document insights about participants and their experiences, as well as to critically examine my own analytical decisions throughout the coding process (Saldaña, 2013). The reflexive journaling process enabled me to capture emergent themes and enhanced the overall credibility and trustworthiness of the study. Additionally, the

journal complemented my interview data by helping me identify patterns and deepen my understanding of teachers' experience successfully supporting students with ASD. Through this reflective process, I was able to consider ways in which successful support might be strengthened, particularly for teachers with less experience supporting students with ASD in general education classrooms.

Interview Data Analysis

The data I collected was coded in cycles from which categories were formed and themes emerged (Table 2). Because it does not rely upon a predetermined premise, inductive analysis was used to identify the relationships and categories derived from the data which led to the development of theories (Tuckman & Harper, 2012; Bhattacharya, 2017). Creswell (2009) calls his process basic qualitative analysis. Organized by the research question, this section reveals the findings from the interviews and coding processes.

The interview data revealed four themes demonstrating teachers' sensemaking in regard my exploration of general education teachers and their successfully supporting students with ASD. The first theme, *Academic Learning/Instructional Supports,* emerged from the basic understanding of the delivery of classroom instruction and each participant had success in different areas of classroom academic support of students with ASD. *Academic Learning/Instructional Supports* demonstrates a starting point for teachers regarding their understanding of successfully supporting students with ASD in the general education classroom. It begins with understanding what students already know, then finding out the goal they need to achieve. These methods, services and resources are provided to students to support learning at school. According to research, one approach to support students with ASD in general education classrooms is peer-mediated instruction and intervention (PMII). PMII is an evidence-based practice in which peers

serve to support both the academic achievement and social-skill development of students with specific learning needs, including students with ASD (National Autism Center [NAC], 2015; Wong et al., 2015).

The second theme is *Building Positive Relationships.* These relationships contribute to social engagement, which contributes to quality of life, emotional wellbeing and physical health (Putnam, 2000). It is important to promote social engagement among people of all developmental abilities (Randolph, 2015). Strong teacher-student relationships are essential for supporting students with ASD. As teachers get to know their students, they identify what works best and build on those successes. This collaborative process—where both teacher and student learn from each other—creates an environment of respect and understanding. When students feel truly known and valued for who they are, they thrive.

The third theme is *Teacher Collaboration.* Teachers are working as a team with other teachers (i.e. general education teachers, interventionists, special education teachers, etc.), service providers, parents, and administrators to ensure the needs of the students with ASD are met. According to DuFour (2016), "Educators who are asked to work in teams will continue to struggle unless they come to a shared understanding key term….in asking them to work interdependently to achieve a common goal for which members are mutually accountable. A collection of teachers does not truly become a team until members rely on one another to accomplish the goal that none could achieve individually" (p. 60). Finally, the last theme is *Social/Emotional Needs* which build students' capacity to internally and externally regulate themselves. The two structural and relational components are evident in research-supported family-school interventions

that target children's social and emotional learning (SEL) needs. These components associated with positive effects for children include home-based involvement in the provision of social-emotional programming, behavioral support, the parent-teacher relationship, and collaboration (Sheridan et al., 2019). Participants have a toolbox containing Social and Emotional Learning (SEL) strategies i.e. visual, sensory and tactile supports, breathing techniques, teaching flexible thinking, calm down spaces, movement breaks and more.

Table 2

Principal Coding Practice (Saldaña, 2013)

Initial Codes	*Categories*	*Themes*	*Theory*	*Research Question*

Abstract to Concrete Procedures	• Differentiated Practice • Explicit Instruction • Environmental Supports • Scaffolding & Checks for Understanding	Academic Learning/ Instructional Supports	When teachers demonstrate an understanding of academic learning to successfully support students with ASD, they can cater to the needs of the students individualized learning needs. This allows them to implement instructional strategies that successfully support the effective learning of all students with ASD.	RQ1
Connect with Students on Personal Level	Knowledge of Students Teacher Classroom Management	Building Positive Relationships	When teachers build positive relationships with their students, they develop an understanding of who students are and how to meet their needs.	RQ1
Parents and Teachers Communication Together	Teachers work Together as a Team	Teacher Collaboration	Teachers collaborating as a team can brainstorm and problem-solving strategies that work for students.	RQ1

Internal & External Regulation	Calming Strategies	Social/ Emotional Needs	Building students' capacity to	RQ1
			Regulate their social and emotional needs require teachers to continue engaging in positive teacher-student relationships.	
Trainings	Professional Development	Teacher Preparedness	Teachers self- assesses their capacity to meet the academic and behavioral needs of the students in their care.	RQ1

Research Question 1

Given the general education teacher's perceptions, how does the general education teacher support students with ASD in the classroom instructionally and environmentally?

This question explored the background and knowledge general education teachers possessed regarding successfully supporting students with ASD in general education settings. It elicited information about the participants' professional preparation, the guidance and training they received related to working with students with ASD, and their experiences with implementation and integration of successful support for students' growth. From this question four themes emerged that illustrate how general education teachers understood and experienced successfully supporting students with ASD to help them make growth. These themes were impacted by some of the categories discovered, the themes are *Academic Learning/Academic Supports, Building Positive Relationships,* Teacher *Collaboration and Social/Emotional Needs.*

Academic Learning/Instructional Supports

Academic Learning/Instructional Supports demonstrates a starting point for teachers in relation to their understanding of successfully supporting students with ASD. Evidence-based practices (EBPs) are defined as instructional strategies, interventions, or teaching programs that result in consistent positive student outcomes when tested experimentally (Mesibov & Shea, 2011). These supports given to students are the methods, services and resources provided to accelerate their learning progress to meet grade-level learning standards and improve performance outcomes. Instructional Supports are reinforced by the intensive research and are required under Every Student Succeeds Act (ESSA) of 2015. When teachers demonstrate an understanding of academic learning to successfully support students with ASD, they can cater to the needs of their students individualized learning needs. This allows teachers to implement strategies that successfully support effective learning of all students. When asked to share their successful support of students with ASD instructionally and environmentally, responses were in alignment with other participants.

Table 3

General Education teacher successfully support teaching students with ASD

Successful Quote *Instructional/Environmental Support for ASD Students*	
Instructional Supports	"When I think of adapting instruction, I think about simple, concrete steps. First, I need you to do this, then I come back and check. Now that you have done this, great job! I see that you have done this well. Now, we're moving to this. Clear and concise, step one, step two, step three...in chunks, depending on the student and their abilities to follow that checklist."

Environmental Supports	"I feel like giving them freedom and flexibility of a workspace. A spot that would appear to be isolated to others, where they may thrive and do their best."

Table 3 presents successful instructional and environmental support offered by general education teachers with a general education endorsement. Both components occur in the general education setting. The instructional support is procedural when delivering explicit instructions to students with ASD. Instructional adaptations refer to the adjustments made in teaching methods, materials and assessments. These teachers demonstrate knowledge of how to differentiate instruction and adapt assignments and assessments without decreasing the rigor of the standard (Saunders et al., 2013). While the environment differs, space changes offering flexibility seating options conducive to the successful learning outcome of the student with ASD.

