Pennsylvania K-8 General Education Teachers’ Perceptions of Preparedness for the Inclusion of Students with Autism: A Mixed Methods Study

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Pennsylvania K-8 General Education Teachers’ Perceptions of Preparedness for the Inclusion of Students with Autism: A Mixed Methods Study

A Dissertation Presented to the Faculty of the College of Education and Social Work West Chester University West Chester, PA

In Partial Fulfillment of the Requirements for the Degree of Doctor of Education

By Erica M. Munson-Tate

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Abstract

This convergent mixed-methods study gathered insights from Pennsylvania kindergarten through eighth-grade general education teachers regarding their perceptions of preparedness for including students with autism. Utilizing Bandura's theory of self-efficacy (1962), which underscores the importance of continual opportunities for individuals to build confidence in their abilities, the study sought to understand teachers' viewpoints on their readiness for inclusion. To achieve educator insight, a combination of surveys and interviews was employed to understand better what preservice and in-service educators learned in their pre-professional and professional experiences. In the survey phase, (n=51) general educators responded to questions covering demographics, teacher education programming, professional development, implemented strategies, and suggestions for training. Ten survey respondents completed an optional virtual interview, providing further insights into their teaching experiences with students with autism and offering suggestions for future training and preparation for general education teachers. The interviews were transcribed, member-checked, and coded to identify themes related to preparedness, instructional barriers, program limitations, and recommendations for future training. Both the survey and interviews contributed valuable information to the research on teacher preparation for students with autism, offering recent perspectives from educators currently in the classroom. Their experiences and suggestions shed light on the ongoing need for adequate preparation of educators to support students with autism.

Keywords: general education teachers, inclusion, autism, self-efficacy, preparedness, teacher preparation, professional development.
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a constant presence in everything I have undertaken in this program. I pray that my life's work will continue to honor your memory and make you proud.
Dedication

This study is dedicated to department leaders and school administration, acknowledging their significant role in influencing teachers' daily experiences and the educational outcomes of students with autism. May the insights from this research and the wisdom of experienced educators encourage you to carefully consider teachers' needs and evaluate the effectiveness of their training. For inclusion to truly promote a sense of belonging and empowerment for students with autism in the classroom community, it is crucial to prioritize the support and readiness of their teachers.
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Chapter 1: Introduction

The prevalence of autism spectrum disorder (ASD) has seen a rapid increase, according to recent data from the Center for Disease Control (CDC, 2023). Approximately 1 in 36 children have been identified with autism, marking a rise since the previous update two years ago. ASD affects individuals across ethnicities, racial backgrounds, and socioeconomic statuses, with a higher prevalence among males than females (CDC, 2023). In recent years, both the scientific and educational communities have recognized the widespread identification of students with autism, underscoring the necessity for improved education and support for this vulnerable population (Webster & Roberts, 2020).

The array of impairments and the growing prevalence of autism present substantial challenges to the educational system (Bemiller, 2019). Throughout the 1990s, educational institutions across the United States witnessed a remarkable surge, with reports indicating an average rise of over 800% in the number of children with Autism Spectrum Disorder (ASD) enrolled in the educational system (Crosland & Dunlap, 2012). This notable increase can be attributed to the recognition of autism as an identifiable disability under the Individuals with Disabilities Education Act (IDEA). In recent years, this trend has persisted, with the population of autistic students steadily growing. Currently, they constitute approximately 12% of the 7.3 million students with disabilities receiving services under IDEA (National Center for Education Statistics, 2023). With the rising number of students with autism entering general education settings, it becomes imperative that teachers are suitably equipped to accommodate them in their classrooms.

The general education teacher's role has greatly gained importance in establishing inclusive environments that foster the success of all students and champion equitable education for those
with autism. Mitchell (2021) asserts that merely 1 in 5 general education teachers feel adequately prepared to instruct students with disabilities. Considering the ongoing surge in autism diagnoses and the likelihood of some students spending part of their day in a general education classroom as delineated in their Individualized Education Plan (IEP), it becomes vital to provide general education teachers with the necessary tools and resources to support students with ASD. Notably, some general educators have explicitly voiced their lack of adequate training to teach students with autism (Blackwell et al., 2017).

While being a person with autism encompasses various social, behavioral, and cognitive factors, it is their right under the Individuals with Disabilities Education Act (Individuals with Disabilities Education Act, 2022) to receive education in their least restrictive environment (LRE), which often leads to placement opportunities for many students with autism in general education classrooms. Individuals with autism have made remarkable progress, transitioning from restrictions and isolation from nondisabled peers to benefiting from movements and advocacy that have granted them access to inclusive settings (Kauffman et al., 2022).

Research consistently underscores the academic and social advantages of inclusive education placement, resulting in students with ASD being primarily educated in general education settings (Bolourian et al., 2021). Nevertheless, as long as educators lack ASD preparation, research will continue to unveil the challenges faced by general educators due to limited course offerings and professional development, with a continuous focus on offering viable solutions (Bolourian et al., 2021; Lindsay et al., 2014; Oliver-Kerrigan et al., 2021; Van Der Steen et al., 2020).
Purpose of the Study

This study explores the perspectives of general education teachers regarding their preparedness to instruct students with autism in inclusive classrooms. This two-part mixed methods study initially employs a concurrent quantitative and qualitative phase to collect participant data. Both data sets were followed by each section’s data analysis and the merging of the findings. During the quantitative part of the study, general education teachers from grades K-8 who have met the inclusion criteria were administered surveys via email through the Qualtrics platform, allowing them to share their insights on teaching students with autism, teacher preparation programs, and professional development. In the qualitative portion of the study, optional semi-structured Zoom interviews were conducted, enabling participants to share and elaborate on their experiences, providing additional depth to their survey responses. Subsequently, the qualitative portion allows participants to provide further insights into their experiences with students with autism and their experiences with inclusion preparation.

Rationale and Significance of Study

This study contributes to the body of research emphasizing the necessity for general education teachers to be well-prepared for instructing students with autism in their classrooms. Research outlines the need for extensive training to support general education teachers as they attempt to educate students with autism (Bolourian et al., 2021). Existing research underscores the significance of teacher preparation, both pre- and post-graduation, in the context of inclusion for students with autism (D’Agostino & Douglas, 2020; Johnson et al., 2021; Lindsay et al., 2014). Nevertheless, there continues to be a persistent need to advocate for enhanced teacher training and professional development for general education teachers, ultimately contributing to the overall educational advancement of students with autism.
This convergent mixed-methods study addresses the disparity between what teacher preparation programs and K-8 teacher professional development offer to general education teachers and how prepared they feel when they enter inclusive classrooms with students with autism. This study will also provide a platform for general educators responsible for instructing students with autism in inclusive classrooms to voice their self-reported experiences concerning both preservice and in-service programming.

There is a continued need to have current research that will allow educators to reflect on their experiences teaching students with autism as well as a space for them to provide additional insights to further the study. According to Creswell & Guetterman (2019), data from the survey helps examine insights on perspectives, opinions, behaviors, and characteristics of a population which, in this case, focuses on general education teachers. However, adding the additional qualitative portion, which will complete the mixed method, will provide an opportunity for a deeper understanding of their experiences and suggestions for future educational planning.

**Problem Statement**

Students with disabilities, particularly those with autism, have the rightful expectation of receiving an education from individuals who comprehend their needs and possess the requisite skills to foster their academic, social, and behavioral progress (Allday et al., 2013). The role of the general education teacher has become pivotal in creating inclusive environments conducive to all students' flourishing and delivering equitable education (Bolourian et al., 2021). The predicament many general education teachers face is their sense of unpreparedness to support students with disabilities, especially those with autism, in inclusive settings. Their feelings of inadequacy have made some teachers unsupportive of inclusion primarily due to their lack of training, which has eroded their confidence (Able et al., 2015).
According to IDEA (IDEA, 2004, section 1462 a,6), individuals teaching students with disabilities should have access to comprehensive preservice preparation, professional development, and instruction using scientifically grounded, evidence-based practices to ensure student progress. In light of the limitations noted by preservice and in-service teachers and their respective school districts, universities must fortify their teacher certification programs, especially for those instructing students with disabilities, particularly those with ASD (Lauderdale-Littin & Brennan, 2018). Regrettably, concerning ASD, general educators express their struggles with inclusion and their need for additional training encompassing fundamental knowledge about ASD, accommodations, collaboration with special education teachers, instructional strategies, evidence-based practices, and advocacy skills (Murray, 2015). Until the challenges confronted by general education teachers in accommodating students with autism are duly recognized and adequately supported, educators will continue to grapple with feelings of unpreparedness.

**Research Questions**

The following research questions will support the study as they will provide opportunities for K-8 general education teachers to share their experiences and reflections with training and teaching students with autism initially via survey and an interview option if they choose to expound upon their experiences.

1. What are the experiences of K-8 general education teachers working with students with autism?
2. How do general educators report their preparedness for teaching students with autism (e.g., autism-specific programs, professional development, field experiences, and coursework related to autism)?
3. How do professional development experiences and teacher preparation programs support teachers in effectively educating students with autism in the general education classroom?
   a. What aspects of teacher preparation do general education teachers report are the most beneficial to help them address the needs of students with autism in their general education classrooms?
   b. What preparatory experiences do general educators in grades K - 8 believe would have helped them to better support students with special needs in the general education classroom?

**Significance of Methods**

The current research study used a mixed-methods convergent design utilizing a (QUANT+QUAL) approach. This approach is valuable for data presentation as it provides interconnected insights that depend on each other to convey the data effectively. This method expands the scope of inquiry beyond what can be achieved through purely qualitative or quantitative methods (Dawadi et al., 2021). Studies examining teacher preparedness, inclusion, the lack of purposeful professional development, and strategies needed to support students with autism encompass various research methodologies.

Some of the contributions to what we have learned about teacher preparedness for including students with autism have been offered through mixed methods studies. These studies underscore the prevailing trends related to limitations in teacher preparation programs, the requirements of students with ASD, the obstacles to preparedness for inclusive education, and the voices of educators who feel ill-equipped due to these limitations (e.g., Ballantyne et al., 2022; Bemiller, 2019; Bolourian et al., 2021; Cordovés, 2013; D’Agostino & Douglas, 2020; Finch et al., 2013; Silveira-Zaldivar & Curtis, 2019;). Quantitative Methods have also contributed to the research of teacher preparedness for the inclusion of students with autism has provided
insights through survey data that have made connections to the deficits educators experience as it relates to their preparedness (e.g., Dimogianni, 2023; Freitag & Dunsmuir, 2015; Lauderdale-Littin & Brennan, 2017). Employing mixed methods enables educators to convey their insights through both survey and interview platforms.

Some of the qualitative methods that have contributed to the studies have allowed educators to participate in case studies, interviews, and participate in focus groups to share their experiences. The research persists in revealing the perspectives of educators who feel unprepared, along with their hopeful suggestions for enhancing preparedness (e.g., Able et al., 2015; Al Jaffal, 2022).

**Quantitative Data**

Initially, the first data set was collected through the Qualtrics platform, which was an online survey. The survey design was created with the influence of a researcher-created survey titled Closing the Achievement Gap: General Educators’ Self Analysis of Preparedness to Teach in Mixed-ability Classrooms (Sparks-Kantor, 2011). The goal of the created survey is to enable participants to provide information about their educational backgrounds, previous coursework, professional development, experiences with students with autism, preparedness for inclusion, fieldwork experiences, comfort levels, as well as suggestions for fieldwork and professional development. The quantitative portion aimed to determine correlations between coursework, professional development, and preparedness and make suggestions for potential programming based on the quantitative findings.

**Qualitative Data**

According to Creswell and Clark (2018), obtaining qualitative and quantitative results provides greater detail by bringing additional voices and perspectives. It is essential to gain the
added voice from the participants because some of what they record in the survey could be enhanced through an interview. The participants signed up for their interviews as an option after completing their surveys. All interviews were recorded after consent using the Zoom platform, transcribed post-recording, and manually edited. Once the editing was completed, the transcripts were sent for member-checking and coded for emergent themes.

**Mixed Methods**

The mixed methods convergent design creates room to capture educators' perspectives not only through the generation of quantitative data via the Qualtrics survey but also by offering the chance for additional insights during a one-on-one interview. This approach allows for concurrently comparing quantitative statistical results and qualitative findings, enhancing the comprehension of the posed research questions (Creswell & Clark, 2018).

**Definition of Terms**

For clarity and context, this study provides the following definitions of terms used within the research:

*Autism Spectrum Disorder (ASD):* Autism spectrum disorder (ASD) or autism is a complex developmental condition characterized by ongoing difficulties in social communication, limited interests, and repetitive behaviors. Autism earns its classification as a "spectrum" disorder due to the broad range of symptom types and severity that individuals may encounter (National Institute of Mental Health, 2024). Although it is typically regarded as a lifelong condition, the functional impairment resulting from these challenges can vary significantly among individuals affected by ASD (CDC, 2023).

*Education for All Handicapped Children Act (EHA):* This act was created in 1975 by the United States Congress to ensure that a free public education that supports their needs for special
education and related services was available to all handicapped children (Singer & Butler, 1987).

**Free and Approved Public Education (FAPE):** Securing a Free Appropriate Public Education (FAPE) for students with disabilities involves providing specialized educational services customized to meet the distinct learning needs of each student. According to IDEIA, FAPE encompasses the delivery of publicly funded special education and related services for students. These services are required to conform to the standards set by the state's educational agency, cover an appropriate range from preschool to secondary education, and align with the student's Individualized Education Plan (Conroy & Yell, 2019).

**General Education Classroom:** In the general education setting, students are educated with their non-disabled peers by a general education teacher who collaborates with the special education teacher to ensure that the student with disabilities receives access to the general education curriculum (OAR, 2023).

**General Education Teacher:** The general education teacher is an educator not a special education teacher, whereas they educate all students in the general education classroom using a core academic curriculum. As it relates to students with disabilities, the role requires them to be a content expert, member of the IEP team, well-informed about the IEP, monitor student progress, implement the specially designed instruction, and collaborate with special education teachers and related service staff (PATTAN, 2020).

**Inclusion:** As defined by Buli-Holmberg & Jeyaprathaba (2016), inclusive education supports the idea that all students in schools, no matter their strengths or weaknesses in any specific area, become an integral part of the school community joined with their non-disabled peers as much as possible.
**Individualized Education Plan (IEP):** A formal, written document designed for every child diagnosed with a disability and possessing unique learning requirements. This comprehensive document includes essential details about the child's background, abilities, educational needs, and necessary accommodations, and specific goals and objectives to be attained. An interdisciplinary team of specialists collaboratively creates, develops, and annually reviews this document to oversee the child's educational progress (Francisco et al., 2020). The Individualized Education Program (IEP) must encompass an assessment of the child's current academic accomplishments and functional capabilities, considering the impact of the child's disability on their participation and advancement within the general education curriculum or for preschool-aged children, as applicable (Individuals with Disabilities Education Act 2004, 20 U.S.C. §300.22).

**Individuals with Disabilities Education Act (IDEA):** The Individuals with Disabilities Education Act (IDEA) is a legal framework designed to guarantee that eligible children with disabilities are provided with a Free and Appropriate Public Education (FAPE), along with necessary related services. Furthermore, IDEA specifies how states and agencies deliver services to children from birth through age two via early interventions and from ages three through 21 through special education services (Individuals with Disabilities Education Act, 2022).

**Least Restrictive Environment (LRE):** Educating students with disabilities to the maximum extent possible with children who are not disabled, and only providing special classes, schooling, or changes of environment when the nature of the disability is severe and the receiving of supplementary aids and services do not produce satisfactory achievements (Bemiller, 2019).
**Professional Development:** Teacher training for general or special education teachers delivered by educational leaders who have completed the required training from a college or university (Finch et al., 2013).

**Self-Efficacy:** A person’s belief in their capability to perform or produce outcomes that impact their lives. These beliefs impact cognitive, motivational, affective, and selection processes (Bandura, 1994).

**Special Education:** Instruction designed to support the learning needs of students with disabilities in classrooms, homes, or hospitals at no cost. It is created with teaching expertise formulated specifically for students with disabilities (Francisco et al., 2020).

**Special Education Teacher:** Special education teachers educate students facing a range of challenges, which encompass learning, mental, emotional, or physical disabilities. They customize mainstream educational materials and provide instruction across multiple subjects for individuals with mild to moderate disabilities. Additionally, they impart fundamental skills to those with more profound disabilities (U.S. Bureau of Labor Statistics, 2023).

**Teacher Preparation Program:** Teacher preparation programs serve as the entry point into the teaching profession, equipping aspiring educators with the knowledge, skills, and competencies required to instruct the nation’s diverse student body effectively. Teacher preparation programs can be offered by an institution of higher education or another organization that offers at least one state-approved teacher preparation program (Department of Education, 2021).

**Limitations to the Study**

Researchers are obligated to the academic community to provide a thorough and truthful account of the limitations of their study (Ross & Zaidi, 2019). One of the initial limitations is around participants. The sample size of teachers might be smaller due to:
• The sample is small only yielding results from 51 educators.

• Sampling bias: The study will represent educators from one state and only include teachers with PA certifications. This study does not allow educators from other states to share perspectives on addressing teacher preparedness concerns.

• Teachers might not want to participate in the second part of the study, the optional Zoom interview, which supports the Qualitative portion of the study.

• General education teachers were only represented from kindergarten through 8th grade. To obtain information from educators who work in elementary/middle schools solely, high school teachers' perceptions were not a part of the sample for this study.

• Selection bias, because the participants are only from one grade span within one state, having that state’s certification. The findings do not represent samples from other states and grade spans.

Reliability & Validity

In the context of mixed methods research, Creswell & Clark (2018) define validity as using strategies to mitigate potential threats that may affect the accuracy of drawing correct inferences and assessments from integrated data. Internal validity is measured in this research study through member checking. If it is found that the findings are invalid, the information will be rechecked to reflect the information shared by the participants. The goal is to ensure that the presented conclusions from the qualitative interviews are reported as initially intended. If the information shared by the participant was what was originally intended, then it is trusted to be valid as it produces the same results. Reliability will be measured in the clarity of the procedures, from accruing the sample to analyzing the results.
**Reliability**

To ensure reliability, all teachers were from the same grade span of K-8. All teachers were given the same quantitative survey questionnaire with the same qualitative 1:1 interview option via Zoom. The only option is that participants can elaborate on the universal questions asked in the interview. The survey could be too long, and people might rush through without thinking about their answers. (There is a percentage completion marker on the screen to let them know how much time they have left to finish the survey and to speed up the time; a drop-down will be added when applicable.) Zoom interviews are recorded and saved in case there is a question of reliability, which allows for being reanalyzed based on the recording.

**Validity**

Triangulation will be a validity measure through surveys, interviews, and member checking. According to Williamson and Johanson (2017), triangulation in research supports using multiple methods and constructs, which offers the study breadth and depth. Self-reporting could pose an issue with internal validity due to participants potentially answering in ways that they feel might be expected due to the research topic but not a true reflection of their lived experiences.

**Bias**

As a parent of a young adult with autism and a former general and special education teacher, I've worked to ensure my personal biases about autism don't affect the study. I've avoided making broad assumptions about participants, recognizing that not all general education teachers struggle with including students with autism. The study's statements relied on research rather than my own experiences.
During optional interviews, questions encourage participants to share experiences and suggestions rather than assuming their perspectives. Additionally, in my role collaborating on professional development with school teams, I avoided discussing topics or experiences that could sway participants' responses. However, despite these efforts, unintended personal bias may still be present.

**Positionality**

With more than twenty years of experience as an educator and a parent of a child with autism, I've encountered the challenges that general education teachers, special education teachers, and leaders face when planning professional development and training around autism topics. My career in public education began as a general education teacher charged with the inclusion of students with disabilities, often relying on support from the special education team. I frequently felt frustrated due to my lack of knowledge and skills in effectively teaching students with disabilities, especially autism, which presented unique challenges related to behavioral needs and social concerns. As a parent, I often questioned whether my own son received support from a teacher like me, who had limited knowledge of how to assist him effectively in a general education classroom.

My experience as a general education teacher was far from unique, as many of us graduated from college ill-prepared to support the diverse students we would encounter in inclusive classrooms. In line with Al Jaffal's findings (2022), the deficits in effectively teaching students with autism can be traced back to the shortcomings of my initial teacher education program. Unfortunately, these limitations persisted throughout my time in public education, as I never received the necessary professional development to enhance my teaching skills. Recognizing the need for more education to support the vulnerable populations I was responsible for teaching, I decided to pursue a secondary degree in special education with a specific focus on autism.
My journey in special education continued for several years until I assumed the role of a coordinator at a charter school, which expanded my scope from exclusively special education to supporting general education teachers. In this capacity, I witnessed firsthand the ongoing challenges that general education teachers faced. They were certified for their roles but still felt unprepared. I started providing support to address this through teacher coaching, professional development, and mandatory collaboration meetings. I found that educators who had students with autism faced the most difficulties.

A positive shift in the confidence and abilities of general education teachers became evident after they received this support, solidifying my passion for this work. Equipping teachers with the skills to educate all their students should be a fundamental aspect of both pre-service programs and in-service professional development. Whether we begin with teacher preparation programs or view them through the lens of in-service professional development, there is an undeniable need to ensure that general education teachers feel empowered and competent in teaching students with disabilities.

Through my research, I aim to engage with K-8 general education teachers, listening to their stories and reflections on teaching students with autism. My goal is to give them a voice so their experiences and perspectives are valued, thereby generating recommendations for universities and professional development programs to instigate necessary changes for current and future educators, ultimately advancing the progress of students with autism.

Summary

Ensuring equitable learning opportunities should not be a struggle for students with disabilities; regrettably, students with autism frequently encounter these obstacles in the general education classroom (Blackwell et al., 2017). As students with autism are increasingly identified
and included in mainstream settings, it's essential for teacher training programs and professional
development efforts to address both the barriers and successes experienced by educators. We can
only grasp educators' needs by attentively listening to their lived experiences and
recommendations for fostering preparedness and creating opportunities.
Chapter 2: A Review of the Literature

The population of children identified with autism spectrum disorder (ASD) is experiencing a rapid increase. According to the CDC (2023), the new findings indicate that 1 in 36 8-year-olds are affected, a rise from the previous estimate in 2018, which was 1 in 44 children. In the past, institutions were responsible for educating the autistic population (Neumeier & Brown, 2020). Yet, with the rising number of identifications and the legal obligations surrounding disability rights, there has been a notable surge in considering children for special education supports and being educated within the general education classroom (History of Inclusion, 2023). These findings indicate that students with autism are becoming more commonplace in mainstream schools, and teachers can reasonably anticipate having one or more of these students in their classes each year.

In accordance with the mandates regarding the Least Restrictive Environment (LRE) for students with disabilities, school teams must contemplate the general education classroom as a viable option. Once placed in the general education setting, educators must guarantee equal access to the curriculum and foster inclusive practices (Bolourian et al., 2021).

Moreover, research emphasizing the academic and social benefits of including autistic students has resulted in many students receiving their education in general education settings. However, barriers for educators persist despite these advancements. Some of the numerous advantages of inclusion have been diminishing the stigma associated with autism, fostering respectful relationships among all students, teaching positive interpersonal behaviors, and enhancing understanding of autism (Beghin, 2021). Even with the benefits of inclusion being the focus, inclusionary practices in these environments require more professional development and training (Kossewska et al., 2022). Inclusion represents the least restrictive environment, and the
lack of teacher preparation continues to challenge educators as they strive to support students with autism. As defined by the American Psychiatric Association in 2013, prominent traits associated with autism include varying levels of social communication challenges and repetitive patterns of behaviors or interests. These behaviors can also create difficulties for educators in inclusive classroom settings.

The study's purpose is to better understand the needs and experiences of general education teachers including students with autism in their classrooms. The literature explains historical development of Autism, DSM-V and IDEA criteria, inclusion, and disability rights. The review assesses teacher preparation programs, the necessary knowledge for teaching students with ASD, and the perspectives of general education teachers regarding their experiences with students on the autism spectrum. Furthermore, the literature will inform suggestions for higher education and K-8 school programming, offering insights into the essential steps administrations must take for future inclusion preparation.

**Autism History**

The evolution of autism begins with the influential observations made by Leo Kanner in 1943. Kanner shared findings from 11 children, eight boys, and three girls, who seemed to have had the same conditions since the infant stages. He outlined two fundamental characteristics: (1) autism, denoting severe challenges in social interaction and connectivity right from the start of life, and (2) resistance to change or insistence on sameness (Kanner, 1943; Rosen et al., 2021). Additionally, according to Da Silva (2023), Kanner noted that these children all shared the same stoic behaviors with additional features of extreme solitude and regression of learned skills previously associated with intellectual disabilities. These were symptoms of early childhood autism due to their age.
During that time, the medical field and schools struggled to find the onset or cause of autism, which limited individuals' ability to provide treatment or assistance for families. Psychiatrists felt that non-emotionally connected families were the cause of the disorder in children, which coined the refrigerator mother hypothesis (Da Silva, 2023). At that time, parents were deemed the cause of their child's disorder due to perceived poor parenting (Bettelheim, 1967). This hypothesis made parents feel guilty about their child's condition, which caused controversy and shame for families.

Due to the barriers families faced in supporting their children, they felt the only viable option was institutionalization for what they hoped would offer a better life. However, according to Biklen (1973), the state institutions were seclusive, and children seemed to be cast out into the woods, away from the public's eye. Kanner later felt that the children's behaviors and inability to embrace emotion from caregivers were partly due to their preference for being alone coupled with their limited social awareness (Crowell et al., 2019).

The initial observations and perceptions of what science believed about autism have evolved. While some aspects echo Kanner's original insights, we now understand the significance, prevalence, and developmental nature of co-occurring disorders and the core features of social communication deficits and repetitive/restrictive/sensory behaviors (Rosen et al., 2021). Kanner’s contributions and others in medicine have provided the initial platforms for defining parameters around autism.

**Autism Defined**

Autism has evolved into a streamlined meaning known as autism spectrum disorder (ASD), which creates an umbrella of previously disjointed disorders (APA, 2017). According to Joon et al. (2021), the categories represented under ASD were Autistic Disorder, Pervasive
Developmental Disorder Not Otherwise Specified (PDD-NOS), and Asperger's disorder. Characteristics of ASD are persistent impairments in reciprocal social communication and social interactions and restricted, repetitive patterns of behavior, interests, or activities. ASD prevalence in children has increased, risk factor understanding has expanded, awareness of concurrent medical conditions and genetic contributions has deepened, and the body of research supporting evidence-based interventions has significantly grown (Hyman et al., 2020). The progress made within the medical community regarding symptoms and support of those with ASD is undeniable. It has become more commonly diagnosed due to the continued contributions from the health and educational field. The scientific and educational community is actively increasing awareness of prevalence, diagnoses, and risk factors while developing interventions.

**Clinical Definition/DSM-5**

The medical field has consistently strived to establish and enhance the diagnostic criteria for autism spectrum disorder (ASD, making the findings more reliable. To increase the specificity of ASD diagnosis, the most recent edition of the Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5), underwent revisions. The DSM-5 serves as a comprehensive guidebook for mental health and brain-related conditions. According to the APA (2013), the DSM-5 initiated a significant transformation in the understanding of Autism, transitioning from a multi-categorical diagnostic system to a unified diagnosis encompassing multiple dimensions.

According to the DSM-5 (2013), autism spectrum disorder is identified by enduring difficulties in social communication and interaction, coupled with restricted and repetitive behaviors, activities, or interests, which may encompass sensory behaviors. These traits typically manifest in early childhood and have a significant impact on daily functioning. The medical
evaluation process for ASD commences with screening to identify children at risk and displaying signs suggesting potential ASD. A diagnostic evaluation is recommended when the initial screening criteria are met (Hodges et al., 2020).

The DSM-4 diagnostic subcategories, including autistic disorder, Asperger's disorder, pervasive developmental disorder not otherwise specified (PDD-NOS), Rett's disorder, and childhood disintegrative disorder, used to be categorized under Pervasive Developmental Disorders (PDDs). However, according to the DSM-5, individuals with a well-established DSM-IV diagnosis of autistic disorder, Asperger's disorder, or pervasive developmental disorder not otherwise specified now receive a diagnosis of ASD. The DSM-5 (2013) employs two consolidated categories for meeting criteria for autism spectrum disorder (ASD) and determining its severity levels:

1. Persistent deficits in social communication/interaction (All three criteria must be met):
   - Challenges in social-emotional reciprocity, including difficulties in initiating contact, engaging in two-way conversations, sharing common interests, and expressing/comprehending emotions effectively.
   - Problems in nonverbal communication for social interactions, involving atypical eye contact, body language, and struggles with nonverbal cues like facial expressions and gestures.
   - Deficiencies in forming and sustaining relationships with individuals beyond caregivers, such as a lack of interest in others, difficulties in adapting to social situations, and hurdles in engaging in imaginative play and cooperation with peers.
2. Restricted, repetitive patterns of behavior (Must additionally meet at least two of the following four restricted behaviors/repetitive behaviors):

- Repetitive speech patterns, recurring motor actions, echolalia (repetition of words or phrases), and persistent use of objects or peculiar phrases.
- Inflexible adherence to established routines, ritualistic behaviors, and intense resistance to alterations, even minor deviations.
- Minimal interests, characterized by an unusual depth of focus or obsession with specific subjects.
- Heightened or reduced responsiveness to sensory stimuli and unusual fascination with sensory aspects of the surroundings, such as a lack of reaction to pain or aversion to specific sounds.

This approach offers a structured framework for comprehending emotional and behavioral problems in young individuals, enabling the formulation and guidance of treatment strategies. DSM-5's intensified developmental emphasis assists child and adolescent psychiatrists in prioritizing diagnostic criteria while considering developmental and contextual details for a holistic assessment (Moran, 2014). The adoption of the updated DSM-V criteria for diagnosis is projected to impact the prevalence of ASD, leading to an increased identification of individuals in need of support (Hodges et al., 2020).

**Educational Definition/Criteria (IDEA)**

Clinical professionals generally make ASD diagnoses by applying the criteria set forth by the American Psychiatric Association, which currently rely on the DSM-V. Conversely, educational assessments tend to be more closely tied to federal special education regulations aimed at addressing school-related concerns (Safer-Lichtenstein & McIntyre, 2020).
Before 1990, psychiatric diagnosis was the exclusive means for children to be categorized with autism. Nevertheless, following the reauthorization of the Education for All Handicapped Children Act (EHA) as the Individuals with Disabilities Education Act (IDEA), children became eligible for autism-related special education assistance upon meeting specific qualification criteria through a school-based assessment.

According to IDEA 2004, autism is a developmental disability significantly impairing communication and social interaction and often involving repetitive behaviors, resistance to change, and unusual sensory responses. It becomes apparent before age three and adversely affects a child's educational performance [IDEA, § 300.8 (c)]. If a child's educational performance is primarily affected by an emotional disturbance, they would not be classified as having autism. However, a child displaying autism characteristics after age three can be identified as having autism if they meet the outlined criteria.

**Medical versus Special Education**

Currently, Children with ASD receive their identification either in a medical/clinical setting or as part of the process to determine their eligibility for special education services in school (Safer-Lichtenstein & McIntyre, 2020). Over the past two decades, there has been a notable 150% increase in identifying children with ASD; this surge is evident in both clinical and educational environments. This increase is apparent not only in the general population through medical diagnoses but also within schools, where more students are becoming eligible for special education services under the autism classification (Safer-Lichtenstein & McIntyre, 2020).

Although both DSM-5 and school-aged evaluation processes, as outlined above, have divergent criteria, each method is often used in school and medical settings, leading to the identification of children with Autism. Not all children diagnosed with ASD in clinical settings
face obstacles to school success; some students may not display externalizing behaviors, experience academic deficits, or struggle to establish and maintain appropriate relationships (Barnard-Brak, 2019).

To examine the differences between ASD severity, adaptive functioning, and challenging behaviors between those who received medical diagnosis versus those who received an identification from the school level, Safer-Lichtenstein & McIntyre (2020) conducted a study that included 73 school-aged children with ASD who met criteria without a medical diagnosis. The recruitment was done in two waves, with 38 participants sampled after being referred for showing symptoms of ASD, and the other 35 met ASD eligibility. The findings revealed that children who received their ASD classification through a medical diagnosis had more symptomatic severity than those who received an educational classification. These findings supported the thought that schools only classify a sample of children missed by the medical community. Under the provisions of the Individuals with Disabilities Education Act (IDEA), outlined in federal special education laws, students with an autism diagnosis become eligible for specialized instruction and supplementary educational support and services when their needs align with the federal definition of ASD after receiving a formal evaluation by a school psychologist (Safer-Lichtenstein & McIntyre, 2020).

Although educational and medical standards support eligibility decisions, there is discourse around autism identification and the best methods to support those affected. Medical treatment for ASD involves therapeutic interventions such as behavior, speech, and occupational therapy, counseling, and medication options to address ASD-related symptoms (Weber, 2016). In contrast, the educational field concentrates exclusively on academic and functional skills that align with state standards. Both medical and school diagnoses of autism are continually working
to provide identification procedures for people with Autism, which will impact both the early intervention process and the clinical field.