Participants in this study work daily in classrooms with students on the spectrum that have less severe challenges of the disorder. ASD is a spectrum disorder, and about 30% of nonverbal students require extensive support needs while the other half are very highly functioning. It is estimated that between 48% of individuals diagnosed with ASD have IQ's below 70 (Bertrand, Mars & Boyle, 2001) leaving the other 52% of people diagnosed with ASD in the higher functioning range with needs for lower levels of

support than those with lower IQs. This research study focuses on students with ASD that do not require high levels of support.

According to Bakken et al. (2016), the purpose of inclusive education was to ensure that students with special needs are "integrated in the general education setting

for as much of the day as possible, with the supports they need to be successful. Inclusion strategies can include co-teaching, consultative services, paraprofessional support, modifications to curriculum or testing, accommodations for specific disabilities, and other services allowing an individual student to access the district curriculum in the general education classroom" (p. 4).

Differentiated instructional practices are tailoring instruction to meet individual needs, which is a category that was discovered in the data analysis impacting the instructional support's theme. Teachers differentiate content, process, products, and the learning environment, the use of ongoing assessment and flexible grouping makes this a successful approach to instruction. During the last 40 years it has become apparent that inclusion has positive benefits and it promotes: (a) achievement of the students individualized education program objectives (Brinker & Thorpe, 1984). These teachers need knowledge of how to differentiate instruction and adapt assignments and assessments without decreasing the rigor of the standard (Saunders et al., 2013).

Thomas explains a way that she differentiates for students with autism spectrum disorders is to put support in place, however holding these students to the same standards by having them follow the same rules. "It's not an exception to those rules; they can learn how to follow those rules. You have to approach it in a different way." In differentiating for her student, she has seen academic improvements made. Thomas understands her student and his capability. "I know how far to push the boundaries with him and teach him at the same time", Thomas says.

Parsons, a veteran general education teacher working at a magnet school, describes using successful instructional support as "figuring out what makes students tick, and what they need from me to be successful." She has a few successful

instructional supports; one is having her students use checklists. For example, the teacher will write assignments in the student with ASD's agenda so that the writing is legible. She writes the assignments for the student until he can write the assignments for himself. The student can check off the assignments as he goes throughout the day. Parsons say, "I also give students with ASD a copy of my notes so, they can listen in class, since this particular student has trouble writing. It's a non-preferred task; they can listen to the material and participate in class without having to worry about writing down the notes." This is something that is done for ASD students in science and social studies. They have to write, but they are seen daily by the SPED teacher during Boost time and that is where their needs are met in writing and for their IEP goals. Boost is a time when all students receive an intervention at the same time. When asked about how she adapts instruction to help her students with ASD, and she responds, "we have gone through extensive training for how to differentiate for my students. And how to adhere to IEPs, gather data on adhering to the IEP, and collecting work samples to support IEP goal changes" says Parsons.

Instructional Supports

Elderburg, a veteran general education teacher currently teaching second grade, says that she sometimes uses manipulatives in math, as a successful instructional support for ASD students, making the abstract more concrete: "To formulate or structure the things we were doing, or making completing a task more procedural, as opposed to abstract." Informing children what to do rather than what they need to understand (Allison et al., 2015). When asked about how she adapted her instruction to help students with ASD, she says "Maybe the use of some picture supports, vocabulary options, a word box, or a picture with a word to go together. Simple, concrete steps are the biggest

thing", says Elderburg. Dickens says, in math "I am able to provide that hands-on aspect or that concrete to get that explanation down on paper in different ways. In contrast, Parsons adapts her instruction with the use of checklists, which she says students use all the time at her school: "We give checklists to a lot of our students, not just students who are on the spectrum." Parsons goes on to say she uses the checklist to help with executive functioning, i.e. cognitive processes that set goal-directed behavior by regulating thoughts and actions and check-in/check-out opportunities to hold students accountable. Executive functioning is a way for students to self-regulate behaviors such as managing their own work and the ability to initiate and complete tasks. An agenda to write down their assignments, and a copy of teacher notes is used so that those who have trouble writing can listen in class. On the other hand, Thomas recalls adapting her classroom instruction by utilizing a website called *Achieve the Core*. A website providing free resources to support implementing Common Core State Standards (CCSS). "You can look at a math standard and track it. What the standard connects to going up and down", says Parsons. I have also used this website for my gifted students also. In writing, students that struggle getting their ideas on paper can use speech-to-text or they can type their work. McKenna et al. (2019) "discussed that inclusion pointed to increased access in the general education curriculum and is often shown to improve adaptive behaviors, peer relations, and more positive transitional outcomes" (Mckenna, 2019).

Scaffolding, another category discovered with instructional support, is defined as a teaching strategy that involves providing temporary support to students as they learn new concepts or skills and removing them as students become proficient. Dickens adopted her instructions to help students with ASD, she recalls that she chunks a lot of

materials for that student, making sure they receive breaks if they are overwhelmed. Chunking, a part of scaffolding, is a method that breaks assignments into parts so that information is easier to process. “Making sure they do 1 or 2 problems…especially those lengthy word problems.” says Dickens. These scaffolding and chunking strategies reduce student’s cognitive load, or the mental effort we expend when we process information. Thus, making the learning more manageable, engaging, and more successful. Successful instructional supports she uses in the classroom, Dickens along with Elderburg agree having routines and structure in place have its benefits in working with student with ASD. According to Elderburg, “They need structure…a structured day, consistent routines, and clear expectations.”

Environmental Supports

When asked about how she adapted the classroom learning environment, Elderburg responds, “I can’t think of anything off the top off the top of my head” …She shares having a flexible classroom environment where students can move about the classroom during instruction. “I’m not one to have students be always seated. Movement doesn’t bother me. My threshold is high…what I am trying to say is it takes a lot to bother me”, says Elderburg.

Parsons adapts her learning environment with the use of flexible seating and different modes of seating (i.e. sitting on the floor, rubber donuts, chairs that are half of an exercise ball and have wheels, wobble chairs, etc.), she offers different seating options in the classroom to students (i.e. tables that look like kitchen tables, high seats, standard seats, low seats, regular desk, regular school chairs, regular table, etc.), calm-down corners, calming fidgets and toys are also offered as options. On the other hand, Saunders adapts her learning environment by being organized, having clear procedures

and expectations which support structure. “We check-in on a regular basis and have a positive environment” to take risks, says Saunders.

Dickens, a fourth-grade teacher, described her first encounter with students that have ASD. Before teaching, she had a background in the role of a paraprofessional during the school year and a one-on-one support for ASD students during summer school. During COVID, “we had masks on, and therefore they had us wear a microphone, but the microphone was too loud for the student with ASD. I would have to sit him beside me, away from the speaker in front of the classroom. She says, including students with ASD into her classroom has impacted her instruction in this way. We have to make sure we are touching base with our team (i.e. special education teacher, psychologist, guidance counselor, whoever’s working with that student,” says Dickens. On the contrary, Saunders says, she uses the accommodation(s) that is being provided and lessons are differentiated to meet those needs. Meeting those students where they are and helping them to grow. We have students with noise sensitivity, so making sure that they know where their headphones are, and getting them to understand that they can go get those items as necessary. Classroom environments provide for the needs of students with ASD by providing students with a structure that is conducive to their learning. Dickens states, “When I think about students with ASD, I think about not just them, but the class. I ask myself, what can I put into my class that could really support ASD students, and my other students could benefit from it as well? My classroom has flexible seating, and we do a lot of group work, which is hard for students that are on the spectrum”, says Dickens.

Thomas shared that she is an experienced teacher, and a mother of a twice exceptional teenage child. She was familiar with some of the behaviors of students with

ASD, since they were similar to her twice exceptional child. She is a departmentalized teacher that teaches math and science. She mentions working with a student with ASD in her first year of teaching, the student had an IEP for autism. He was very highly functioning and had moments he would get frustrated and have emotional outbursts. Thomas explains, it was her first year having to teach under those conditions, and "I felt like she did everything wrong. she replies. Previously, my heart was more involved in it. I would make decisions for him based on emotion." Now, that I have experience, "I can see what these kids need. They do need structure, and a teacher that is going to treat them like everyone else."

Thomas recalls this year is the year where she has had the most students on 504 plans and IEPs. In her first class, she has 3 out of 18 students with ASD. She says, "they're all at different levels of education and learning, and they all have different needs." Her other class has two students with IEPs and one with a 504 plan. In another class, one has an IEP and two other students have 504 plans. Thomas discusses some

successful support working with students with ASD, reflecting on a student she had the previous year in third grade. Thomas was asked: How has having students with ASD in your classroom influenced your instruction? Thomas speaks of two students in her other class who are performing at the second-grade level and first-grade levels. "In ELA were writing essays and analyzing the Declaration of Independence," so we must modify the content to their level (i.e. we use pictures and they write a sentence about the picture,

etc.). She adapts her classroom instructions using a website called *Achieve the Core,* a website that provides resources to support implementation of the standards. “You can look at math standards and track it. “I would take whatever we were learning in multiplication, and I would track it down to kindergarten. Whatever the standard was in Kindergarten, I would go through iReady standard and find lessons, assignments, work, and practice for him to work on.” When having to modify the curriculum to a student instructional level”, Thomas also uses a program called *Kami*. It is a digital classroom application or chrome extension used to modify assignments. Teachers are able to turn PDFs and slides presentation into accessible, interactive, and personalized digital tasks i.e. (real-time annotation, audio/video instructions, individualized modifications for student in Google classroom, Canvas, and Schoology, etc.).

Saunders, a 5th grade teacher, shared that she has a previous background as a first-grade teacher and therefore is familiar with teaching the structure, routines, and procedures in a way that a student with ASD would understand. Successful instructional support that she used with students with ASD also included movement breaks within the classroom as needed. The student was allowed to “pace the back of my room, and I would check in with him. He was always good at paying attention and so he was able to answer and follow along in those discussions and those lessons.” Another successful support that she utilized was “enabling students to advocate for what they want” whether through pictures, writing or verbal communication. Also, teaching them the feelings they have, and how to advocate for themselves, and to share what’s going on within them, to make them successful. Saunders recalls a successful time she was able to get a student of hers with ASD out of the Tier system. The student had been receiving some type of support

for several years, and lots of interventions at home with parents. The students had strong support at home.

The "data continued to increase and reach grade-level expectations, and so the school has been able to take away some of those supports." Currently, the student is not attending any school services. "They're receiving all their instruction in the general education classroom. That was really a big celebration that occurred just recently when we had a re-evaluation for the student." Inclusion of students into general education classrooms has influenced teachers' instruction by "making sure accommodations are being provided, and the lessons are differentiated to meet those needs," says Saunders. Saunders was asked: How does your classroom learning environment provide for the needs of students with ASD? "My classroom is very organized, and I have very clear procedures and expectations, and so I think that helps with the structure. We have daily conversations about each other and how we're doing. We check in on a regular basis. I think we are in a very positive environment, so it makes it easy to communicate." She says she has adapted to the needs of her classroom for the students with ASD by allowing support each other, having them take risks, and having students as part of a group to be able to participate and communicate. "They're not afraid to make mistakes, and I have sometimes that's the biggest thing" says Saunders.

"In my learning environment, I'm big on routine i.e. repeated instructions, visual instructions with written instructions, opportunities to work with peers, etc. I'm not very

rigid. I'm routine and calm. I allow kids to be themselves and make mistakes, and I am honest with my students and always try to explain things." Saunder feels like a lot of students on the spectrum need to know why things are the way they are and why we are required to do certain things. "They need to know ahead of time, so you can prepare them and tell them why it's happening. That helps a lot." She adapted her learning environment to include the needs of ASD students in that she makes these adjustments naturally, and she doesn't realize she is adapting to her learning environment. "I'm thinking of a friend I've had for two years. I don't think I've changed anything as far as my learning environment. I allow him to work in a group that I know feels comfortable. That was a big issue, having to deal with everybody. Now, he has some trust in few friends, so I let him work in that group. He works hard" says Saunders.

Building Positive Relationships

As one teacher's experience demonstrates, environmental support works most effectively when paired with strong, trusting relationships between teacher and student. The second theme that emerged from the data reflects the interconnection of how these teachers build positive relationships with their students who have ASD as well as with other students in the classroom. Positive relationships with their students who have ASD as well as with other students in the class. Attending class alongside a student with a disability can yield positive impacts on the social attitudes and beliefs of non-disabled students. A literature review by Staub et al. (1995) describes five benefits of inclusion for non-disabled students: reduced fear of human differences, accompanied by increased comfort and awareness (less fear of people who look or behave differently); growth in social cognition (increased tolerance of others, more effective communication with all peers); improvements in self-concept (increased self-esteem, perceived status, and sense of belonging); development of personal moral and ethical principles (less prejudice,

higher responsiveness to the needs of others); and warm and caring friendships (Staub et al., 1995, p. 37).

Table 4

General Education teacher successfully support teaching students with ASD

Building Positive Relationships			
Initial Code	*Category*	*Themes*	*Quote*
Listen to the Student	*Verbal Communication*	*Building Positive Relationships*	Articulating their thoughts can be a challenge…trying to find some form of communication can be a challenge".
Getting to know the Student	*Positive Teacher Impact*		
	Teacher Support	*Teacher Trainings*	"They all have their quirks, their different triggers, things that they excel in, things they dislike, and whether they are sensitive to sound. Just getting to know who they are and what makes them tick."
			"Not doing this on my own and reaching out for help".

Some of the ways participants in the study build positive relationships within their classrooms would be to form a classroom community which would allow students to support one another, take risks, and become part of a group that participates and communicates with the teacher and one another. Students with ASD have difficulty communicating their needs. "Trying to find some form of communication is a challenge.

Some students can respond verbally, and their language is not a problem, while others have a difficult time communicating their wants or desires" says Elderburg. This classroom community allows students with ASD to be included in general education classroom activities. Teachers meet their students where they were, as unique individuals with different needs. In meeting students where they are, teachers try the best way to support student communication. Teachers getting to know students and making those lasting connections are paramount in building relationships with a child. Elderburg explains, "no one child is the same. Students with ASD all have their different quirks, different triggers, things they really excel in, or things that they dislike, or whether it is that they are sensitive to sound they are just like any other kid." Teachers' growing relationships and connections with ASD students help teachers to better meet students' needs. When asked about her experience with ASD students, Dickens says, "I had to build such a great relationship and connection with that child that many people were unable to make." Parsons speaks of the importance of relationships, "building relationships with children is paramount to anything I do in the classroom."