*Typical Behaviors Associated with ASD in an Educational Setting*

People with ASD often encounter barriers to social interactions, display repetitive behaviors, and may have unique learning and attention patterns (CDC, 2023). The extensive variability seen in ASD can be traced back to its consolidation of ranges of disorders that were previously individually listed within the DSM-IV (Rosen et al., 2021). These distinct categories are now under the ASD umbrella, and the behaviors associated with each disorder are still present. As outlined by the CDC, and categorized in the DSM-5 (2013), the two pathways under which many experience autism are social communication and interaction and restricted or repetitive behaviors or interests, and examples are outlined below:

Examples of Social Communication and Interaction Abilities

- Avoids or does not keep eye contact
- Does not respond to name by nine months of age
- Does not show facial expressions like happy, sad, angry, and surprised by nine months of age
- Do not play simple interactive games like pat-a-cake by 12 months of age
- Uses few or no gestures by 12 months of age (for example, does not wave goodbye)
- Does not share interests with others by 15 months of age (for example, shows you an object that they like)
- Does not point to show you something interesting by 18 months of age
- Does not notice when others are hurt or upset by 24 months of age
- Overlooks other children and does not join them in play by 36 months of age
• Does not pretend to be something else, like a teacher or superhero, during play by 48 months of age
• Does not sing, dance, or act for you by 60 months of age

Restricted or Repetitive Behaviors or Interests:
• Lines up toys or other objects and gets upset when the order is changed
• Repeats words or phrases over and over (called echolalia)
• Plays with toys the same way every time
• Is focused on parts of objects (for example, wheels)
• Gets upset by minor changes
• Has obsessive interests
• Must follow certain routines
• Flaps hands, rocks body, or spins self in circles
• Has unusual reactions to the way things sound, smell, taste, look, or feel (CDC, 2023, Signs and Symptoms section, para. 2)

Additionally, some of the other behaviors exhibited by children with autism stem from anxiety, which is a common experience (Lau et al., 2019). When teachers are not able to support students with autism and other disabilities, they become punitive about the behaviors and treat manifestations of disabilities as behavior concerns rather than opportunities for instruction (Smith, 2020).

In addition to the abovementioned behaviors and characteristics, some individuals with ASD have heightened levels of intelligence in which they need support. As mentioned by Katusic et al.(2021), ASD can exhibit a range of presentations influenced by the child's cognitive abilities, as well as the degree of social communication deficits and the severity of restricted,
repetitive behaviors. It is essential to consider the intelligence level of autistic individuals when providing support. Many autistic individuals achieve scores within the average to above-average range. Compared to the general population, more autistic individuals fall into the gifted category, with IQ scores exceeding 140 (Embrace Autism, 2023). The unique needs of students with autism must be planned for them to succeed in the general education classroom.

**Before Disability Rights**

Before the formation of the Education for All Handicapped Children (PL94-142, 1975) and Individuals with Disabilities Education Act (IDEA, 1990; 1997; 2004) disabled children were excluded from opportunities to learn with non-disabled peers. Prior to 1975, U.S. schools only provided education to 1 in 5 children with disabilities, and some states had laws against educating children who were deaf, blind, emotionally disturbed, or had an intellectual disability; there were approximately 1.5 million students who were excluded from public schools (Burns & Dudley-Marling, 2014). Consequently, numerous children and adults with disabilities were placed in state institutions where they received accommodation without undergoing comprehensive assessment or proper education (Scott et al., 2015). The institutionalization of people with disabilities was initially put in place for people with similar needs to cohabitate and learn together but quickly turned to isolation from society (Francisco et al., 2020). Instead of being considered for an opportunity to learn with non-disabled peers, students with autism were isolated and only had the chance to be educated in settings with children like themselves in institutions because they were deemed uneducable or "too disabled" (Haegele et al., 2020; Wehmeyer, 2022).

As more and more light was shined on educational programming by families, advocates, and lawmakers, the push for students to experience a more equitably inclusive environment
began to pick up more steam. From the 1950s through the 1970s, on the brink of the Civil Rights movement, families and advocacy groups took charge of the educational rights of those with disabilities. They questioned the legality of excluding students with disabilities. In 1954, the Supreme Court case Brown v. The Board of Education determined that "separate but equal" was illegal and had to be reevaluated when considering the education of people with disabilities (Brown v. The Board of Education, 1954).

Once children with disabilities were allowed into general education classes, the advocacy for appropriate education continued to be pushed to the forefront. In 1971, the case Pennsylvania Association for Retarded Children (PARC) paved the way for free public education to include those considered to be "mentally retarded," as well as introducing the Least Restrictive Environment for children with disabilities (Public Interest Law Center, 1971). Without considering the general education classroom when planning for student programming, children with disabilities would continue to be excluded from educational opportunities with non-disabled peers.

**Individuals with Disabilities Education Act (IDEA)**

The push for equality in free education progressed forward with the Education for All Handicapped Children in 1975 (Public Law 94-142), which was soon named the Individuals with Disabilities Education Act (IDEA); this mandate brought about the Individualized Education Plan (IEP) process and planning for students in their Least Restrictive Environment (Burns & Dudley-Marling, 2014). IDEA was crafted to improve efforts in identifying students with disabilities, providing them with appropriate education, evaluating the effectiveness of these initiatives, ensuring due process protection for children and their families, and allocating financial resources for these programs and services (Scott et al., 2015). Given the push for
inclusion and parameters around the identification of students with disabilities, there has been a consistent rise in the number of students receiving services under IDEA.

The amount of children between the ages of 3-21 that were IDEA eligible has been steadily increasing; during the 2010-2011 school year, there were 6.4 million students classified with disabilities, and when looking at the data from 2021-2022, the number increased to 7.3 million eligible students with an only a one percent drop during the pandemic due to school closures (National Center for Education Statistics, 2023). Additionally, IDEA ensures that eligible children with disabilities receive a Free and Appropriate Public Education (FAPE) with related services as needed; additionally, it outlines how states and agencies provide services to children from birth through two with early interventions and ages three through 21 with special education services (IDEA, 2004). To support efforts around the placement of students with disabilities in inclusive settings, IDEA, 20 U.S.C. § 1462(a) (2004) outlines the Least Restrictive Environment (LRE), which requires that whenever possible, children with disabilities, whether they are in public or private institutions or other care facilities, should be educated alongside their non-disabled peers. The placement of children with disabilities in special classes, separate schools, or removal from the regular educational environment should only happen when the nature or severity of the child's disability is such that they cannot satisfactorily achieve their educational goals in regular classes, even with the provision of supplementary aids and services.

With the strides made by the EHA and IDEA, before 1990, children with Autism were not represented when discussing FAPE because it was not seen as a specific disability (Smith et al., 2020). To ensure that IDEA remained intuitive to the needs of children with disabilities and their families, several amendments were made since its initial inception in 1975. Autism and
traumatic brain injury were added to the disability categories that received services under IDEA (Yell et al., 2017). These updates to the law are vital for the autistic community primarily because it was not until the reauthorization of IDEA in 1990 that children with ASD could be deemed eligible to receive services. Before the reauthorization, some children were offered support intended for the intellectually disabled or emotionally disturbed (Smith et al., 2020). The recent amendments called for not only the advancement of disability laws but also parameters around what teacher preparation and the school-age programming process should look like for states.

Inclusion

Inclusive education promotes the concept that all students in schools, regardless of their strengths or weaknesses in any area, should be an integral part of the school community and should interact with their non-disabled peers as much as possible (Buli-Holmberg & Jeyaprathaba, 2016). While the inclusion of students with ASD is a fundamental right, some individuals find it challenging to grasp their role in this process. Inclusion of students with ASD is a joint effort involving teachers, teacher assistants, administrators, consultants, and parents, all working together for success (NASET, 2018). Research that emphasizes the academic and social benefits of inclusion has significantly influenced education policies, leading to the inclusion of numerous students with autism in mainstream educational environments (Bolourian et al., 2021).

There has been a consistent increase in the enrollment of students with autism who receive services under IDEA and spend 80% or more of their school day in general education classrooms. Data from the U.S. Department of Education reveals that in 2000, 18% of students with autism spent 80% or more of their day in general education classrooms. By 2010, this figure
had increased to 39%, and this trend is anticipated to continue to grow (NSBA, 2019). Currently, when reviewing the data for the Fall of 2021, in the United States, 95% of students with disabilities were accommodated in mainstream educational settings (National Center for Educational Statistics, 2023). Among these students, 67% spent a minimum of 80% of their school day in general education classrooms. The movement toward increased inclusivity in education is driven by a federal mandate that requires providing education for students with disabilities in the least restrictive environments, reflecting a nationwide trend (Frake et al., 2023).

Schools are increasingly placing students with autism in inclusive settings; however, simply having students with autism alongside their non-disabled peers is insufficient to address the needs and social challenges experienced by students with autism (Silveira-Zaldivar & Curtis, 2019). Many government policies concerning students with disabilities have made inclusive education a cornerstone. General education teachers now play a crucial role in establishing inclusive environments conducive to the success of all students and the delivery of equitable education (Bolourian et al., 2021). However, a significant obstacle general education teachers face is their unpreparedness to meet the mandates imposed on them, stemming from a deficiency in their preparation coursework (Mitchell, 2021). Frake et al. (2023) investigated inclusive educational opportunities for autistic students through interviews with 54 educators and 14 parents (including five service providers). They identified a prevailing theme: autistic students must prove their suitability for general education classes. The study emphasized the importance of fostering educator readiness through professional development and paraprofessional support. These findings underscore the urgent need for teacher education programs to address implicit biases against integrating autistic students into general education settings.
Concerning the inclusion of individuals with autism, the lack of readiness among general educators has not solely impacted the teachers but has also had consequences for the students. Holmes (2022) conducted a phenomenological study with six autistic students to explore their experiences regarding teacher awareness and preparation in inclusive settings. The findings revealed that all six students felt socially isolated from their peers and educators due to a lack of understanding about autism, affecting their overall acceptance. One highly effective method for teachers to prepare for the inclusion of a student with ASD is to acquire precise information about the disorder. Access to accurate information promotes comprehension and cultivates a positive attitude toward the task of including a student with ASD (NASET, 2018).

**Individualized Education Program**

As the public became more aware of autism, an increasing number of families sought more significant amounts of screenings, assessments, evaluations, and services, which resulted in an influx of children receiving services under the disability category of autism (Whitby et al., 2022; Al Jaffal, 2022). According to IDEA 2004, § 300.324 (a), an Individualized Education Program (IEP) as a written plan for providing education services to eligible students with disabilities or gifted students who need specially designed instruction to progress under one of the 13 categories. The individuals responsible for providing input for creating the individualized program are called the IEP team. To create an IEP, specific individuals should be at the meeting to provide input; the team must have parents/legal guardians, the student if applicable, general education teacher(s), special education teacher(s), a Local Education Agency (LEA) representative, and related services providers if applicable.

In the past decade, the number of students classified with autism under IDEA has seen a twofold increase (U.S. Department of Education, Office of Special Education Programs, 2021).
Given the needs to be addressed for children with autism, IEPs include goals to address social and communication challenges and academics, ensuring that the school team is aware of the skills needed for real-world success (Applied Behavior Analysis Programs Guide, 2022). When writing the IEP, team members must consider the child's strengths, parent/guardian concerns, initial or recent evaluation results, and academic and functional needs when planning for the student's success.

IDEA requires schools to provide FAPE for children with disabilities, but legal issues can arise if the IEP does not set meaningful goals for student progress, and when students are not receiving education that would provide progress, legal concerns arise. In the 2017 Supreme Court case Endrew F. v. Douglas County School District RE-1 (United States Department of Education, 2017), the parents of a boy with autism argued that his IEP did not support his annual progress or educational benefit. The school claimed he only needed minimal benefit, but the Supreme Court unanimously ruled that IDEA supports grade-level advancement for children in general education (United States Department of Education, 2017). The ruling in favor of the family came in 2018 from the idea that the child was not provided with an appropriate education for him to make progress in the school setting. The Supreme Court findings in Endrew may encourage government officials and professional organizations to prioritize enhanced instruction and evidence of progress for students with disabilities while de-emphasizing placement as the sole indicator of specialized education (Kauffman et al., 2022).

When a student is placed in a general education setting, it is essential to ensure that they are making advancements in the specific areas where they have deficits. Historically, decisions regarding the placement of students with severe disabilities have frequently been influenced less by their individualized learning requirements and more by prevailing beliefs and assumptions.
about how students learn, rigid school district policies that limit program delivery choices, and other factors unrelated to the specific needs of the students (Agran et al., 2019). The IEP team should consider placement decisions to ensure they are in accordance with the Least Restrictive Environment (LRE) requirements stipulated by IDEA, aiming to optimize the students' opportunities for advancement (OSERS, 2023). Historically, planning for the educational placement of students with autism in general education settings has been a significant concern. Placement choices decided by the team commonly encompass inclusion in mainstream classrooms, self-contained classrooms within regular schools, or specialized educational institutions, such as those designed for students with autism (Gindi, 2019). No matter where the student is positioned following the IEP meeting, it is crucial that those responsible for meeting the agreed-upon needs of the students are well-prepared to facilitate the student’s development.

**Teacher Preparation**

Legally, IDEA (2004) mandates that educators must consistently enhance their skills through professional development and possess initial skills from their teacher preparation programs to support students with disabilities categorized under IDEA 2004, 20 U.S.C. § 1462(a). However, general education teachers still feel unprepared to educate students with disabilities, including autism, effectively. According to Mitchell (2021), approximately 1 in 5 general education teachers report feeling adequately prepared to instruct students with disabilities. The need for educators to be prepared for students with disabilities has been around for years; however, the continued barriers that educators face shows that it currently still exists.

**History of Teacher Preparation**

Although students with disabilities began entering traditional school settings, the 1950s and 1960s laid the foundation for teacher preparation. The History of IDEA (2022) gives an
overview of the teachers' training that prepared educators for the influx of children with
disabilities entering classrooms. The Training of Professional Personnel Act of 1959 (Public Law
86-158) trained leaders to support children with mental retardation, which in 2017 was replaced
with intellectual disability. In 1961, The Teachers of the Deaf Act (Public Law 87-276) trained
instructional personnel with techniques to support children who were deaf or hard of hearing. In
1963, the Mental Retardation Facilities and Community Mental Health Centers Act (Public Law
88-164) was an expansion that provided training programs to help individuals support all
disability categories. Although teacher preparation throughout the years has advanced, it
continues to need further enhancements to prepare educators for what students need while in a
general education setting.

**Pre-Service Teacher Preparation Programming**

The role of the general education teacher has gained critical importance in establishing
inclusive environments where all students can thrive and receive equitable education (Bolourian
et al., 2021). The increasing placement of students with autism in general education settings
explicitly demands that general education teachers have the necessary knowledge to provide the
support outlined in the student's IEP. The inclusive education framework, coupled with the rising
number of autism diagnoses, poses a significant and complex challenge for prospective teachers
(Sanz-Cervera et al., 2017). This necessitates them acquiring qualifications required for
effectively educating all children during pre-service teacher programming (Sanz-Cervera et al.,
2017). The continued barriers educators face is being traced back to the pre-service level and not
carried through while at the schools where they are employed.

As outlined in Section 1462 (a) (2), IDEA's mandate around teacher preparation is to
ensure that general education teachers have the necessary skills and knowledge to provide
instruction in the general education classroom, skillsets surrounding scientifically based research and practices as well as coursework to support students with disabilities.

Studies have examined pre-service teachers' perspectives about their preparation to teach children with disabilities and found that many felt failed by their programs due to their inability to support students with disabilities post-graduation (Al Jaffal, 2022; Devi & Ganguly, 2022; Litton et al., 2017; Sanz-Cervera et al., 2017). In a 2017 quantitative study, Blackwell et al. examined 87 general education teacher candidates from three preparation programs. They assessed the candidates' existing knowledge of ASD and its sources. This investigation aimed to inform the design of more efficacious teacher preparation courses. The results found that in-service teachers reported that the coursework in their preparation programs was insufficient in that it did not prepare them to educate the rising population of students with disabilities, specifically those with autism, due to it lacking effective intervention strategies and opportunities for teacher candidates to work closely with students with ASD.

Pre-service teacher training profoundly influences their in-service teaching (Lauderdale-Litten & Brennan, 2018). Limited special education courses in general education programs lead to insufficient ASD training for many teachers (Al Jaffal, 2022). Restricting the curriculum to a few disability courses limits the skills available to teachers once they get into their classrooms. Pennsylvania's K-12 teacher preparation framework requires teacher programs to prepare educators for inclusive instruction and support for English language learners (Dept. of Ed., 2012). In accordance with 22 Pa. Code § 49.13(4)(i), Pennsylvania mandates at least nine credits for accommodations and adaptations for students with disabilities, plus three credits for English Language Learners (Pa Dept. of Education, 2012). Additionally, Pennsylvania does not propose
specifics on coursework or methods. Instead, it outlines competency areas, such as disability types, cognitive skill development, assessments, and literacy.

There is no mention of ASD training in the base general education program. However, Pennsylvania offers the Autism Endorsement Certification for specialized training after completing at least PA level 1 certification in education topics (Dept. of Ed., 2016). This endorsement enhances skills for educators serving students with pervasive developmental disorders on the autism spectrum. Although progress is being made there is continued research around the needs that general education teachers have when teaching students with ASD based on their limited coursework (Devi & Ganguly, 2022; Jellinek et al., 2022).