Thomas shares a situation where she could tell a student was becoming upset. Building a positive relationship also consist of in the moment teaching "in that moment, teach him it's going to be okay. Ask, what do we do in these situations?" Remind the student "we're going to have to calm down, and we have to go to class," and understand we are going to get that book, but it's not now when we want it. The student went to special area, and the teacher was informed of the incident. The students were fine. "When I picked him up, I handed him his book." Dickens speaks about a time when she was able to calm a frustrated student. "Just that connection and that relationship." I saw him in the hallway and he was struggling, "I got on the ground and sat with him. After he

calmed down, he could elaborate and verbalize what was wrong." Since we used to have conversations about dolphins, he would tell me a random fact about dolphins." Also building those relationships with the student's family, "connections with parents as well." Those lasting impressions with parents, "they wanted me to" teacher their daughter as well.

Inclusion pointed to increased access in the general education curriculum and is often shown to improve access in the general education curriculum and is often shown to improve adaptive behaviors, peer relations, and more positive transitional outcomes (Mckenna, 2019). Saunders states, when considering positive teacher impact, "accommodations are being provided, and the lessons are differentiated to meet those student's needs. If there's noise sensitivity, making sure that students know where their headphones are, and getting them to understand" that they can retrieve those items as needed. Saunders shared an incident about building a relationship with a student with ASD in her classroom by taking the time with a student. Another example, "something came up on the big screen at the front of the room, and the student saw their name. The student went into a panic". Because of the relationship both teacher and student had developed, the student was able to talk to the teacher about what he was feeling. The students requested a break, and they were able to talk about the situation. Saunders asked, "do you still need a break?" The student responded, "nope, I'm ok now, thanks for explaining things." Thomas had a different experience early in her career when it came to building relationships. She says, "I felt like I did everything wrong. My heart was more involved, and I would make decisions for him based on emotions. ASD students need a teacher that will treat them like everyone else", says Saunders.

Teacher Collaboration

While these benefits of inclusion demonstrate the overwhelming impact on individual student development, realizing this vision requires more than good intentions it demands intentional ongoing collaboration among educators. Teachers who understand and embrace these outcomes become architects of inclusive classrooms, even now they cannot do this work in isolation. The research affirming inclusive value for all learners simultaneously reveals the critical truth: sustained teacher collaboration is the foundation upon which inclusive practices are built. When educators come together to design responsive instruction, share evidenced based strategies, and collectively solve problem solving barriers to belonging, they transform inclusion from an idealistic goal into the lived reality for every student in their care.

Table 5

Successful Instructional/Environmental Supports for ASD Students

Teacher Collaboration

Codes	*Categories*	*Themes*	*Quote*
Work together as Team to find out what Works Best for kids	*Work as a* Team	*Teacher Collaboration*	*"We meet with our resource teachers at a* the beginning of the year and the go over *IEPs with us and talk about different students Or the students we are going to have and their Strengths."*
			"I think it is critical that parents and teachers work together as a team."
			"Those connections you build with parents, and they see that you truly love their child, those connections really go a long way."

Participants' knowledge of working together as a team for the benefit of the student was strongest in this area of teacher collaboration. Among participants, serving as general education teachers of students with ASD, regardless of level of experience. Participants define teacher collaboration as working together as a team-interventionist, special education teachers, general education/classroom teachers, school psychologists, behavior interventionists, academic interventionists, counselors, ESL teachers, IEP team members, and parents to ensure students' individual needs are met. Parents and teachers set aside time to communicate strengths and concerns of their students. As conversations take place about students, information increases and teacher toolboxes are filled with strategies that work. "It takes a team of people to put their heads together and learn about the child." What has worked? What has not worked? Once data is collected on the

students, and questions have answers, then interventions can now be put into place to support areas of weakness. It's been a team situation, "we work with an incredible team of counselors, teachers and interventionist" recalls Dickens. Participants from the magnet schools report a higher level of administration and teaching staff support than from teachers in non-magnet schools. They have the support of their administrators, on-site counselors, etc. There are a community of people in the school building that not only support the students but also support the teachers. For example, teachers will meet with the behavior team to present a problem(s). In response, the school counselor will say, "let me come down to your classroom to conduct an observation and give you feedback to put an intervention in place" says Dickens.

Parents, administrators, educators, and support personnel agree that interventions addressing the social skills deficits of students with ASD are needed if students are expected to attain increase independence and success (Brown, Odom, & Conroy, 2001; US Department of Education, 2003), research suggests general education teachers do not feel prepared to implement such interventions. In fact, some general education teachers do not support an inclusive model of teaching citing their own lack of training preparation for teaching in inclusive settings (Ross-Hill, 2009).

Throughout the interview process, I discovered that teachers from magnet schools had higher collaboration among staff and were better supported and prepared by school staff as they gained knowledge from their years of experience, working with students with ASD than teachers from the public schools. One of my interview questions asked teachers how they were supported to work with students with ASD? Elderburg responded, "If we're being raw and frank, I would say that we are not. I feel like public education has changed in many ways. I don't feel that teachers are getting the support

that they need to best support the students in their classrooms. I love my job, but some days are hard, and it's getting harder", says Elderburg. As opposed to the response of Dickens to the question, a teacher from a magnet school. She reports, "Collaboration, the SPED teacher, Administration, guidance counselor, gifted specialist, paraprofessional. That team is there for the child, and we all want to see the child succeed."

Parsons, a public-school teacher says, "I am supported by my administrator, onsite counselors, mental health partners who come in the community who come into schools, and counselors that see students. I don't have to want anything at my school. If I see a kid who is struggling, all I need to do is send a single email, then a community of people in my building respond. I don't think I have ever worked with a group of people who care more about the health and wellbeing and social-emotional needs of every single child that walks through our doors."

Saunders says she is supported to work with students with ASD in her classroom in "meeting with resource teachers to have talks about students and review IEPs at the beginning of every year." If needed resources teacher will come into the classroom to brainstorm ideas for interventions for students and observe a student, if necessary."

Data from interview participants reveals that preparedness depends on the school environment where they work. Mostly, all the participants interviewed described the first year of teaching as a learning experience, where they made mistakes and learned what worked through trial and error. "I did the best that I could as a new teacher, but I probably didn't do as much as I learned throughout my professional career." If a teacher did not encounter a student with ASD before the classroom, the first year in the classroom was their first experience. Thomas explains that she is a mom of a twice exceptional son, "the behaviors and challenges are similar to students that have autism."

However, Dickens, a teacher in a magnet school, explains that she has not had training to support her in successfully teaching students with ASD. She answers, “no training, more so collaboration with SPED teachers.” Saunders, a 5th grade public sch teacher says, “We’ve had trainings, I just can’t think of anything off the top of my head specifically”.

Social/Emotional Learning (SEL)

While teacher collaboration emerged as a critical resource for supporting ASD students, the quality and consistency of that collaboration-alongside formal professional development-significantly shaped teachers’ confidence and preparedness. The disparities in training experiences between educators revealed an important gap: collaboration alone, though valuable, cannot fully substitute for structured, autism-specific

Professional development. Without intentional, sustained professional development paired with collaborative practices, teachers may lack the foundational knowledge and emotional competence necessary to respond to the social and emotional needs of students with ASD. Understanding these gaps becomes essential as we consider how teachers own social emotional capacity-shaped by training, support, and professional learning communities directly influences their ability to foster emotional safety, social connection, and belonging for neurodivergent learners.

Table 6

General Education teacher successfully support teaching students with ASD

Social/Emotional Learning (SEL)

Building Positive Relationships

Initial Code	*Category*	*Themes*	*Quote*
Breaks, Breathing Strategy Strategies	*Calm Down Spaces*	*Social/Emotional Strategies*	Sometimes, articulating their thoughts or desires can be a challenge Trying to find some form of communication can be challenge".
Fidgets/SEL	Social Emotional	Check-in/Check-out	
Regulation	Regulation Strategies	Teacher Regulation	"I think the most challenging is when the two that I have on IEPs in my room, they have emotional support things that they carry around with them, and if they don't have those things, it can cause them to spiral."
			"Be sure that I am regulated, before I attempt to calm them down".

Social and Emotional Learning (SEL)

Many children with autism demonstrate challenging behaviors that interfere with their ability to learn and be successful in general education classrooms (Gonzalez-Lopez & Kamps, 1997; Weiss & Harris, 2001). Unfortunately, general education teachers often have limited knowledge and skills related to this disorder, and they are not typically able to intervene effectively to decrease challenging behaviors and successfully include children with ASD in general education classrooms (Scott, Clark, & Brady, 2000). As a result, the inclusion of children with autism in general education classrooms has often posed problems for teachers and administrators in inclusive settings (Mesibov & Shea, 1996).

We interpret incoming information through the lens of what we already know (Willingham, 2021). Similarly, the teachers in this study approached implementation through the framework of their Prior knowledge and experiences. Saunders describes her initial experience teaching social and emotional learning in familiar terms - through successful supports - explaining, “I think the most challenging would be when you’re not receiving that support from home, and the communication is not consistent between home and school-consistency is the key. It can be difficult. Making sure their needs are met,” says Saunders.

When students with ASD struggle with communicating their thoughts, ideas, and desires they will at times become frustrated. Emerging from the data are codes that suggest the need for students to take a break or access breathing strategies to calm themselves. The category that emerged from the code is calm down spaces. Teachers provide students with spaces separate from other peers in the classroom called calm corners. In these spaces students take advantage of social/emotional strategies

in the form of a break from activities or tasks to be able to regulate their emotions by breathing, coloring, drawing, or other reflective activities. According to Parsons, "Outward behaviors are a symptom of another problem. Give him some space to calm down. I know that this child needs breaks." She shares that sometimes she sets a 15-minute timer for herself. "Can you take this book to Ms. Taylor in the office?" offers a much-needed release to the building tension in the student emotions. Also, the beginning of the year can be overwhelming. She tells her student that it would be a good idea at the end of each block, to take a few minutes to decompress and calm before moving to the next block.

Teachers encounter numerous challenges working with students that have ASD. When students are not equipped with the tools, they need to be successful, they struggle to remain in the classroom, thus missing out on instruction in core subjects like ELA and Math. Thomas remembers a challenging experience, "I think about this day, my two that have IEPs in my room, they have emotional support. Things that they carry around with them (fidgets), and if they don't have those things, it can cause them to spiral." Parsons sees things different, "dealing with oppositional defiance is probably the hardest part, everything else you can put an intervention in place." In other words, these students become dysregulated easily and so fast that it becomes a difficult situation. When asked about some challenging experience in the classroom with ASD students, Elderburg responds, "sometimes articulating their thoughts or desires and trying to find some form of communication can be challenging. Dickens says her challenging experience include student's hypersensitivity to noise, textures, scents, and things like that". Trying to get them to have empathy. Understanding that we are not going to engage in this behavior, just building that relationship and connection is helpful.

When students become dysregulated, as this occurs rapidly and frequently with ASD students, “I make sure that I am regulated before I attempt to calm them down” says Parsons. This is probably the biggest challenge as a teacher, when you are in a classroom full of 22 students and this child is dysregulated again. You are in the middle of a lesson and the student is off,” replies Parsons.

While delivering classroom instruction Dickens states, “Everybody always asks me, what do you do? I respond, I don’t know. I just listen to the child. She asked herself, what is the child saying? She asks other teachers that seek her advice, did you ask him what was wrong? Did you ask him why he didn’t want to do his work? Are you in his face and do you have strong perfume on?” Many different things can cause a student to be off or become dysregulated when it comes to autism, Parsons explains.

Table 7

Successful Instructional/Environmental Support for ASD Students			*Quote*
Teacher Preparedness			
Initial Code	*Category*	*Themes*	

Trainings *ACEs* *SEL* *Gifted* *Shame* *Ruby Payne*	*Professional Development (PD)*	*Teacher Preparedness*	"None. No training, more so collaboration with SPED teachers. I went through all my PDs and no, I have not had any training teaching student with ASD".
Being Prepared *Team communication* *Parent collaboration*	*Beginning of the year*		"We sit down and talk about students on the front end i.e. what has worked in the past, Behaviors, anything to expect so that I can be prepared."
Lack of preparation	*First year/ first experience*		"That was my first experience in a classroom teaching like that…I feel like I did everything wrong."

Teacher Preparedness

The findings revealed that sensemaking of teacher perception and how these teachers successfully support students with ASD in the classroom instructionally and environmentally initiative unfolds as a gradual, iterative process that involves developing foundational understandings, responding to external and internal influences, and building self-efficacy. Educators engaged with the process from multiple entry points based on

their prior experiences. Veteran educators with higher levels of school-based support began with a deeper understanding and refined their practice they encountered new information, whereas less experienced educators that lacked school-based support relied initially upon familiar approaches and gradually expanded their knowledge and confidence over time. Experienced teacher in a school with high levels of support states how to be prepared, “As teachers we must do immediately, we have to make sure we are touching bases with our team.” The special education teacher, your school psychologist, guidance counselor, whoever is working with that student to say let’s sit and talk about what did not work last year? How do I begin? What works? Behavioral? Academic concerns? “At the end of the day when you have an ASD student with an IEP, there is going to be extensive documentation,” says Dickens.

Teachers need knowledge of how to differentiate instruction, adapt assignments and assessments without decreasing the rigor of the standard (Saunders et al., 2013) and may not have the training in their teacher preparation programs or know how to approach this task (Allday, Neilsen-Gatti, and Hudson 2013; Forlin and Chambers, 2011; Kim 2011; Maccini and Gagnon, 2006; McCrimmon 2015). Research suggests general education teachers do not feel prepared to implement such interventions. In fact, some general education teachers do not support an inclusive model of teaching citing their own lack of training preparation for teaching in inclusive settings (Ross-Hill, 2009). According to Thomas, as she refers to her first experience in the classroom, “That was my first experience in the classroom having to teach something like that, and I feel like I did everything wrong. She speaks about the first year, “I had to learn the best way, but my heart was more involved in it.” She would make decisions for a student based on her emotions. “Now that I have gotten experience, I see kids” need structure, says Thomas.