Smith (2020) suggests that teacher preparation programs should revamp their curriculum to address the evolving educational requirements of students with disabilities. They should also integrate the unique needs of students with disabilities, considering factors like race, gender, class, and identity. Additionally, Smith recommends incorporating mandatory teacher training linked to fieldwork experience to provide exposure and comprehension of IEPs. While mandates were being passed to support LRE, newer and more inclusive teacher preparation was simultaneously formed.

The growing prevalence of ASD among students poses challenges for our educational system. While general classroom teachers are becoming more aware of effective strategies, there remains a need for ongoing professional development to address the needs of these students adequately (Murray, 2015), as well as additional staff support from other team members to allow them to fully implement inclusion (Bemiller, 2019). General education teachers are vital for inclusive education success, yet research shows they lack the knowledge and confidence to effectively teach students with autism based on limited professional development (Bolourian et
al., 2021; Van Der Steen et al., 2020). When teachers come into the field unprepared, it is left up to their places of employment to find a way to fill in the gaps (Park et al., 2021).

**In-service Teacher Preparation**

The mandates of LRE and the charge to differentiate and accommodate students with disabilities are high for general education teachers; however, when unprepared, it leaves schools, educators, and students at a disadvantage. While many educators practice differentiation in their settings, it is imperative to continue these practices when including students with autism to support their academic growth (Beghin, 2021). The barriers to differentiation and other educational practices stem from the professional development needs outlined by general education teachers.

To identify general education teacher professional development needs for the inclusive practice of students with autism, Bolourian et al.’s (2021) mixed-methods study, implemented a focus group that included 18 general education teachers with an average of 14.9 years of teaching experience. Five of these teachers had prior professional training in autism. The study's objective was to identify areas in which teachers required professional development regarding autism. The study's findings revealed that three-quarters of the participants stressed the urgent need for autism-specific training, mainly due to the absence of adequate professional development. Additionally, the research indicated that teachers were in need of professional development in several areas, including methods for teaching students with autism, recognizing student strengths, implementing evidence-based behavior strategies, proactive approaches for inclusion, building parent-teacher relationships, and training to enhance active listening skills.

If teachers lack proper training, they deprive children with disabilities of educational equity, defeating the initial purpose of inclusion (Bemiller, 2019). In agreement with Bolourian
et al.'s (2021) findings, Able et al. (2015) conducted a focus group with 27 general educators. They emphasized not only a deficit in professional development on autism topics but also the necessity for evidence-based practices, support for collaboration with families, and meeting students' diverse needs in their classrooms. Beyond these professional development needs, research has found that general educators stressed the importance of fostering collaboration between general and special educators (Able et al., 2014; Al Jaffal, 2022; Allday et al., 2013; Van Der Steen et al., 2020).

An additional layer of professional development comes from educators needing to implement the IEP and the strategies for the success that it lays out. When general education teachers have students with autism in their classroom, their continued needs become evident as they try to put into practice the programming laid out in their IEPs. The preparedness of teachers plays a crucial role in ensuring the successful inclusion of students; however, many general and special education teachers lack the necessary readiness to effectively implement Assistive Technology (AT) in schools (Park et al., 2021). Given the communication and functioning barriers that some children with autism encounter, general education teachers additionally highlighted the need for assistive technology, typically a consideration in an IEP to enhance task accessibility (Park et al., 2021; Van Der Steen et al., 2020). Assistive technology, as defined in the Tech Act of 1988, refers to any device or product system designed to support or enhance the functional capacity of individuals with disabilities. Through professional development, educators need to know how to implement the tools that offer equitable curriculum access to students with autism while in their classroom setting.

**Suggestions for Teacher Preparation**
Research has revealed a link between elevated stress levels and educator burnout, particularly when teachers perceive that their job demands exceed the resources at their disposal and their own capabilities (Brittle, 2020). When educators are ill-equipped to effectively accommodate students with disabilities in their classrooms, it can result in burnout, legal repercussions, and hindered student advancement. Bemiller (2019) also noted that the absence of adequate educational resources and limited training significantly contribute to extreme fatigue, prompting educators to avoid inclusive practices and explore alternative methods for educating students beyond their classroom. The importance of thorough teacher preparation cannot be overlooked.

Due to the continual increase of students with autism in general education settings, research has begun to explore the knowledge and experiences that general education teachers provide on successful inclusion (Oliver et al., 2021). Although some general educators have expressed concern about educating students with autism due to limitations in professional development and or pre-service programs, some have experienced successful inclusionary environments and shared strategies. General education teachers found that to increase success for students with autism in classroom settings, is to boost their self-esteem by providing jobs and classroom responsibilities which promotes a feeling of belonging in the inclusive classroom (Bolourian et al., 2021).

To find out methods for successful inclusion of students with ASD, Lindsay et al. (2014) conducted a qualitative study that interviewed 13 elementary school teachers from inclusive classrooms with experience ranging from three to 22 years; twelve of the teachers had additional coursework in special education. The interviewed educators had experience with ASD and discussed scenarios in their interviews that they felt would yield results with inclusion for other
educators. The findings offered the following five recommendations: resource advocacy training, tailored teaching, collaboration amongst the staff, parent and student rapport, and an environment where disability awareness is evident. The successful utilization of general education ideas can support those with a limited understanding of inclusionary practices for students with autism (Paisley et al., 2022).

To provide additional outlooks on teacher perceptions of successful inclusionary measures for students with autism that would decrease educator stress, Oliver et al. (2021) conducted a focus group with 12 general education teachers with an average of 11.8 years of teaching to understand the successful techniques they used in their classrooms. The study questioned the teaching strategies and tools General educators use to support the inclusion of students with autism. Some of the findings reported that the usage of Universal Design for Learning (UDL) and Classroom Pivotal Response Teaching (CPRT), as well as evidence-based practices (EBPs): modeling, visual supports, if/then statements, breaks, utilizing support staff, using student interests and educating peers. The research yielded four themes on why general education teachers used these implemented strategies to enhance communication, self-regulation, social skills, and academic engagement.

**Building Efficacy Through Preparation**

Teacher efficacy comes from their preparedness (Bandura, 2012). According to self-efficacy theory, this connection holds true, as it associates the acquisition of mastery experiences as the most effective means of enhancing teacher efficacy (Bandura, 2012, as cited in Savolainen et al., 2020). General education teachers who have autistic students under their care often exhibit significantly low levels of teaching efficacy, which are heightened by a deficiency in ASD education and training (Bolourian et al., 2021). Savolainen et al. (2020) asserts a link between
teacher attitudes toward inclusive education and their efficacy. To transform teachers' views on inclusion, it is essential to cultivate self-efficacy during their pre-service education programs and professional development.

**Theoretical Framework**

Figure 1 delineates Bandura's Theory of Self-Efficacy as the framework guiding the research investigation into teacher preparedness regarding the inclusion of students with autism.

**Figure 1.**

*Self-Efficacy Theory Connected to Teacher Preparation for Inclusion*

Individuals who feel prepared will be motivated to persevere when convinced that their abilities can produce the desired effect (Bandura et al., 1999). According to the self-efficacy theory proposed by Bandura (1994), people with high confidence in their capabilities tend to view challenging tasks as opportunities to be mastered rather than avoided. A strong sense of self-efficacy may lead to a sense of accomplishment, well-being, and the motivation to persist through adversity. Teacher self-efficacy, which refers to teachers' confidence in their teaching
abilities, has been found to vary based on contextual factors, including the characteristics of the students they are working with (Love et al., 2019). This study adopted a self-efficacy lens to investigate teachers' perceptions of their readiness to include students with autism. Devi and Ganguly (2022) suggest that teacher preparedness is closely tied to their experience level, training, and the administration's support. Furthermore, teacher efficacy is linked to their effectiveness, instructional practices, and the academic achievements of their students (Barni et al., 2019). This theory implies that educator preparedness is only complete with improved pedagogical skills.

Educators with high self-efficacy can exert extra effort and persevere longer in achieving educational success with students. This suggests that educators who have experienced capacity-building opportunities are inspired to exert more effort. The question arises: What can enhance or support individuals in building self-efficacy? Bandura et al. (1999) propose that enactive mastery experiences are a crucial component of self-efficacy theory, as they provide opportunities for learning by doing, which, in turn, reinforces feelings of capability and accomplishment. In education, feelings of self-efficacy are what educators need to persevere through complex educational mandates that require them to understand the needs of students with disabilities.

Albert Bandura's self-efficacy theory posits that individuals are more likely to succeed when they have consistent opportunities to gain confidence in their abilities (Bandura, 1962). This notion supports the idea that individuals are more inclined to avoid tasks they perceive as unachievable. Regarding human functioning, Bandura hypothesizes that self-efficacy is linked to an individual's choice of tasks, efforts, and persistence (Artino Jr., 2012). According to Savolainen et al. (2020), there is a correlation between the effects of teacher efficacy and their
attitudes toward their preparedness for inclusive education. This statement, in line with self-efficacy theory, is accurate as it connects the acquisition of mastery experiences as the most effective way to enhance teacher efficacy (Bandura, 2012, as cited in Savolainen et al., 2020). To transform teachers' attitudes toward inclusion, their competency must be developed during pre-service and in-service programming. Many educators' self-efficacy beliefs focus on their ability to produce desired outcomes related to student engagement, achievement, and learning results, which require the utmost attention (Seneviratne et al., 2019).

In cases where the general education classroom is designated as the Least Restrictive Environment (LRE), general education teachers have a legal obligation to deliver essential interventions to facilitate student progress. Nonetheless, their confidence in their capabilities is pivotal. In a recent review of the literature, Wray et al. (2022) examined the barriers influencing teacher efficacy for including students with disabilities. The obstacles identified were linked to various factors, including demographic influences, educational and training experiences, interactions with individuals with disabilities, school climate, and internal attributes of teachers. Significantly, professional development training in ASD holds potential for augmenting teachers' knowledge and improving their perceptions, attitudes, and self-efficacy (Bolourian et al., 2021). It is also noted that education and training, encompassing both pre-service and in-service programs, consistently stood out as a vital element essential for fostering teacher self-efficacy in inclusive education. Furthermore, Wray et al. (2022) found that the presence of practicum and field experiences significantly enhanced educator efficacy by providing additional opportunities for preparedness.

Educators' self-efficacy beliefs are interconnected with confidence in their capabilities and should be a central focus in their professional development (Bandura et al., 1999). To
continuously build educators' self-efficacy in teaching students with autism, certain fundamental knowledge and skills must be provided to ensure they feel competent in meeting the needs of their students. Devi and Ganguly (2022) conducted an exploratory case study research study in Australia involving eight pre-service educators and eight new teachers who had recently graduated from general education teacher preparation programs. The aim was to gain insights into their perceptions of the inclusion of students with ASD. The study examined the impact of university education, experiences with students with ASD, and support from the administration on participants' self-efficacy beliefs.

Employing Bandura's self-efficacy framework, the study made predictions about the belief in one's ability concerning the levels of support and provided recommendations for enhancing preparedness. The findings indicated self-efficacy was linked to hands-on experience, opportunities for accessing autism resources, coursework explicitly targeting students with autism, support from parents, and ongoing feedback from mentor teachers. The levels of support that the participants found necessary to bolster their belief in their preparedness offered opportunities for mastery experiences.

**Prepared Educators**

Wu (2016) emphasizes the significant role of mastery experiences in shaping self-efficacy development, particularly among educators. Increased engagement in programs that enhance their preparedness empowers educators to effectively include students with autism in their classrooms, fostering student success. Webster & Roberts (2020) conducted a case study involving three schools, implementing a school-wide autism competency (SAC) to enhance outcomes for students with autism. They found that the engagement and preparation of school leaders significantly influenced the implementation process, teacher preparedness, and overall
student outcomes. In alignment with Webster & Roberts (2020), Kossewska et al. (2022) reviewed the effectiveness of the ASD-EAST workshop in strengthening teachers' skill sets through professional development linked to student success. The research revealed that following the professional development series, teachers demonstrated increased understanding of the needs of students with ASD, grew more confident in their abilities, and successfully implemented strategies presented to them within three months, resulting in improved classroom performance for both students with and without ASD. The findings reinforce the notion that teacher preparedness influences their self-beliefs, attitudes toward inclusion, and creates opportunities for success.

**Summary**

The emphasis on inclusion and the rising number of students with autism underscore the importance of general educators being well-prepared to provide academic support, social skill strategies, assistance with possible anxieties, and behavioral regulation for a successful learning experience (Bolourian et al., 2021). Without intensified efforts from teacher preparation programs and professional development initiatives, general education teachers may be disadvantaged when attempting to include students with ASD effectively.

The sense of preparedness that educators experience while teaching students with autism can be analyzed through the lens of self-efficacy and linked to their perceived competence. The proposed study will employ the self-efficacy theory to investigate general education teachers' perceptions of their preparedness for instructing students with autism to establish a connection between preparedness and self-efficacy. Furthermore, it will elucidate why efficacy is crucial for educators to be adequately prepared to support their students, particularly those with autism (Avramidis et al., 2019).
Chapter 3: Methodology

To assess how Pennsylvania general education teachers perceive their readiness for including students with autism, I aimed to gather insights directly from classroom educators. This involved gathering insights on their experiences within teacher preparation programs and professional development. The initiative to ensure teachers are adequately equipped for students with autism has become increasingly significant, given the growing likelihood of encountering such students in today’s classrooms (Al Jaffal, 2022). Presently, the overall population of students with disabilities is on the rise, with approximately 1 in 36 children identified as having ASD, signifying an increase since the last update two years ago (CDC, 2023). Given the ongoing upward trend in identification and the probability of students with ASD receiving their education in their most appropriate setting, it is crucial to provide general education teachers with the essential tools and resources to support these students effectively. As outlined by the revised IDEA in 2022, a more effective education for children with disabilities is achieved by setting high expectations for these students and maximizing their access to the general education curriculum within general education classrooms to the greatest extent possible (Individuals with Disabilities Education Act, 20 U.S.C. § 1400(5),(a) (2004). To ensure that students with disabilities make progress in accordance with federal special education laws, it is imperative that general education teachers possess the skills and knowledge required to provide the educational opportunities necessary for these students to thrive. According to IDEIA (Individuals with Disabilities Education Act, 20 U.S.C. § 1462 (a),(6) (2004), those working with students with disabilities should have access to comprehensive pre-service training, ongoing professional development and instruction in using scientifically grounded, evidence-based practices to
facilitate student progress. When educators are unable to provide this level of education, students with disabilities may face adverse consequences.

Research Design

The mixed methods approach utilizes quantitative and qualitative data to elucidate results that one method alone may not adequately convey (Creswell & Clark, 2018). This study’s chosen research design is convergent mixed methods design. As Creswell and Clark (2018) described, the convergent design seeks to gather diverse yet complementary data on the same subject, aiming to enhance the understanding of the research problem.

Additionally, convergent designs prove beneficial when the study has time constraints. This design allowed the researcher to collect and analyze survey data while conducting and analyzing semi-structured interviews. This approach allows for a more comprehensive understanding of what educators know and wish to learn about the inclusion of students with autism because each portion does not solely depend on the findings of the other to make determinations. The comparison of data from both portions contributes to a more holistic view.

In the convergent mixed methods design, the research begins with both quantitative and qualitative phases being conducted concurrently noting that one measure does not depend on the other, but rather using both forms of information enhances understanding of the research questions (Creswell & Clark, 2018). It is understood that all methods experience a form of limitation; however, in a mixed methods design, the biases experienced in one method could neutralize or cancel the bias in the other. This research employed a convergent mixed methods approach to explore the tools that general education teachers instructing students from kindergarten through 8th grade believe are essential for their preparation to teach students with autism within inclusive educational environments.
Moreover, this research study allowed participants to share their experiences regarding K-8 schools and higher education institutions in their efforts to prepare both prospective and current educators to assist students with autism effectively. Figure 2 illustrates the journey from data collection to interpretation in quantitative and qualitative methods.

Figure 2.

Convergent Mixed-methods design utilized in the research study

The quantitative portion of the research utilized a survey conducted through the Qualtrics platform. The questionnaire was designed by the researcher, but inspiration was drawn from a previous study authored by the researcher Sparks-Kantor (2011). Simultaneously, the qualitative section of the study involved optional one-on-one interviews conducted and recorded utilizing the Zoom platform. These interviews aimed to offer further insights into participants' experiences and provide additional recommendations for institutions of higher learning and professional development.

Setting and Participants

The study surveyed certified general education teachers in Pennsylvania, spanning kindergarten to eighth grade, who were employed by Pennsylvania school districts or charter schools. Insights from cyber schools were not excluded. The aim was to gather perspectives from educators with diverse experiences, specifically focusing on the preparation and skill
development of general education teachers in educating students with autism. Special education teachers were intentionally excluded to solely capture the viewpoints of general education teachers.