While inquiring about the trainings teachers received to successfully teach students with ASD Dickens responds “None. No training, more so collaboration with SPED teachers. I went through all my PDs and no, I have not had any training” teaching student with ASD. According to Bakken (2016), research reveals “teachers reported a lack of confidence regarding knowledge IEP requirements, but those teachers that had training on IEP development were more confident in their abilities” (p. 5). Teachers lack preparation and do not make them ready to take on the unique needs of students with ASD. Saunders says, “I have had multiple trainings, I can’t think of trainings that have supported me in working with students with ASD”.

Parsons, a magnet school teacher states that she has had “Adverse Childhood Experiences (ACE’s) trainings, a ton of Social/Emotional Learning (SEL)training, training around twice exceptional training and shame. There is significant difference in the professional development received between the two teachers. One teacher doesn’t believe he had any training to help her prepare to work with students with autism, and the other teacher has had an abundance of training to help prepare her to work with students with ASD. However, Parsons speaks about having been through training for example, Adverse Childhood Experiences (ACE) training, and Social and Emotional Learning (SEL) related to learning calming strategies for students experiencing dysregulation symptoms. She also shares experiencing a training two years ago about Shame. “I did not realize how much shame was driving my students” replies Parsons.

Since teacher preparedness is important to the implementation of effective interventions for instructional supports, I asked my participants about any training they received to prepare them to work with students with ASD. “I couldn’t give you a training that I’ve necessarily attended or received or at through. I feel like it’s genuinely just

been, experience, conversations with fellow educators. Gaining insights, knowledge, and expertise from them. My mentor teacher, when I first started. She was phenomenal support" says Parsons. In one study, both elementary and secondary general education teachers voiced concerns about their lack of confidence teaching in an inclusive classroom and feelings of low self-efficacy in working with special education students (McCray & McHatton, 2011). Even after taking a course were helpful in inclusionary practices, the pre-service teachers stated that the courses, however they still required more support in instructional strategies and understanding characteristics of students with different types of disabilities (Able et al., 2015, p. 46).

Summary of Findings

This research investigates given the general education teacher's perceptions; how does the general education teacher successfully support students with ASD in the classroom instructionally and environmentally? Analysis of participant interviews reveal a reflecting continuum from experienced to veteran teachers that illustrates how understanding is constructed over time and mirror the iterative process of sensemaking. Participants shared successful strategies learned by experience rather than professional training for supporting students with ASD in the general education classroom. Those who reported high levels of school-based support had increased confidence in implementing these successful strategies. Conversely, those who reported low levels of school-based support expressed a greater need for professional training and classroom-Based models of implementation. Participants' self-assessment revealed similarities in perceived preparedness by lack of knowledge in working with students with ASD. These findings reflect the outcomes of sense making, the iterative process through which teachers develop the understanding necessary to implement change.

The study revealed five themes that emerged from the data. First, according to the research question academic learning/instructional support gives general education teachers, despite their perceptions, a way to successfully support students with ASD so teachers can tailor to their individualized learning needs. Second, is building positive relationships. When teachers build positive relationships with their students, they develop an understanding of who students are and how to meet their needs. Third, teachers collaborating as a team can brainstorm and problem solve strategies that work for students. Next, social/emotional learning (SEL). When teachers are building students' capacity to regulate their social and emotional needs, teachers need to continue engaging in positive teacher-student relationships. Finally, teacher preparedness training is vital to helping meet the needs of students with ASD for these teachers. These findings provide the foundation for interpreting Chapter 5.

Chapter V: Discussion and Conclusions

Introduction

General education teachers' successful support of students with ASD in the general education classroom considers the number of students with ASD taught in inclusive classrooms is increasing (Wong et al., 2014, p. 1). The statewide prevalence of ASD from ages 3-21 year of age ranged from 1.5% in Tennessee and Wisconsin to 2.3% in Arizona. More boys than girls had ASD at all sites with male to female ratios ranging from 3.5% (Utah) to 4.7 (Minnesota).

The purpose of this qualitative study was to explore the perceptions and experiences of elementary general education teachers regarding their capacity to integrate into the general education setting. The data collected came from semi-structured interviews with five teachers. The interviews sought to examine how teachers made sense of the successful support offered to students with ASD, specifically, the integration support in the general education environment instructionally and environmentally. This chapter presents the study's conclusions, discusses potential implications, offers recommendations for future research, and identifies the study's limitations.

Summary of Findings

This study sought to explore how general education elementary teachers who have had experience teaching students with ASD successfully support students instructionally and environmentally. Teachers understand the integration of successful support for students with ASD into the elementary general education curriculum, the factors that influence their perceptions, and the perceptions of their preparedness.

The findings demonstrated that educators began the sensemaking process by drawing on their previous successful experiences based on their prior knowledge and background working with students with ASD. They engaged with successful support

designed to reduce challenges, influence of instructional and environmental strategies, and the practical realities of working with students with ASD.

Discussion of Findings

Research Question 1

Given the general education teacher's perceptions, how do the general education teachers successfully support students with ASD in the classroom instructionally and environmentally?

The findings from this study demonstrated that teachers made sense of successful support through the lens of prior knowledge or experience with working with students with ASD, implementing strategies to adapt instruction and the learning environment into existing frameworks, and discovering challenges that shape as the process of sensemaking unfolds. Five key themes emerged in response to the research question: Academic *Learning/Instructional Support*, *Building Positive Relationships, Teacher Collaboration*, *Social/Emotional Needs (SEL) and Teacher Preparedness.*

Academic Learning/Instructional Support was evident across all participants in this study. Participants also grounded their understanding of general education teachers support of students with ASD. Conversely, those who reported low levels of school-based support expressed a greater need for professional training and classroom-based models of implementation by relying on their prior experiences. Notably, veteran general education teachers described their understanding as an evolution, from what was once primarily viewed as adapting instruction through scaffolding to the problem-solving differentiation. In contrast, teachers who were newly responsible for integrating successful support and had limited experience. Teachers differentiate content, process,

products, the learning environment, and the use of ongoing assessment and flexible grouping, which makes this

a successful approach to instruction. As Thomas reflected, “It’s not an exception to those rules; they can learn how to follow those rules. You have to approach it in a different way,” illustrating that sensemaking begins with existing knowledge. Similarly, Parsons recalled “figuring out what makes students tick, and what they need from me to be successful.”

The theme *Academic Learning/Instructional Supports* illustrated how participants needed assistance in navigating the process through formal, ongoing training. Interpretation of strategies and standards cannot be left up to teachers to interpret in isolation. Dickens says, in math, “I can provide that hands-on or that concrete aspect to get that explanation down on paper in different ways.” In contrast, Parsons adapts her instruction with the use of checklists, which she says students use all the time at her school: “We give checklists to a lot of our students, not just students who are on the spectrum,” says Dickens.

Parsons comments underscored an important distinction, as a math teacher, she is deeply familiar with and comfortable with math standards, but less so with successful support for students with ASD. Over time, her experience with math standards fostered both competence and confidence, while successful support remains less central to her professional identity.