**Setting**

The setting was the state of Pennsylvania and its extensive number of districts and charter schools to sample perspectives from a targeted population of general education teachers. According to the Pennsylvania Department of Education (2024), Pennsylvania's K-12 education system serves 1.7 million students across 500 districts, ranging from 200 to 140,000 students. Furthermore, there are 160 brick-and-mortar charter schools and 14 cyber charter schools educating 135,000 students. Despite sending the survey to 25 school districts across Pennsylvania, only two school districts and three charter schools responded with approval, all of which were brick-and-mortar institutions located in the Southeastern part of the state.

**Participants**

All participants were from Southeastern PA (n=51), held at least a bachelor's degree and possessed at least a Pennsylvania general education teacher certification. Furthermore, some participants held additional certifications that expanded their teaching capacity across different grade levels and specialized areas. These additional certifications included (a) Principal K-12, (b) Reading Specialist, (c) English 7-12, (d) TESOL, (e) Science 7-12, (f) Health and Physical Education, (g) Mathematics 7-12, (h) ESL Program Specialist, and (i) Special Education PreK-8 and/or PreK-12. The participants were a combination of those who taught students with autism (n=44) and those who did not (n=8). All participants utilized their insights to support the research quantitatively, however 10 contributed qualitatively.
**Attrition.** The study emphasizes the importance of highlighting the meticulousness and transparency in the participant selection process, which could offer invaluable insights for future researchers. By late February, 130 responses were recorded in the Qualtrics data system. I meticulously transferred them to the SPSS statistical program for thorough cleaning and organization, including the meticulous assignment of question numbers.

During the initial data review phase, I assessed each response to identify incomplete surveys, missing consents, timeouts, and responses that did not meet the required gateway questions. Subsequently, I excluded these responses from the analysis.

While participants had the option to discontinue the survey at any point and for any reason, completing important items such as Likert-scale questions was crucial for potential statistical analysis. Additionally, understanding whether participants had experience teaching students with autism was essential for interpreting their viewpoints and insights into teacher preparation and professional development. Consequently, we removed respondents who did not complete the Likert-scale items from the dataset, ensuring data integrity.

Out of 130 respondents who began the interview process, the following is the outline of attrition:

- Four educators declined consent.
- Fourteen educators failed to meet the inclusion criteria, ending the survey.
- Thirteen educators partially met the criteria, which caused the survey to end.
- Forty-eight educators skipped major sections or allowed the survey to time out after 48 hours.
- Fifty-one valid responses remained for analysis.

**Compensation.** As outlined in the IRB and research flyer, educators who completed the survey would be entered into a drawing to win an Amazon gift card. All participants who
expressed interest in entering the drawing provided their email addresses in the raffle. We entered the email addresses into a password-protected website called "Wheel of Names." Lastly, a randomly selected email address was picked to receive an electronic gift card.

Instrumentation

The research employed two distinct methodologies to compare quantitative statistical results with qualitative findings (Creswell & Clark, 2018). The quantitative aspect utilized a survey instrument developed via the Qualtrics data collection system. Given the significance of capturing educators' perspectives, the qualitative component was pivotal, offering another dimension to the study. Following the survey, participants could participate in interviews—the qualitative instrument comprised of semi-structured interviews conducted on the Zoom platform. This approach provided participants with a platform to delve deeper into their experiences, yielding additional insights into teacher preparation programs, areas of improvement, and the support they sought in their professional development and roles within their current schools. Additionally, to ensure that the survey instruments were tailored to address the research questions, I utilized a table to facilitate the seamless integration of both quantitative and qualitative data in pursuit of the research objectives. Table 3.0 illustrates the correlation between research questions and quantitative and qualitative methods.
### Table 3.0

**Research Questions with Survey and Interview Collaboration**

<table>
<thead>
<tr>
<th>Question</th>
<th>Questionnaire Items</th>
<th>1:1 Interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>RQ1: What are the experiences of K-8 general education teachers working with students with autism?</td>
<td>19 22 23 25 30</td>
<td>1 2</td>
</tr>
<tr>
<td>RQ2: How do general educators report their preparedness for teaching students with autism (e.g., autism-specific programs, professional development, field experiences, and coursework related to autism)?</td>
<td>12 13 14 15 16 17 18 20 21 24</td>
<td></td>
</tr>
<tr>
<td>RQ3: How do professional development experiences and teacher preparation programs support teachers in being able to effectively educate students with autism in the general education classroom?</td>
<td>12 13 14 15 20 21 24 26 27 28 29 30 32</td>
<td>3 4 5 6</td>
</tr>
<tr>
<td>a. What aspects of teacher preparation did general education teachers report were the most beneficial and aided them with addressing the needs of students with autism in their general education classrooms?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. What experiences do general educators in grades K - 8 believe would have helped them to better support students with special needs in the general education classroom?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* The table demonstrates the connections made between research questions, surveys, and interviews.

**Quantitative Instrument: Qualtrics Survey**

Participants accessed a survey hosted on the Qualtrics online platform. Following the methodology proposed by Creswell and Clark (2018), quantitative data was collected.
simultaneously but separately from the qualitative phase. The survey aimed to facilitate data collection and analysis while interviews were conducted and reviewed. Its objective was to quantitatively capture participants' viewpoints on various topics such as their teacher preparation programs, special education coursework, and ongoing professional development. Additionally, it served as a platform for participants to offer suggestions to a wider administrative audience beyond their immediate educational circle.

The survey consisted of 40 questions, which included gateway questions at the beginning along with a consent form question. The initial four gateway questions queried participants about their teaching experience, PA certification status, college completion, and employment within a district or charter school. Upon completing these gateway questions thoroughly, participants encountered various question types, such as multiple-choice, open-ended, rank-order, and matrix table questions/statements.

The questions were categorized into four sections: Inclusion Criteria, Preparedness, Teacher Preparation Programming and Professional Development, and Others. Demographic information was gathered through six multiple-choice questions regarding participants' educational backgrounds. Following this, participants answered 16 questions concerning their college experiences, which related to field experiences, student teaching, and coursework connecting them to students with autism. Additionally, four more questions focused on participants' experiences teaching students with autism, utilizing multiple-choice, select-all, and Likert scale formats. Teachers who completed these questions provided insights into their current employment and the role of professional development in supporting their work with students with autism. The section also included select-all, fill-in-the-blank, and rank-order questions, allowing participants to prioritize areas where they gained knowledge about autism. Finally,
three questions invited reflection on the pandemic through fill-in-the-blank responses and solicited any concluding thoughts via multiple-choice and text questions. The last two opportunities asked educators to provide their email for optional contact regarding an Amazon gift card and participation in an interview, with the link embedded in the signup page.

**Qualitative Instrument: Interviews**

The qualitative data collection aimed to compare its results with the quantitative statistical findings (Creswell & Clark, 2018). The interview's purpose was to give participants an opportunity to share additional insights into their education experiences as it relates to teacher preparation, professional development, and the inclusion of students with autism. This phase coincided with quantitative research, occurring simultaneously within the same timeframe. While the survey was ongoing and actively gathering responses, individuals were concurrently enrolling for and completing interviews.

The initial data gathering involved a survey conducted through Qualtrics, offering participants the option to participate in an interview. Participants interested in scheduling an optional interview utilized the SignupGenius website, an online scheduling platform linked to the second-to-last survey item. This platform allowed participants to select a convenient time from the options provided, scheduled during breaks, after school, and on weekends to avoid disrupting working hours. To encourage open discussion, interviews were allocated 40 minutes to ensure participants could share without feeling rushed. Once signed up, participants were contacted through the platform and provided with a passcode. Throughout the interviews, participants engaged in discussions covering a range of topics, such as their educational backgrounds, experiences working with students with autism, thoughts on professional growth, readiness for inclusive environments, fieldwork encounters, and recommendations for teacher training.
programs. The questions were created prior to the interview so that they would offer additional insight into preparedness. Although they were pre-constructed, participants were allowed to reflect and expand on their experiences and share recommendations to fully describe their concerns and suggestions regarding teaching students with autism. The following semi-structured interview questions were posed to the participants:

1. Please share an experience you have had while working with a child with autism. How successful was this experience for you and the student? (If the interviewee did not have experience teaching students with autism, the interviewer skipped to interview question #3)

2. What instructional, learning, and behavioral strategies do you currently apply when working with students with autism? Please provide some examples of how you apply these strategies.

3. What are the skills you believe are necessary to be developed in elementary and middle years, general education teacher preparation programs as it relates to teaching students with autism? Why do you think this?

4. What are the skills you believe are necessary to be presented during school-wide professional development in schools as it relates to students with autism? Why do you think this?

5. How do skill gaps in teacher preparation programs affect general education teachers' feelings of preparedness for the inclusion of students with autism?

6. How do limitations in school-wide professional development affect general education teachers' feelings of preparedness for the inclusion of students with autism?
All Zoom interviews offered participants the option of recording with video, audio, or both after consenting to the process. Transcripts, generated via the Zoom platform and meticulously corrected, were analyzed for thematic codes to deepen the study's findings. In qualitative inquiry, a code symbolically captures essential attributes of language-based or visual data using brief words or phrases (Saldaña, 2016). Lastly, to validate the accuracy of the interview, participants were invited via email to review the transcripts for feedback and comments, a process known as member-checking (Varpio et al., 2016). All participants agreed to member-checking during their recorded session and were emailed a copy of their transcript with the participant-provided pseudonym and all information was removed that identified a particular student, parent, or school.

**Procedures**

I began the research process by sending consent-seeking emails to Pennsylvania school district superintendents, charter school CEOs, letters of support to a doctoral program, and requests for permission to conduct research on social media platforms. These initial consent emails and letters of support provided detailed information about the research questions, survey questionnaire, and consent forms. The purpose was to ensure that potential administrations understood what their educators would expect if they chose to participate in the study.

The research was carried out electronically and virtually, allowing participants to choose a location to complete the survey using their devices. Upon receiving the flyer, participants could scan the QR code or click the embedded survey link. The survey itself was conducted through the Qualtrics platform. For those willing to participate in interviews, the option to schedule an interview was included as the last question in the survey. Participants could conveniently schedule their interviews using the link in the survey, which directed them to the SignUpGenius
scheduling site (SignUpGenius, 2024). Upon scheduling their interviews, participants were provided with the corresponding access code. Completing the interview on Zoom allowed participants to log in from a location of their choice on their self-selected interview date and time during the scheduling window.

**Researcher’s Bias**

As a parent of a young adult with autism who received support both academically and socially while in school and a former PA general education and special education teacher, I have rigorously mitigated personal biases in this study. I have refrained from making broad assumptions about participants, understanding that not all general education teachers struggle to integrate students with autism into their classrooms. The study's assertions are firmly rooted in research, not personal anecdotes. In optional interviews, questions are carefully crafted to prompt participants to share their experiences and suggestions rather than presuming their viewpoints.

Throughout this study, I have been steadfast in my commitment to maintaining objectivity. I've consciously refrained from forming generalized assumptions about the participants, understanding that not all general education teachers encounter challenges when including students with autism in their classrooms. In the optional interviews, questions are designed to encourage participants to draw upon their experiences and provide suggestions, rather than making assumptions. This unwavering commitment to objectivity is crucial for the integrity and reliability of the research.

In my current role, I often lead professional development sessions on various topics, many of which are related to special education. I refrained from discussing these topics or my experiences at my school with the participants to prevent any influence on their responses. This decision ensures their responses remain uninfluenced and upholds the research's integrity. It's
worth noting that my past experiences may shape my perspective and interpretation of the data. However, my extensive experiences and familiarity with the educational needs of educators and students with autism can contribute to a deeper understanding and analysis of the data.

**Participant Recruitment**

Prior to obtaining IRB approval, I conducted a preliminary search on school district websites in Pennsylvania to identify publicly listed contact information for superintendents and CEOs (in the case of charter schools). The letter of intent for research was then sent to their respective email addresses. After securing IRB approval and post-research proposal defense, I was responsible for contacting the administrator designated for email distribution (as indicated in the letter of support). Permission to conduct research was sent to 25 districts. The initial email contained a preview of the survey questions, the consent form, and an example letter to be returned with their permission to conduct research. Upon approval, I provided the superintendents or CEO with the necessary document to send to educators, which included a flyer with the QR code and link to the Qualtrics survey, which featured an embedded sign-up link within the survey for interviews if they chose to participate.

To broaden the participant pool, I interviewed classmates within my cohort at West Chester University who met the inclusion criteria. I emailed the recruitment flyer to them, utilizing the class list available in the course D2L webpage, with the hope that they might share it within their respective networks after completing the survey. Employing snowballing as an additional recruitment layer, I sought additional participants. Another recruitment method involved the social media platform Facebook. Permission was granted from the administrators of a Facebook group called "Philly Educators," where educators from Philadelphia and its surrounding counties share education-related ideas. The flyer was posted on the Facebook page
to attract participants that met the inclusion criteria.

**Study Timeline**

The research study began in June and concluded in April. Figure 3 illustrates the timeline utilized to conduct the study, providing transparency regarding the research steps undertaken.

**Figure 3.**
Research Study Timeline.

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**Quantitative Data Analysis**

The quantitative survey was designed using the Qualtrics platform. Additionally, it was used to collect data from participants and export it into the web-based Statistical Package for the Social Sciences (SPSS) platform. After the data was exported to SPSS, all categories were checked for accurate representation from the original survey questions. After uploading the file to SPSS, cleaning the data commenced to prepare the data for analysis. The categories such as date completed, I.P addresses, duration, status, and progress were deleted to show only the survey questions on the chart. Secondly, the question numbers were relabeled to represent an
abbreviated question, and questions were shortened to support spacing and visibility. Next, the Likert or “select all” questions were regrouped so that values could be seen in one question set, which made data formation easier. After data cleaning, the initial data set was run utilizing descriptive statistics.

**Qualitative Data Analysis and Coding Procedures**

Coding in qualitative research involves organizing collected data by assembling, categorizing, and thematically sorting it (Williams & Moser, 2019), facilitating the construction of meaning from the data. In this study, the coding process unfolded in three phases to ensure that themes from interviews genuinely captured teachers' voices as they reflected on experiences and suggested improvements to teacher preparation programs and school administrations. Recognizing that a single coding round may not unveil all insights, Saldaña (2021) emphasizes coding as an iterative process, often requiring multiple attempts for more accurate results.

**Coding**

The coding process was grounded in the principles of grounded theory, employing the In Vivo, Axial, and Theoretical coding canons (Saldaña, 2016). In Vivo coding involves extracting words or brief phrases directly from qualitative data, reflecting participants' language (Strauss, 1987, as cited in Jugessur, 2022). In the final stages of coding, Saldaña (2016) defines Axial and Theoretical Coding as methods involving comparing, reorganizing, and prioritizing codes into categories, synthesizing them to form a core category crucial for grounded theory construction. During interviews, significant connections and themes emerged across all participants.

The coding process commenced with In Vivo coding, allowing everyday experiences and ideas shared by teachers to shape initial themes, aligning with the desire for participants' words to form the research baseline. Axial coding followed, identifying potential subcategories
emerging from the initial phase (Gläser & Laudel, 2013). Lastly, theoretical coding facilitated the discovery of the central/core category, unveiling the primary theme of the research and yielding thematic outcomes.

**Threats to Validity**

In the framework of mixed methods research, Creswell & Clark (2018) characterize validity as employing strategies to address potential challenges that could impact the precision of making accurate inferences and assessments from integrated data. Researchers must maintain transparency and recognize potential threats to validity that may arise, and then take proactive steps to address these threats. The points below highlight potential validity threats that have been considered related to internal and external validity.

**Internal Validity**

It's crucial to acknowledge that self-reporting could present a challenge to internal validity since participants may feel pressured to conform to expected responses rather than provide authentic reflections of their experiences. Some participants in the study were connected to my professional network. While their input will inform future programming, there is a concern that educators might have responded in a manner they perceived as less candid or protective of their professional relationship with me.

**External Validity-Generalization**

The research comprised a limited subset of general education teachers, as per the inclusion criteria, which targeted educators teaching Kindergarten through eighth grade within a Pennsylvania school district or charter school. Expanding the study to encompass educators from different states, educational environments, or grade levels might reveal disparities in teacher preparation programs and on-the-job professional development experiences. Moreover, while the
10 interviews provided valuable insights, they may not encapsulate the entire spectrum of perspectives and ideas from the surveyed population of educators.

**Increasing Validity and Reliability**

To ensure the validity and reliability of the qualitative portion of the study, three strategies were implemented. Data triangulation was conducted to mitigate researcher bias throughout data collection and presentation. Interrater reliability was employed, allowing an additional researcher or field expert to validate and agree upon the coding applied to the interviews. Member checking was utilized to keep participants informed about the shared information's consistency with their interview responses.

**Triangulation**

Williamson and Johanson (2017) propose that triangulation enriches research by employing diverse methods and constructs, thus expanding the study's breadth and depth and enhancing its validity. This concept is further supported by Creswell and Clark (2018), who suggests that gathering multiple field texts, triangulating data, and conducting member checking are crucial for ensuring high-quality data collection. In the qualitative portion of the study, triangulation was utilized to validate interview information through member checking and to achieve interrater reliability by considering secondary perspectives on codes and excerpts. Furthermore, triangulation was evident in integrating quantitative and qualitative measures to inform findings, thereby enhancing the overall robustness of the study.