The theme *Building Positive Relationships* support works most effectively when paired with strong, trusting relationships between teacher and student, demonstrating the importance of providing teachers with sustained, structured support as they learn to navigate successful support for students with ASD. Yet even with guidance, teachers

encountered the complex, day-to-day realities of bringing the initiative to life in their classrooms. As participants engaged with these relationships, they described obstacles that complicated implementation and revealed how systemic constraints interacted with individual sensemaking. Researchers generally find that teachers have closer and less conflictual and dependent relationships with children who have fewer behavioral problems (Birch & Ladd, 1998; Pianta & Nimetz, 1991; Pianta & Steinberg, 1992).

According to Robertson et al. (2003), a study based on the relationships between general education teachers and students with autism classmates were asked to complete a social inclusion measure to examine students' perceptions of the social environment of their classroom. Social inclusion measures included all the participating children in the class, including the student with autism. Children's level of social involvement was measured by their affiliation with peers. Results indicated considerable variability in reports of relationships of included students with autism, children's level of behavior problems, degree of social inclusion and associations between these factors (p. 126). Teachers must carve out time to integrate successful support for students with ASD into existing curricula, an especially difficult task when ELA and Math blocks are tightly prescribed. For meaningful change to occur, teachers must be given the time and space to learn and adapt.

Connections Between Emerging Themes and Existing Literature

Together these themes merge into the integrated process of *Preparing Teachers for Inclusive Education* a framework for Inclusive Educator Preparation Curriculum Figure 1. provides a visual understanding of ***Academic Learning>Building Positive Relationships>Techer Collaboration>Social/Emotional Learning>Teacher Preparedness.***

The study discovered five themes that emerged from the data. First, according to the research question academic learning/instructional support gives general education teachers, despite their perceptions, a way to successfully support students with ASD so teachers can cater to students' individualized learning needs. While causation is up for debate, what is clear is that prevalent trends indicate a need for a better understanding of the population to ensure appropriate educational service delivery (Bakken et al., 2016, p. 115). According to Loreman (2007) there are seven pillars of support for inclusive education. Support consists of developing positive attitudes, supportive policy and leadership, school and classroom processes grounded in research-based practices, flexible curriculum and pedagogy, community involvement, meaningful reflection, and necessary training and resources (pp. 3-12). According to Bakken et al. (2016), the purpose of inclusive education was to ensure that students with special needs are "integrated in the general education setting for as much of the day as possible, with the supports they need to be successful. Inclusion strategies can include co-teaching, consultative services, paraprofessional support, modifications to curriculum or testing, accommodations for specific disabilities, and other services allowing an individual student to access the district curriculum in the general education classroom" (p.4).

The second theme is building positive relationships. When teachers build positive relationships with their students, they develop an understanding of who students are and how to meet their needs. A literature review by Staub et al. (1995) describes five benefits of inclusion for non-disabled students: reduced fear of human differences, accompanied by increased comfort and awareness (less fear of people who look or behave differently); growth in social cognition (increased tolerance of others, more effective communication with all peers); improvements in self-concept (increased self-esteem, perceived status,

and sense of belonging); development of personal moral and ethical principles (less prejudice, higher responsiveness to the needs of others); and warm and caring friendships (Staub et al., 1995, p. 37).

The third theme is teacher collaboration, teachers collaborating as a team can brainstorm and problem solve strategies that work for students. In addition to continued concerns about their lack of preparation, some teachers noted they do not receive adequate support within their schools (Ross-Hill, 2009). Specifically, teachers have reported a desire for collaboration to support inclusion (Finke et al., 2009). Although personnel between general and special education teachers is beneficial, teachers lament the lack of planning time, the incompatibility of teachers, lack of training, varying student skill levels, and lack of administrative support (Scruggs, Mastropieri, and McDuffie, 2007).

Next, is the social/emotional learning (SEL) theme, when teachers are building students' capacity to regulate their social and emotional needs requires teachers to continue engaging in positive teacher-student relationships. In one study, both elementary and secondary general education teachers voiced concerns about their lack of confidence teaching in an inclusive classroom and feelings of low self-efficacy in working with special education students (McCray & McHatton, 2011).

Finally, teacher preparedness allows educators to collect student data needed through parent and teacher input to offer the educational support necessary for students to be successful. General Education teachers and their impact on the learning of students with ASD. In the context of other relevant literature, this project's implication for teacher perception and preparedness is significant because "there is a compelling need to improve the preparation of teachers required to serve these students" (Busby, Ingram,

Bowron, Oliver, & Lyons, 2012, p. 29). While other studies have focused on placement in the general education classroom, this research focuses on drawing from these

educators' insights in order to make meaning and provide strategies for implementing successful inclusionary practices that are known and less known (Harrison et al, 2005).

Many teachers attribute their hesitation to include students with disabilities to a lack of proper training. A large study conducted in the United States indicates that around one-fifth of general education teachers who teach students with disabilities report that they do not have adequate support, and one-third feel that they were not adequately trained to support students with disabilities in their classrooms (Blackorby et al., 2004). As a result, the inclusion of children with autism in general education classrooms has often posed problems for teachers and administrators in inclusive settings (Mesibov & Shea, 1996).

According to Bakken et al. (2016), the purpose of inclusive education was to ensure that students with special needs are "integrated in the general education setting for as much of the day as possible, with the supports they need to be successful. Inclusion strategies can include co-teaching, consultative services, paraprofessional support, modifications to curriculum or testing, accommodations for specific disabilities, and other services allowing an individual student to access the district curriculum in the general education classroom" (p.4).

The literature explains that successful support of students with ASD in the classroom comes by having extra adult support, students being pulled out of the classroom for related services, working on off grade level assignments within the curriculum, accommodations (i.e. eliminate answer choices, extended time, etc. and other services that will allow ASD students to access the curriculum in the general

education setting. However, implementation of these strategies into the classroom becomes a challenge when general education teachers lack the professional training necessary to carry out effective support.

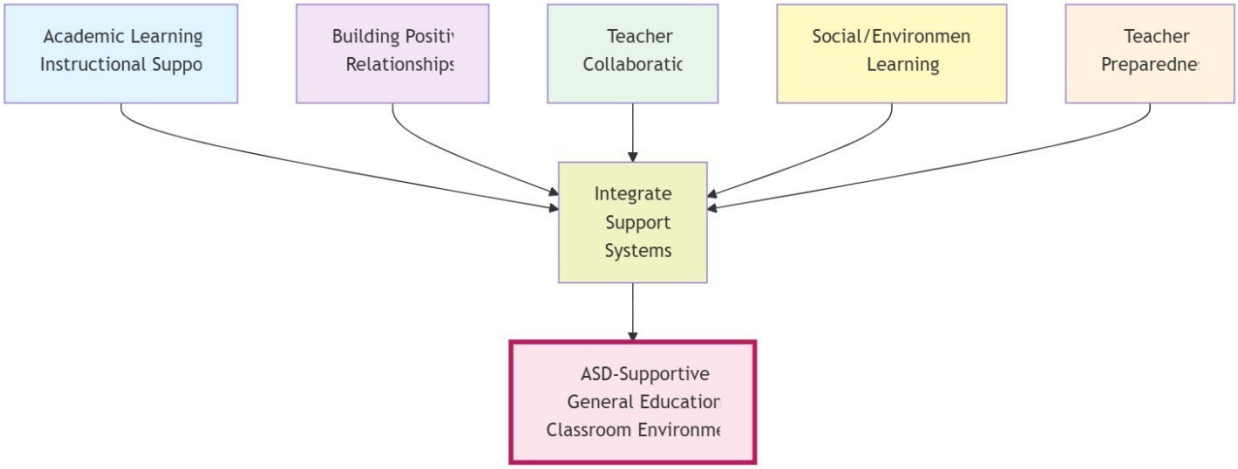

Figure 2. *Funnel Image*

The conceptual framework above describes the five themes that emerged from the data that capture the participants' perceptions for how to successfully support students with ASD in the general education classroom and how these themes integrate into a support system. The themes are funnel together to become a holistic environment that is needed for the successful classroom support of ASD students. First, the idea behind the diagram is that the delivery of evidenced-based practices, instructional strategies or interventions matters for how students with ASD obtain information. Students' connections with their teachers and their peers thrive in a positive environment, and as a result positive relationships are built on a solid foundation. Second, teachers need to have those frequent conversations with other teachers, related service providers, specialists or any individuals working with the ASD student. Third, consistent communication allows for changes or updates in a student's data, when necessary, to keep students' individual