**Interrater Reliability**

To ensure reliability and transparency in the qualitative aspect of the research study, interrater reliability was established following Cole's (2023) guidelines. This process involves assessing the level of agreement among coders, which contributes to discussions enriching the
conclusions or theories drawn from the data. Initially, a fellow researcher experienced in coding was enlisted, and they reviewed a 15% sample (n=58) of items from participant interviews, matching them with 16 codes. To facilitate the coding conversation, a master copy of the codes and item matches was created for reference. Five out of the 58 matches initially lacked agreement during the conversation but were resolved through discussion.

Through discussions on alternative codes and reviewing the interview items, consensus was reached on categorizing the last four items under a new code. Only one excerpt remained unresolved. Consequently, the reliability score was 98%, with just one disagreement out of the 58 items. This process significantly benefited the coding process by providing an additional interpretive perspective and fostering deeper conversations about the research, thereby enhancing code reliability (Cole, 2023).

**Member Checking**

Member checking, or participant validation, bolsters research credibility by involving participants in verifying the accuracy and alignment of findings with their experiences (Birt et al., 2016). To validate the qualitative aspect of the research study, after transcribing the interviews, all interviewees were emailed copies of their transcripts for verification. Each participant confirmed their approval via email. Subsequently, all participants approved the use of their transcripts. However, one participant provided feedback regarding the mention of the grades they taught in the transcript. This line was modified by blacking out the grade, and the adjusted transcript was sent back for review. Upon acceptance by the participant, it was considered finalized.

**Informed Consent and Protection of Human Subjects**
Ensuring participant protection is paramount. Participants received an informed consent statement detailing risks, benefits, and confidentiality in the quantitative phase before commencing the study. They retained the right to discontinue the survey at any time. In the qualitative phase via Zoom, participants joined interviews after completing the survey. To safeguard identities, they adopted pseudonyms. Opting for interviews meant consenting to recording, with participants notified when recording commenced. Participants retained control over screen visibility during interviews, enhancing their participation control. The survey data was securely stored in the password protected Qualtrics system and then transferred to the SPSS program.

Access to both survey components necessitated a university login and verification through the DUO application for security purposes. Additionally, the educator interview transcripts were uploaded from the Zoom platform to Microsoft OneDrive and placed in a folder for protection. Outside of OneDrive, the only other platform with access to the transcripts was the application password secured through the university, the electronic system Dedoose, which supports coding and theme creation (Dedoose, 2024).

**Summary**

In Chapter Three, I provided readers with a thorough insight into my study by outlining participant selection procedures, consent protocols, data collection methods, and intended data interpretation. Furthermore, I discussed potential biases and considerations for validity. To ensure the validity and reliability of the study, I incorporated triangulation, member-checking, and interrater reliability into the research process. Following the recommendation of Creswell and Clark (2018), interviews and surveys underwent simultaneous analysis and integration, facilitating comparison, contrast, and synthesis of the findings.
In the forthcoming chapter, I will share the findings from both quantitative and qualitative perspectives of the study. Despite employing different methodologies, both approaches provided comparable insights and recommendations regarding teacher training programs and school-wide professional development in K-8 educational settings, specifically regarding the inclusion of students with autism.
Chapter 4

In this study, general educators' perceptions of preparedness for the inclusion of students with autism in kindergarten through eighth grade in Pennsylvania were investigated using a convergent mixed-methods approach. The study was conducted by collecting and analyzing quantitative and qualitative data simultaneously. This chapter delineates the outcomes of the research study in alignment with the research questions and theoretical framework. It was structured by initially providing the background of the data analysis, restating the research questions, presenting the participants' backgrounds, offering insights into both quantitative and qualitative analysis procedures, organizing each research question, discussing the connected quantitative and qualitative data, and analysis, and finally integrating both methods into the findings.

Data Analysis

To ensure a comprehensive presentation of the data, the analysis section begins by providing background information on quantitative survey respondents and qualitative interviewees, allowing readers to connect with the participants before delving into the results. The examination commences with the quantitative component, given that all participants completed the survey. It is noteworthy that while the quantitative aspect was initially addressed, the qualitative phase was conducted concurrently and complemented the quantitative data (Creswell & Plano Clark, 2018).

The quantitative data analysis involved using descriptive and inferential statistics, employing correlational tests. The qualitative component of the study commenced with In Vivo coding to capture educator voices, followed by axial coding to condense, and refine codes, and
ultimately, theoretic coding to underpin the emergence of themes. Lastly, Table 4.0 outlines the correlation between the research questions, survey items, and interview questions.

The following research questions were highlighted:

RQ1: What are the experiences of K-8 general education teachers working with students with autism?

RQ2: How do general educators report their preparedness for teaching students with autism (e.g., autism-specific programs, professional development, field experiences, and coursework related to autism)?

RQ3: How do professional development experiences and teacher preparation programs support teachers to effectively educate students with autism in the general education classroom?

   a. What aspects of teacher preparation do general education teachers report are the most beneficial to help them address the needs of students with autism in their general education classrooms?

   b. What preparatory experiences do general educators in grades K - 8 believe would have helped them to better support students with special needs in the general education classroom?

Survey Participants’ Backgrounds

The 51 participants in the research study represented Kindergarten through 8th-grade general education teachers currently employed in a Pennsylvania-based public district or charter schools. Of the respondents, 68.6% were elementary educators (grades K-5), and 31.3% were middle-level educators. Table 4.0 shows the percentage of participants at each grade level and their years of teaching experience.
Table 4.0

*Characteristics of the Survey Respondents*

<table>
<thead>
<tr>
<th>Respondent Characteristics</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade Currently Teaching</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K</td>
<td>7</td>
<td>13.7</td>
</tr>
<tr>
<td>1</td>
<td>7</td>
<td>13.7</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>5.9</td>
</tr>
<tr>
<td>3</td>
<td>8</td>
<td>15.7</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>9.8</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>9.8</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>7.8</td>
</tr>
<tr>
<td>7</td>
<td>5</td>
<td>9.8</td>
</tr>
<tr>
<td>8</td>
<td>7</td>
<td>13.7</td>
</tr>
<tr>
<td>Years of Teaching Experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-3</td>
<td>2</td>
<td>3.9</td>
</tr>
<tr>
<td>4-7</td>
<td>7</td>
<td>13.7</td>
</tr>
<tr>
<td>8-10</td>
<td>9</td>
<td>17.6</td>
</tr>
<tr>
<td>11 years or more</td>
<td>33</td>
<td>64.7</td>
</tr>
</tbody>
</table>

Table 4.1 illustrates that the majority of participants did not obtain Pennsylvania certification before 2004. This is significant because in 2004, PDE mandated educators to complete nine credits of special education courses with three credits focusing on English Language Learners (ELL). Educators certified before this requirement were certified based on their university's curriculum. Furthermore, over half (54.9%) of the respondents indicated that they received their certification at the undergraduate level. While all respondents held current PA certifications, 11.76% of them were also certified in New Jersey (n=5) and New York (n=1).
Table 4.1

*State Certifications Years and Levels Achieved*

<table>
<thead>
<tr>
<th>Sample Characteristics</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pennsylvania Certification before 2004</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>15</td>
<td>29.4</td>
</tr>
<tr>
<td>No</td>
<td>32</td>
<td>62.7</td>
</tr>
<tr>
<td>Certification before 2004 and Certification after 2004</td>
<td>4</td>
<td>7.8</td>
</tr>
<tr>
<td>Certified in Another State outside of PA (n=50)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>44</td>
<td>86.2</td>
</tr>
<tr>
<td>New Jersey</td>
<td>5</td>
<td>9.8</td>
</tr>
<tr>
<td>New York</td>
<td>1</td>
<td>1.96</td>
</tr>
<tr>
<td>Pennsylvania Certification Level Obtained</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergraduate Studies</td>
<td>28</td>
<td>54.9</td>
</tr>
<tr>
<td>Master’s Level</td>
<td>20</td>
<td>39.2</td>
</tr>
<tr>
<td>Post Baccalaureate</td>
<td>3</td>
<td>5.9</td>
</tr>
</tbody>
</table>

*Note.* This table provides insights into Certifications, highlighting states in addition to Pennsylvania, the year of certification, and certification level/s obtained.

Table 4.2 shows the certifications acquired by all participants in the research study. Each participant holds between one and four certifications. This information is crucial because it sheds light on the diverse backgrounds educators bring to the table when teaching students with autism. The table also shows that none of the survey respondents have taken advantage of the PA Autism endorsement, which is available as an add-on to their current certification. The endorsement
provides additional skillsets necessary for teaching and better educational outcomes for students with autism.

**Table 4.2**

*Certifications Obtained by Participants*

<table>
<thead>
<tr>
<th>Sample Certification Types</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants with Single Certifications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PreK-4</td>
<td>15</td>
<td>29.4</td>
</tr>
<tr>
<td>Gr4-8</td>
<td>2</td>
<td>3.9</td>
</tr>
<tr>
<td>K-6</td>
<td>6</td>
<td>11.7</td>
</tr>
<tr>
<td>K-8</td>
<td>2</td>
<td>3.9</td>
</tr>
<tr>
<td>English 7-12</td>
<td>2</td>
<td>3.9</td>
</tr>
<tr>
<td>Participants with Dual Certification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PreK-4 &amp; K-6</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>PreK-4 &amp; Reading Specialist</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>PreK-4 &amp; Early Childhood</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>PreK-4 &amp; Special Education PreK-8</td>
<td>5</td>
<td>9.8</td>
</tr>
<tr>
<td>High School; Admin</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>K-12 Health &amp; Physical</td>
<td>2</td>
<td>3.9</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K-6 &amp; Middle School</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>PreK-4 &amp; TESOL</td>
<td>2</td>
<td>3.9</td>
</tr>
<tr>
<td>PreK-4 &amp; Gr 4-8</td>
<td>3</td>
<td>5.7</td>
</tr>
<tr>
<td>Math 7-12 &amp; 6-9 Science</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>Participants with three or more Certifications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PreK; Birth-3rd; K-6</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>Gr 4-8; ESL; Principal</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>PreK-4; Gr4-8; &amp; Special</td>
<td>2</td>
<td>3.9</td>
</tr>
<tr>
<td>Education PreK-12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PreK-4; Gr 4-8; HS; &amp; ESOL</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>PreK-4; Gr4-8; &amp; Reading</td>
<td>1</td>
<td>1.9</td>
</tr>
</tbody>
</table>

Specialist
Interview Participants

Ten educators participated in the qualitative phase of the study. Each participant was ultimately renamed with numbers from 1 to 10. All participants contributed to both the survey and interview phases to provide insights into their teaching experiences, pre-service teacher preparation program preparedness, and the professional development available at their workplaces. Participants were volunteers who indicated their willingness to be interviewed by checking a box for the last item on the survey and signing up through an electronic schedule.

Participant #1. Participant #1 is a female general educator teacher with over five years of teaching experience. In her early teaching experience, she started as a building substitute teacher and served as a 1:1 aide for students with autism. In her interview, she shared that she is passionate about inclusion, and on her own, she comes up with different ways to help students with autism find success in her classroom.

Participant #2. Participant #2 is a female general education teacher with over 10 years of teaching experience. During her interview, she shared frustrations about parents not always wanting to give all information to the school about the needs of their students, which leaves educators with limited backgrounds to figure out ways to support on their own. She wishes professional development to offer time and information for people to collaborate and learn how to help students with autism.

Participant #3. Participant #3 is a female general educator with over 10 years of experience. She has been an inclusion teacher since her first year of teaching. Participant #3 has always had a larger population of students with disabilities than other teachers. She expressed that she felt like others were too afraid to teach students with different autism. She also shared that “teachers need to know they are responsible for teaching everyone.”
**Participant #4.** Participant #4 is a female general education teacher with over five years of experience. She shared that she doesn't feel like she can ensure the students with autism in the class leave knowing more than what they came in with. She stated she “Often feels set up for failure due to limited autism training from the college level and Professional Development.”

**Participant #5.** Participant #5 is a female general education teacher with over five years of experience. She reported feeling a disconnect between the children she encountered during her preparation coursework and those she encountered in the classroom. She notes feeling that it is a lot of pressure to “figure it out on teachers,” making them spend so much time finding outside Professional Development. Also, she stated that professional development should follow through when giving inclusion tips to ensure teachers implement the strategies correctly. Lastly, she stated, “Passing the Praxis and other Statewide assessments does not show preparedness for classroom teaching.”

**Participant #6.** Participant #6 is a female general education middle school English teacher employed by a Pennsylvania charter school with over five years of teaching experience at the same school. She mentioned that she was fortunate to have taught the same student with autism for three years. However, she described the first year as challenging due to limited preparedness, necessitating a process of trial and error. Nervous about receiving a new student with autism due to little support, she anticipates having to figure things out again. She stated, “I feel like for people or educators who don't have autism, a lot of social skills feel very inherent, so we do not know how to teach social skills to someone that does not inherently have them.”

**Participant #7.** Participant #7 is a male general education middle school teacher with over five years of experience. He reportedly feels that you must have a passion to see all students
succeed before entering the classroom, and educators should be willing to give students what they need to succeed. He stated that “students with autism are not broken students.”

**Participant #8.** Participant #8 is a female general educator with over 20 years of experience. She is a parent of a child with autism and says she treats other children like she would want her child to be treated. She wishes that before graduation, she would have more exposure to students with autism. She stated, “I think undergraduate programs need to do a better job of explaining you are also a special education teacher because they [students with autism] will be in your classroom too.”

**Participant #9.** Participant #9 is a male general education teacher who has taught for over 20 years. He stated that although he has taught numerous autistic students, he feels frustrated at his current school because his autistic students, no matter the level, do not get a chance to be in inclusive settings outside of “specials” and lunch due to being placed in the life skills program for most of the day. When reflecting on the current professional development training that he’s received while at his current school, he stated that “There is no true plan; in my two years so far in this district, I have yet to see anything about autism; I mean nothing.”

**Participant #10.** Participant #10 is a female general education teacher who has taught for over three years and reported that professional development has been offered at the surface level but not enough to impact what is needed in the classroom for students with autism. She also believes that teacher prep programs offer theory, but more practice or exposure to what is necessary in the classroom is required. She stated, “During my education, we focused on, okay, you've got one student with an IEP or autistic, but in reality, you have like seven or eight.”

**Quantitative Data Analysis**
The quantitative aspect of the study commenced with the execution of descriptive statistics and biserial correlations when deemed necessary to share connections within the data utilizing the SPSS statistical software. This enabled the portrayal of participant demographics and facilitated a comparative analysis across survey questions. Additionally, a Point-Biserial Correlation analysis was conducted, enabling the comparison of survey items with yes/no responses to Likert items. This analysis revealed correlations of significance, particularly in areas such as teacher preparation and teachers' capacity to support students with autism. The quantitative data informed relationships regarding the influence of teacher’s educational backgrounds, preparation, and professional development on educators' sense of preparedness and their experiences in teaching students with autism.

**Qualitative Data Analysis**

The qualitative analysis began with in Vivo coding, basing the initial phase on the words or phrases spoken by interview participants. This method captured the participants’ language, offering valuable insight into narratives or concepts (Manning, 2017). To ensure that I was connected to the participants’ voices, I listened to each interview an additional time so that their words were saturated through the coding process. Due to the richness of the participant’s insights, 25 initial codes emerged, and 376 excerpts or items were identified after going through each transcript. Following the initial coding process, I examined each code to identify those that could be combined into another code. I refined the dataset by eliminating synonyms, reducing redundancy, and selecting the most pertinent codes to serve as representatives. Ultimately, I collapsed the 25 initial codes into 16, which commenced the axial process. As Saldaña (2016) suggested, during this secondary coding phase, the goal was to pinpoint key codes in the research, distinguishing them from less significant ones.
Lastly, the final stage of the coding process was theoretical coding, where I took the codes from the axial phase and placed them in themes around Professional Development Needs (specific request from educators), Teacher Preparation Needs, Strategies Applied, and Feelings about Inclusion, and a section emerged that was not anticipated called, Advice to Educators. The Advice from Educators theme emerged as the participants began to state things that teachers should know whether they were entering the field or were experienced with teaching. Table 4.3 illustrates the evolution of the coding process across three phases. The first column depicts the initial phase, followed by a progression showcasing the condensation or removal of codes leading to the second and then the final phase.
Table 4.3
*Progression Phases of Coding*

<table>
<thead>
<tr>
<th>In Vivo Codes</th>
<th>Axial Codes</th>
<th>Theoretical Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barriers to Instruction</td>
<td>Barriers to Instruction</td>
<td></td>
</tr>
<tr>
<td>Classroom Disruptions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher Experiences</td>
<td>Inclusion Experiences</td>
<td></td>
</tr>
<tr>
<td>PD: Needs</td>
<td>PD: Needs</td>
<td></td>
</tr>
<tr>
<td>PD: Time to plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of PD</td>
<td></td>
<td>PD: Needs</td>
</tr>
<tr>
<td>PD: Parent Communication (How to effectively communicate)</td>
<td>PD/TP: Parent Communication</td>
<td></td>
</tr>
<tr>
<td>PD: Aware of Needs</td>
<td>PD: All Team members Need to be Prepared</td>
<td></td>
</tr>
<tr>
<td>PD/TP: Behavior Management/Supports</td>
<td>PD: Planners should know</td>
<td>TP/PD: Understanding Autism</td>
</tr>
<tr>
<td>PD: Leaders should know</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategies Applied</td>
<td>Strategies Applied</td>
<td></td>
</tr>
<tr>
<td>TP/PD: Inclusion Fear</td>
<td>TP: When Teachers Aren’t Equipped</td>
<td></td>
</tr>
<tr>
<td>TP: Teachers are not being equipped</td>
<td>TP: Differentiation</td>
<td></td>
</tr>
<tr>
<td>TP: Learning How to Collaborate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TP: Collaboration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TP: Should Include</td>
<td>TP: Should Include</td>
<td>TP: Needs</td>
</tr>
<tr>
<td>TP: Communication</td>
<td>PD/TP: Parent Communication</td>
<td></td>
</tr>
<tr>
<td>TP: De-escalation Techniques</td>
<td>TP: The IEP</td>
<td></td>
</tr>
<tr>
<td>TP: IEP Implementation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TP: The IEP Process</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TP: Autism Background</td>
<td>TP/PD: Understanding Autism</td>
<td></td>
</tr>
<tr>
<td>TP: Autism Characteristics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TP/PD Teachers Need to Know</td>
<td>TP/PD: Teachers Entering the Field should Know</td>
<td>Advice from Educators</td>
</tr>
<tr>
<td>TP/PD Teachers feel</td>
<td>TP/PD Inclusion Feelings</td>
<td></td>
</tr>
<tr>
<td>TP/PD Teacher Inclusion Feelings</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Codes and themes with "TP" or "P" refer to Teacher Preparation programming or Professional Development, respectively. Codes with both abbreviations indicate an overlap between both categories as reported by respondents.
Results for Research Question 1

The findings for research question #1 will be presented by first outlining the purpose of the question. Subsequently, the quantitative data gathered from the five survey questions linked to question one will be presented. Following this, the qualitative data obtained from the two interviews selected for question one will be showcased. Finally, both methods will be integrated to demonstrate how they collectively support the overarching findings for the research question.

RQ1: What are the experiences of K-8 general education teachers working with students with autism?

Research Question #1 explored the daily experiences of general educators teaching students with autism in inclusive classrooms from kindergarten to eighth grade. This study offered educators a platform to exchange insights on typical classroom scenarios, encompassing interactions with students with autism, colleagues, parents, and reflections on training. Its goal was to provide a comprehensive portrayal of the number of students with autism being taught and the challenges and situations confronted by the participants. To address this question, five items (19, 22, 23, 25, and 30) from the survey were analyzed using descriptive statistics and the results are shared in Table 4.4. Additionally, the coded responses to two interview questions (1 and 2) served to further explain research question one.

R1. Quantitative: Descriptive statistics and Correlations

Teaching Students with Autism. Descriptive statistics were utilized to gain insight into participants' experiences from a quantitative perspective, focusing on survey items. The initial inquiry examined the number of students with autism participants have instructed throughout their careers. Table 4.4 displays teachers’ years of experience in relation to the proportion of those who taught students with autism. Educators with varying levels of experience have or are
working with children with autism in their classrooms. Although not statistically significant, a greater percentage of experienced educators report working with students who have autism.

Table 4.4

*Years of Experience and Educators Teaching Students with Autism*

<table>
<thead>
<tr>
<th>Years of Experience</th>
<th># of Educators in Each Grade Band</th>
<th>Percent who Reported Teaching Students with Autism</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-3</td>
<td>n =13</td>
<td>25.5</td>
</tr>
<tr>
<td>4-6</td>
<td>n=10</td>
<td>19.6</td>
</tr>
<tr>
<td>7-10</td>
<td>n=12</td>
<td>23.5</td>
</tr>
<tr>
<td>11+</td>
<td>n=16</td>
<td>31.4</td>
</tr>
</tbody>
</table>

**Inclusion Experiences.** Additionally, to examine the experiences of educators teaching students with autism, I ran descriptive statistics and found that most respondents 84.3% (n=43) reported that they have taught students with autism in the past or are currently teaching students with autism. When looking at the amount of time educators have spent with students with autism, Table 4.5 shows that 76.5% (n=39) of the educators have taught a student with autism for at least half the school day.

Table 4.5

*Inclusion Experiences*

<table>
<thead>
<tr>
<th>General education teacher classroom inclusion experience</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently teaching or previously taught student with autism</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>43</td>
<td>84.3%</td>
</tr>
<tr>
<td>No</td>
<td>8</td>
<td>15.7%</td>
</tr>
<tr>
<td>Taught a student(s) with autism for more than 50% of the day?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>39</td>
<td>76.5%</td>
</tr>
<tr>
<td>No</td>
<td>12</td>
<td>23.5%</td>
</tr>
</tbody>
</table>
**Planning and Teaching.** I employed point biserial correlation analysis, to ascertain potential relationships between the variables, teaching a student with autism for more than 50% of the day and the corresponding reported ability to plan for them. Table 4.6 illustrates the positive relationship between teachers who taught students with autism for more than 50% of the day and greater confidence when planning for students with autism (r49(.33), p - .018).

**Table 4.6**

*Planning for and Teaching Students with Autism*

<table>
<thead>
<tr>
<th>Taught a student(s) with autism for more than 50% of the day?</th>
<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
<th>I can plan for students with autism.</th>
<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taught a student(s) with autism for more than 50% of the day?</td>
<td>Pearson Correlation</td>
<td>Sig. (2-tailed)</td>
<td>N</td>
<td>I can plan for students with autism.</td>
<td>Pearson Correlation</td>
<td>Sig. (2-tailed)</td>
<td>N</td>
</tr>
<tr>
<td>I can plan for students with autism.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.330*</td>
<td>.018</td>
<td>51</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td></td>
<td>51</td>
<td>I can plan for students with autism.</td>
<td>.330*</td>
<td></td>
<td>51</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.018</td>
<td></td>
<td>51</td>
<td></td>
<td></td>
<td></td>
<td>51</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).

**Pandemic Impact.** The pandemic has presented significant challenges for students with autism spectrum disorder, as changes in structured environments, social interactions, and schoolwide supports made inclusion and general education management more challenging for educators (Baweja et al., 2021). Therefore, I felt it was important to gain some understanding of how the different instructional formats impacted educators’ perceptions of working with students with autism. One open-ended survey item asked participants to contemplate the pandemic's influence on their interactions with students with autism to help explain their more recent experiences.
Table 4.7 delineates the efforts to educate students with autism as conveyed by nine participants. Forty-two respondents indicated NA, meaning they did not work with students with autism during the Pandemic. The respondents shared experiences of students being behind in social skills, communication challenges, and student teachers not receiving the necessary career experiences.

Table 4.7

*Pandemic’s Impact on Students with Autism*

<table>
<thead>
<tr>
<th>Reported Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Behind in social skills</td>
</tr>
<tr>
<td>• Built more awareness of their individual needs</td>
</tr>
<tr>
<td>• I feel like the students with autism were negatively affected by the pandemic. They missed exposure to environments and classrooms when they were online</td>
</tr>
<tr>
<td>• It impacted the relationship building…there was an extra layer of complexity in everything. Since there is so much more going on with students with autism, to begin with, it was much more challenging</td>
</tr>
<tr>
<td>• Zoom made hiding/avoidance incredibly easy and rendered my strategies to combat it useless since it removed my access</td>
</tr>
<tr>
<td>• It was challenging with communication</td>
</tr>
<tr>
<td>• Missing those key years in social development with peers</td>
</tr>
<tr>
<td>• Students lack even more social skills</td>
</tr>
<tr>
<td>• The pandemic helped identify more students with autism</td>
</tr>
</tbody>
</table>

*Accommodations and Modifications.* To delve deeper into educators' encounters while teaching students with autism, the survey incorporated a checklist, encouraging educators to detail the accommodations and modifications they implement in their inclusive classrooms to aid these students. Participants could write additional accommodation if they did not see them on the checklist. Table 4.8 presents the accommodations and modifications identified by respondents.

Educators were able to select all the strategies they utilized in their classrooms and had the option to add any additional modes of support they implemented. As an additional notation, the three most common strategies are accommodations, not modifications. Breaks were chosen
by forty-six respondents as an accommodation for students with autism, with a selection rate of 90.2%. (n=46) The next most frequently utilized accommodation, chosen by 45 respondents, was extended time, with a selection rate of 88.2%. (n=45) Visuals for instruction ranked third, selected by 41 participants at a rate of 80.4%. (n=41) The fourth strategy involved a modification, with forty-one respondents opting for assignment modifications at a rate of 80.4%. (n=41) This modification was used frequently as visuals for instruction. The least employed accommodation was the use of sensory items, with only four respondents opting for sensory tools to address sensory needs, resulting in a selection rate of 6% (n=3).

Table 4.8

*Implemented Accommodations and Modifications*

<table>
<thead>
<tr>
<th>Accommodations and modifications Implemented</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breaks as Needed</td>
<td>46</td>
<td>90.2</td>
</tr>
<tr>
<td>Extended Time</td>
<td>45</td>
<td>88.2</td>
</tr>
<tr>
<td>Visuals for Instruction</td>
<td>41</td>
<td>80.4</td>
</tr>
<tr>
<td>Modified Assignments</td>
<td>41</td>
<td>80.4</td>
</tr>
<tr>
<td>Individualized Behavior Plan</td>
<td>31</td>
<td>60.8</td>
</tr>
<tr>
<td>Paraprofessional.1:1 Support</td>
<td>25</td>
<td>49.0</td>
</tr>
<tr>
<td>Noise Canceling Headphones</td>
<td>24</td>
<td>47.1</td>
</tr>
<tr>
<td>Communication Plan</td>
<td>14</td>
<td>27.5</td>
</tr>
<tr>
<td>Assistive Technology</td>
<td>11</td>
<td>21.6</td>
</tr>
<tr>
<td>Classroom Paraprofessional</td>
<td>11</td>
<td>21.6</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1:1/Small Group Instruction</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>Alternative Seating</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>Flexible Seating; basket of fidgets/sensory toys; pass system to visit the sensory room accompanied by para</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>Sensory Toys</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>Sensory; social stories; structure and routines with visual support; music; repetition</td>
<td>1</td>
<td>1.9</td>
</tr>
</tbody>
</table>
**RQ1. Qualitative: Interview Data Results**

Interview questions 1 and 2 yielded data that addressed research question one. The qualitative responses were coded using a three-phase coding strategy. I used in Vivo coding for the first analysis phase, followed by axial coding, and then reviewed the resulting data for themes.

In total, I identified 16 codes. Three codes titled Inclusion Experiences, Barriers to Instruction and Strategies Teachers Applied resonated with the qualitative portion of Research Question #1. Interview question one will be explained in two parts. The first part will highlight the *Inclusion Experiences* (1:1) followed by *Barriers to Instruction* (1:2). In the final qualitative section addressing Research Question #1, responses to interview question two were linked to the code labeled Strategies Teachers Applied.

**Interview Question 1:1: Experiences**

Question one of the interviews asked participants to share their experiences working with children with autism. The objective, as outlined in Table 4.9, was to offer a summary of participants' encounters with students with autism and their evaluation of whether they perceived these experiences as successful or not. The reflections cited were extracted from excerpts categorized under the theme *Inclusion Experiences*, as detailed in Table 4.3. Participants' responses are directly quoted within the table.

Participants # 4, #5, #8, #9, and #10 shared insights into their encounters with students with autism in school settings, also reflecting on the emotions these experiences evoke. Participant #4 voiced concern that students with autism were lacking sufficient support. They shared that their inability to offer calming techniques, stemming from limited experience, had a negative impact on the students. Participant #5, reflecting on their first year of teaching with a
student with autism, expressed regret over feeling unprepared to provide adequate academic support, stating, "I do not feel like I was prepared, and I feel like I could have done more." Similarly, Participant #8 shared a similar sentiment, acknowledging their efforts but admitting they were not fully prepared to support the student, despite the student receiving special education services. Participant #8 additionally observed the perceived inefficacy of the support offered, resulting in significant personal effort expended without adequate preparation.

Participant #9 highlighted limitations in their experience with students with autism due to the district's practices of minimizing inclusion rights. They noted that autistic students were often segregated from general education settings, leading to limited opportunities for support. Participant #9 expressed frustration at the overreliance on separate placements for autistic students, resulting in minimal support within their own classroom.

Lastly, Participant #10 shared their experience of observing more success within the classroom environment compared to outside settings during their limited time with a student with autism. They emphasized the importance of raising awareness among others to better support the student's needs beyond the classroom, noting it as an additional barrier for the student. Although the experiences highlighted by the participants have different lenses, they all shared feelings of disservice, preparation, placement concerns, entire staff being prepared, and academic barriers due to limited training. These feelings play a significant role in the feelings of preparedness not just for the teachers involved but for fellow staff members.
### Table 4.9

**Recent Participant experiences**

<table>
<thead>
<tr>
<th>Participant #</th>
<th>Item 1: Recent Experience Working with a Child with Autism</th>
<th>Feelings of Success</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>A scholar needs calming down, and it does them a disservice because it leaves 20 others sitting and observing the behaviors [the participant had to send the student out with a behavioral team member because they could not support their behavior and it was disrupting the class, the name of the person was in the original document].</td>
<td>No</td>
</tr>
<tr>
<td>5</td>
<td>It was my first year teaching and I had one scholar with autism. I don’t feel like I was prepared, and I feel like I could have done more academically.</td>
<td>No</td>
</tr>
<tr>
<td>8</td>
<td>As far as my experience with him, I tried my best, but I can’t say I was fully prepared to deal with a student like him even though he had special ed[services].</td>
<td>No</td>
</tr>
<tr>
<td>9</td>
<td>The students that are identified as autistic are always pulled from our school, and placed in another school or are put in a classroom down below [in the basement classrooms used solely for autistic students]. The two I have in my classroom are only there to be taken to electives.</td>
<td>No</td>
</tr>
<tr>
<td>10</td>
<td>I was only with him for about 4 months, but anything within the classroom was more successful than when he left the classroom [other educators were not informed of his needs in the spaces outside of the classroom].</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Interview Question 1:2 Barriers to Instruction**

The code titled Barriers to Instruction outlined the experiences that educators faced in their classrooms, whether during instruction, planning for instruction, or supporting scholars with behaviors that, at times, impede their learning. The participants shared details when reflecting on their experiences to offer insights into what happens in their classrooms.

**Barriers Related to Planning.** Planning and implementing lessons can pose challenges for educators, especially when unsure how to make curriculum accessible for autistic students.
Participant #9 emphasized the importance of experience in effective planning, stating, "If you don't have the experience, you could be prepping incorrectly." Additionally, he noted that the curriculum often lacks focus on accommodating students with autism.

**Barriers Related to Materials.** Participant #5's statement highlights the challenges they faced during the planning process, particularly concerning the availability of materials, and underscores the emotional strain of being unable to fulfill the necessary requirements in the general education classroom. Participant #5 stated, “Sometimes you may feel like you do not have the necessary materials, and you don’t always want it to be only when they get pulled out [by the special education team] that they get the accommodations or things that they need.” The participant emphasized her eagerness to engage in planning, compared to the obstacle they encountered.

**Barriers Related to Behavior.** Although autistic behaviors vary from person to person, they are intrinsic to individuals with autism. In our research study, both survey respondents and interview participants consistently emphasized a shared theme when discussing the behavioral challenges they faced and the support they needed. For the study's focus, typical autistic behaviors mentioned included meltdowns, stimming, sensory overload, injurious behaviors, tantrums, social barriers, communication limitations, and outbursts. These behaviors were recurrently highlighted by participants in both the survey and interviews.

Barriers to supporting student behaviors can hinder educators' capacity to offer beneficial assistance. Participant #3 shared, “… a lot of times in general education classrooms, autism [autistic behaviors] will sometimes present as behavior problems.” Participant #8 emphasized, “It was a challenge working with him. I didn’t even know how to grade him; he would do something called stimming, or he would have meltdowns.”
When educators lack preparation, they often find themselves without the necessary resources when classroom situations arise. Participant #7 reflected on his feelings when sharing an experience, “It can be frazzling cause his outbursts weren’t just verbal. They were physical. If someone had the headphones that he wanted he was gonna bop him over the head to get those headphones.” Participant #4 shared that during instruction, “he [the student] would disrupt the whole class, or he’ll climb the desk, pull down his clothes, or pull up shirts.” Participant #3 also indicated that when educators are unaware of how to support behaviors that are typical for students with autism, it will result in consequences, “They don’t really do much in terms of problem-solving for students with autism, and it results in like a lot of behavioral write-ups.” The remarks made by the participants align with existing literature, highlighting the importance of educators receiving tailored professional development focused on equipping them with effective behavior support strategies to improve outcomes for students with ASD (Pas et al., 2016).