needs in mind. Next, Social/ Emotional Learning (SEL) is a part of the student and teacher's ability to self-regulate in stressful situations. Finally, teacher training programs result in consistent positive outcomes for students with ASD. High levels of training foster positive attitudes among teachers. All of which come together in a system that support the success of not only students with ASD, but all students. These supports are executed with the general education classroom setting.

Recommendations for Practice

In consistent findings, Hsien et al. (2011) suggested high-level training in special education fostered positive attitudes toward inclusion among teachers; however, some researchers argued teachers needed a support system in general education settings to improve instruction delivery (p. 33). Consequently, the integration of successful support of students with ASD into the general education curriculum, particularly in elementary schools, will primarily fall to in-service teachers. Unfortunately, many teacher preparation programs do not include successful support of students with ASD coursework or endorsements, leaving districts reliant on professional development initiatives to fill this gap (Vegas et al., 2022).

A well-prepared and knowledgeable teacher remains the cornerstone of effective instruction, yet identifying qualified general education teachers who will teach using successful support for students with ASD highlights the challenge of this integration effort. Because many teachers struggle to successfully instruct students with ASD in general education classrooms, districts must be deliberate in the design and delivery of professional learning for teachers successfully supporting students with ASD integration. Recognizing the iterative nature of sensemaking, the following recommendations are offered to guide districts in supporting teachers.

Dickens emphasized the value of collaboration, she says “It takes a team of people to put their heads together and learn about the child.” What has worked? What has not worked? Once data is collected on the students, and questions have answers, then interventions can now be put into place. It’s been a team situation, we work with an incredible team of counselors, teachers and interventionists.”

Recommendations for Future Research

This research was but a small step toward uncovering insights into how general education elementary teachers successfully support students with ASD instructionally and environmentally. The recommendations for future research below could provide further insights needed to continue to support these students and their teachers successfully.

Additional Participants

This study focused on a small group of educators within a single state where general education teachers who had experience teaching students with ASD, successfully support students instructionally and environmentally. Including both experienced and veteran teachers in public and magnet schools provided valuable comparative insights; however, expanding the participant pool could yield broader understanding of the phenomenon. Future research could include a larger, more diverse sample of teachers across multiple districts, states, or even nationally. Such an expansion would allow for stronger comparisons between teacher groups and offer a more comprehensive understanding of how sensemaking occurs around successful instructional and environmental support for students with ASD. The findings could also inform best practices for supporting teachers and sustaining implementation efforts across varied educational contexts.

EL Curriculum

Many schools utilize the EL curriculum as a block of learning within the regular education classroom. Formerly referred to as Expeditionary Learning (EL) is a different approach to education, where students learn through doing, and time is devoted to building relationships and developing character. Teachers design curriculum and projects that connect students to the big ideas, engaging students in problem-solving and deep thinking. Future research could include a section, side notes or foot notes in the lesson to inform the reader how to successfully support students with ASD.

Limitations of the Study

The first limitation of this study related to participant selection. Although the participants offered valuable insights, the candidate pool was limited by parameters established by the district and schools' administration. Including a larger number of public schools, magnet school teachers, both male and female may have yielded additional perspectives on sensemaking and implementation. Several participants were unable to reflect on successful support of students with ASD lessons because they had not implemented them.

A second limitation of the study related to interview questions. Testing open ended interview questions to a pilot group of general education teachers and gathering their feedback on the quality and effectiveness of the questions to inform my research could be informative.

Finally, the third limitation is to survey teams of administrators to see how they choose candidates to meet the criteria for the research study. Administrators were not included in this study; their perspectives on sensemaking and successful support for students with ASD could have offered important insights. Collectively, these limitations suggest opportunities for deeper understanding of how instructional and environmental

successful support is implemented and interpreted across different roles within the school system.

Conclusion

The study explored how general education elementary teachers who have had experience teaching students with ASD successfully support students instructionally and environmentally to discover teacher perceptions, the impact of internal and external factors effecting those perceptions and how teachers conclude in making sense of all these factors, and how prepared teachers were for teaching in inclusive classrooms. Participants teaching in magnet schools report more professional development training and higher levels of school-based support. In contrast, participants in public schools reported less professional development training and lower levels or no support school-based support. The findings highlight the primary role of the teacher within the five themes, academic learning/instructional support, building positive relationships, teacher collaboration, social/emotional learning, and teacher preparedness. The study describes the importance of teachers offering quality educational strategies so that students with ASD are able to access the district's curriculum.

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Appendix A

Interview Protocol

Candidate Name:
Date of Interview:
Time Interview Began:
Time Interview Concluded:
Participant Pseudonym:
Participant Information:

Interviewer (I):
Thank you for volunteering to participate in this study. This interview should take no more than 60 minutes. With the number of students diagnosed with autism spectrum disorder (ASD)Increasing, it is important to seek out successful strategies teachers can use to support students with ASD. This research study aims to answer one key question:
How do general education elementary teachers who have had success teaching students with ASD support these students instructionally and environmentally?
As a reminder, all data collected will remain anonymous and stored in a safe, protected location. You can withdraw from the study at any time with no penalties to you. Would you like to begin the interview? And is it ok if I record the interview? Thank you.

Participant (P): Participant Affirmation (s) Dissertation- Interview Questions 1. Tell me about your experience as a teacher over the years and your current position.

2. Tell me about your first experiences teaching students with ASD.

3. What have you learned about teaching students with ASD as you've gained more experience?

4. Tell me about some successful experiences teaching students with ASD.
5. Tell me about some challenging experiences teaching students with ASD.

6. How has the inclusion of students with ASD influenced your instructional strategies in your classroom?

    a. How have you adapted your instructions to help students with ASD?

    b. Probe for specific stories and examples
7. How does your classroom learning environment provide for the needs of students with ASD?

    a. How have you adapted your learning environment to help students with ASD?

   b. Probe for specific stories and examples

8. Tell me about the training you've received to successfully teach students with ASD.
   a. Probe for specific stories and examples
   b. Is there any training you wish you'd had?
9. How are you supported to work with students with ASD in your classroom?
10. Before we wrap up the interview, is there anything else you'd like to share or want others to know about successfully teaching students with ASD?