**Interview Question Two: Educator Experiences**

Interview question two encouraged participants to share their experiences with instructional methods, learning techniques, and behavioral strategies when working with students diagnosed with autism. This inquiry prompted participants to explain practical approaches and firsthand encounters with students on the autism spectrum. One of the study's objectives was to offer recommendations to educational programs and practitioners, bolstering their preparedness to support future educators effectively. Table 4.10 outlines the experiences participants encountered in learning, instruction, and behavioral strategies.

In Table 4.10, educators shared their experiences with strategies implemented to achieve success in learning, instruction, and behavior. All 10 participants contributed insights into their methods utilized during inclusion. Participants 1, 2, 8, and 10 underscored the significance of the
special education team in guiding instructional strategies for students with autism. Participants #9 and #10 also highlighted the value of involving families in planning instructional strategies and experiences for students with autism. Finally, participant #10 emphasized the importance of leveraging the educator community to share experiences and provide support, enhancing fellow educators' abilities by equipping them with learning strategies that enhance their overall experiences teaching students with autism.
### Table 4.10

**Strategies Teachers Applied**

<table>
<thead>
<tr>
<th>Participant #</th>
<th>Learning Strategy</th>
<th>Instructional Strategy</th>
<th>Behavioral Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pre-planning for instruction and ensuring work systems were prepared. To-do list</td>
<td>Utilize the autistic support team to review my lesson plans</td>
<td>Incentive systems with preferred rewards</td>
</tr>
<tr>
<td>2</td>
<td>Repetition of words and skills</td>
<td>Utilize the Special Education Team for documented instructional needs</td>
<td>Communicate changes to keep systems consistent</td>
</tr>
<tr>
<td>3</td>
<td>Peer buddy Visual schedule</td>
<td>Choice Boards Scaffolding information</td>
<td>Learned triggers to prevent shutdowns Flexible with student needs for comfortability</td>
</tr>
<tr>
<td>4</td>
<td>Extra work time, possibly less homework Differentiated assignments</td>
<td>1:1 instruction after whole group lesson</td>
<td>Offer more frequent breaks when they are showing signs or reaching capacity</td>
</tr>
<tr>
<td>5</td>
<td>Manipulatives during instruction Guided notes</td>
<td>Same behavior expectation plan for norms, but extra time to minimize frustration or anxiety</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Work to break ratio</td>
<td>Safe Space in the classroom to work if feeling overwhelmed</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Visual Schedule on the Board</td>
<td>Practice patience when they seem upset</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Daily Structure</td>
<td>Wait time during instruction Ask the IEP team Modified assignments</td>
<td>IEP review for behavior strategies Frequent Observations Meeting with parents</td>
</tr>
<tr>
<td>9</td>
<td>Communicate with family about academic needs</td>
<td>Rewards and incentives for motivation Minimize loud noises/talking</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Checklists on the desk Being prepared ahead of time Created a committee for transition to my class fellow educators to learn how to support autistic students</td>
<td>Utilize the special education Preferential seating to accommodate needs.</td>
<td></td>
</tr>
</tbody>
</table>

**Research Question #1 Mixed-Method Analysis**

Research question #1 delved into the experiences of general education teachers while teaching students with autism. By analyzing survey responses and conducting interviews, various
themes emerged, illuminating participants' encounters and how they are influenced by their preparedness. These themes centered on their capacity to plan for students with autism, the strategies employed, the requisite support for achieving success, and the significance of reflection in shaping their overall experiences.

I examined educators’ experiences to assess the amount of time they are responsible for teaching students with autism. The data revealed that 84% (n=43) of educators have taught students with autism, with 76% (n=39) reporting that they have taught such students for more than 50% of the day. This underscores that these educators have substantial experience with including students with autism and necessitates an exploration of the practices occurring in their classrooms.

Educators who reflected on their experiences educating students with autism revealed that they have been employing various accommodations and modifications to support their students. The highest percentage of support revolves around providing breaks as needed (90.2%, n= 46 ), extending time for tasks (88.2%, n= 45), utilizing visuals for instruction (80.4%, n=41), modifying assignments (80.4%, n=41), implementing behavior plans (60.8%, n=31), and engaging a paraprofessional for 1:1 support (49%, n=25 ). These supports have demonstrated efficacy in benefiting students with autism, and their successful implementation requires that educators meticulously plan for their students' needs to foster success within their general education inclusion classrooms.

Planning for students with autism entails drawing from many resources, with the ability to plan and execute depending on educators' training and expertise. When queried about the learning, instructional, and behavioral strategies employed in their classrooms to accommodate students with autism, educators shared insights encompassing pre-planning, incentives and
rewards, visual aids, breaks, noise management, structured environments, and designated safe spaces. While implementing these strategies positively impacted their experiences with students with autism, participants, particularly #1, #2, #8, and #10, emphasized the necessity of leveraging individuals with special education backgrounds for effective planning. Special education teams were tapped for instructional support, autistic support teachers reviewed lesson plans, IEP teams modified assignments and ensured readiness for student transitions, and behavior strategies were sought from IEP teams. Participants #9 and #10 underscored the importance of involving families in academic support and preparation. Notably, Participant #10 initiated a committee to facilitate the preparation of fellow educators to support autistic students.

Educators frequently encounter obstacles in effectively supporting students with ASD around behavior, academic and social needs, often hindered by their own limitations due to training (Al Jaffal, 2022). Participants stressed the crucial role of support from special education teams and colleagues, recognizing its value in addressing unforeseen behaviors. Reflecting on their experiences, educators expressed feelings of inadequacy and apprehension regarding perceived shortcomings within their environments. They underscored the significance of receiving assistance from special education teams and colleagues, particularly in navigating behaviors they couldn't anticipate alone.

**Results for Research Question #2**

The analysis of research question two commences with an explanation of its purpose, followed by the quantitative presentation of data from the eight survey questions linked to the research question. Subsequently, the findings from the data will be reviewed and correlated with the outcomes necessary to address research question two.
RQ2: How do general educators report their preparedness for teaching students with autism (e.g., autism-specific programs, professional development, field experiences, and coursework related to autism)?

Research question #2 used a quantitative method (survey) to provide educators with a platform to express their perceived preparedness in teaching students with autism, drawing from their training and interactions with autistic students during preparation. This aspect was pivotal to the study as it allowed educators to pinpoint some sources of their inclusionary preparation. The question was answered through responses to survey questions 13, 14, 15, 18, 20, 21, 24, and 28.

Quantitative Data Supporting Question # 2

Descriptive statistics are detailed in Table 4.1 and visually represent educators' opportunities for preparedness during their teacher preparation programs. The table includes data on field experiences, the number of courses related to students with disabilities and autism, and the impact of the pandemic on student teaching experiences. The table describes the opportunities during coursework for participants to engage in courses covering students with disabilities and those that focus explicitly on autism, if any, that were offered during pre-service.

Teacher Preparation Experiences. On Table 4.11, it is noted that 51% (n=26) of the respondents had courses that included preparation for students with disabilities; however, when asked about the emphasis on teaching students with autism, 11% (n=6) said it was present in their general education courses. Additionally, the question was posed: how many students with autism were present in their field experiences and stayed in the classroom; 94% (n=48) of the respondents encountered no more than two students during their fieldwork or student teaching that stayed in the general education classroom. Lastly, when reflecting on the pandemic effects
on student teaching and preparedness to teach students with autism, 5.9% (n=3) of the respondents did complete student teaching during the pandemic; those respondents also reported not being prepared to teach students with autism.

**Table 4.11**

*Autism and Teacher Preparation Experiences*

<table>
<thead>
<tr>
<th>Teacher Preparation and Autism Education</th>
<th>N</th>
<th>%</th>
<th>Missing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of students with autism in fieldwork/student teaching that stayed in the classroom</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>24</td>
<td>47.1</td>
<td></td>
</tr>
<tr>
<td>1-2</td>
<td>24</td>
<td>47.1</td>
<td></td>
</tr>
<tr>
<td>3-4</td>
<td>2</td>
<td>3.9</td>
<td></td>
</tr>
<tr>
<td>5+</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Teaching students with autism emphasized in gen ed courses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>6</td>
<td>11.8</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>45</td>
<td>88.2</td>
<td></td>
</tr>
<tr>
<td>Number of Courses focused on autism</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>41</td>
<td>80.8</td>
<td></td>
</tr>
<tr>
<td>1-2</td>
<td>9</td>
<td>17.6</td>
<td></td>
</tr>
<tr>
<td>3-4</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Did general education courses include preparation for students with disabilities?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>26</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>24</td>
<td>47</td>
<td>1</td>
</tr>
<tr>
<td>Completed Student Teaching during the pandemic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>3</td>
<td>5.9</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>48</td>
<td>94.1</td>
<td></td>
</tr>
<tr>
<td>Student Taught during the pandemic and prepared to teach students with autism</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>3</td>
<td>5.9</td>
<td></td>
</tr>
<tr>
<td>Missing responses (due to not being applicable)</td>
<td>48</td>
<td>94.1</td>
<td></td>
</tr>
</tbody>
</table>

**Preparation Impact.** Table 4.12 depicts the perceived effects of training received for educating students with autism. Survey respondents evaluated and prioritized the most influential training experiences that enhance their preparedness for teaching autistic learners. The survey
presented six choices, including teacher preparation programs, support from family and/or friends with autism, and training within and outside educational institutions for participants to prioritize. Notably, one respondent did not complete this section. The sample size for Table 4.12 is n = 50.

The tabulated data reveals the hierarchy of supportive resources from most to least impactful. The analysis indicates that colleagues and family members or acquaintances with autism were rated as the highest sources of knowledge. Approximately 29.4% (n=15) of participants identified colleagues as the most influential, while 25.5% (n=13) attributed the second highest impact to family members and/or friends with autism. Interestingly, no participants ranked learning from school administration as having the top impact; only 9.8% (n=5) rated it as the second most impactful. External professional development was deemed most impactful by 7.8% (n=4) of the respondents. Notably, only 15.7% (n=8), regarded teacher preparation as the most impactful source of information, whereas 19.6% (n=10) of the respondents felt school-based professional development provided the most effectual information.

**Table 4.12**

*Reported Source of Impactful Information*

<table>
<thead>
<tr>
<th>Area of Impact</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colleagues</td>
<td>15</td>
<td>29.4</td>
</tr>
<tr>
<td>Family members/and Friends with Autism</td>
<td>13</td>
<td>25.5</td>
</tr>
<tr>
<td>School-based Professional Development</td>
<td>10</td>
<td>19.6</td>
</tr>
<tr>
<td>Teacher Preparation</td>
<td>8</td>
<td>15.7</td>
</tr>
<tr>
<td>Administration</td>
<td>5</td>
<td>9.8</td>
</tr>
<tr>
<td>Outside Professional Development</td>
<td>4</td>
<td>7.8</td>
</tr>
</tbody>
</table>
**Self-Perceived Ability.** To assess the self-perceived ability of educators to teach students with autism based on the coursework and training they have received, a 4-point Likert Scale item was presented during the survey. The options given were Strongly Agree (SA), Agree (A), Strongly Disagree (SD), and Strongly Disagree (SD). Table 4.13 (n=51) outlines the Likert scale findings relevant to how participants reported preparedness for working with students with autism.

**Comfort for Teaching Students with Autism.** The first five items outlined on Table 4.13 sought respondents' perceptions of their comfortability and know-how for identifying students with autism, reading and implementing IEPs, planning, managing behaviors, and inclusive teaching. Ninety-six percent (n=49) of participants felt they could identify the characteristics of autism and 80% (n=40) indicated they were comfortable teaching students with autism in an inclusive setting. Fewer participants reported as much confidence in implementing IEPs (76.5%, n=39), planning for students with autism (70%, n=35), and managing students’ behavior (66.5%, n=34).

**Additional Coursework.** Although participants reported higher levels of comfort for working with students with autism when asked if it would have been beneficial to have had additional coursework to support students with autism, 96% (n=49) agreed or strongly agreed additional coursework would have been helpful. These findings highlight that although respondents report some strengths in their teaching abilities, most feel that additional coursework would have been advantageous.
Table 4.13

**Preparedness for Students with Autism**

<table>
<thead>
<tr>
<th>Likert Scale Questions</th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>S D</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can identify the characteristics of autism</td>
<td>29.4%</td>
<td>66.7%</td>
<td>3.9%</td>
<td>0%</td>
</tr>
<tr>
<td>I am comfortable with reading and implementing my students’ IEPs that have autism.</td>
<td>27.5%</td>
<td>49%</td>
<td>23.5%</td>
<td>0%</td>
</tr>
<tr>
<td>I can plan for students with autism.</td>
<td>21.6%</td>
<td>49%</td>
<td>29.4%</td>
<td>0%</td>
</tr>
<tr>
<td>I feel comfortable helping students with autism manage their behavior.</td>
<td>23.5%</td>
<td>43.1%</td>
<td>33.3%</td>
<td>0%</td>
</tr>
<tr>
<td>I am comfortable with teaching students with autism in my inclusion classroom.</td>
<td>27.5%</td>
<td>52.9%</td>
<td>19.6%</td>
<td>0%</td>
</tr>
<tr>
<td>I would have benefited from additional coursework to support students with autism.</td>
<td>82.4%</td>
<td>13.7%</td>
<td>2%</td>
<td>2%</td>
</tr>
</tbody>
</table>

**Planning Compared to Coursework.** Table 4.14 highlights the Point Biserial correlations that were conducted to determine if there was a relationship between participants who reported they had general education coursework related to teaching students with autism and their reported confidence. Relationships were identified where participants reported on their ability to plan for students with autism \( (r_{p}=.298), p = .034 \) and feelings of comfort for managing behavior \( (r_{p}=.292), p = .038 \). These positive correlations reflect those participants who had coursework relating to students with autism in their general education classes felt more confident when planning for and managing students with autism.
Table 4.14

Correlation Table: Likert Items and Teacher Preparation

<table>
<thead>
<tr>
<th>Item</th>
<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
<th>Teaching students with autism covered in gen ed courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am able to identify the characteristics of autism</td>
<td>.173</td>
<td>.225</td>
<td></td>
</tr>
<tr>
<td>I am comfortable with reading and implementing my students' IEPs that have autism.</td>
<td>.151</td>
<td>.291</td>
<td></td>
</tr>
<tr>
<td>I can plan for students with autism</td>
<td>.298*</td>
<td>.034</td>
<td></td>
</tr>
<tr>
<td>I feel comfortable helping students with autism manage their behavior.</td>
<td>.292*</td>
<td>.038</td>
<td></td>
</tr>
<tr>
<td>I am comfortable with teaching students with autism in my inclusion classroom.</td>
<td>.226</td>
<td>.111</td>
<td></td>
</tr>
</tbody>
</table>

Note. Correlation is significant at the 0.01 level (2-tailed **). The correlation is significant at the 0.05 level (2-tailed*).

Research Question #2 Quantitative Analysis

Research Question #2 investigated how general educators reported their preparedness for teaching students with autism concerning sources of education, such as autism-specific training, professional development, and coursework related to autism. Themes emerged regarding the necessity of training for educators' preparedness, the significance of autism-related coursework combined with field experiences, the influence of the pandemic on preparation, and the effects of various training options on teacher readiness.

When examining educators' initial opportunities to interact with students with autism within the framework of a training program, it is crucial to highlight the opportunities presented during preparation programming. Table 4.11 presents the survey findings using descriptive statistics.
Respondents noted their chances to engage with and learn about students with autism during their courses and field experiences. Eighty-one percent (n=41) of respondents reported not having any courses solely focused on autism, while 88% (n=44) mentioned that autism was not emphasized in their special education courses for general education teachers when learning about special education topics. It is worth noting that before engaging in fieldwork or student teaching experiences, educators reported having limited exposure to learning about autism and minimal interaction with students with autism during their field coursework.

During the survey, educators were prompted to reflect on their interactions with students with autism, particularly during their fieldwork and student teaching experiences. Forty-seven percent (n=24) of respondents reported not encountering any students with autism in the general education classroom during their student teaching or fieldwork, while an equal percentage had one to two students with autism present in their classroom. This indicates that almost half of the educators had no students with autism in their field classrooms, with 94.2% having zero to two students during their student teaching or field experience coursework. Additionally, the impact of the pandemic on student teaching was considered in terms of preparedness for students with autism. Three respondents mentioned that they student-taught during the pandemic, all of whom expressed feeling unprepared to teach students with autism.

The findings from Table 4.11 overall revealed limited coursework focusing on students with autism, minimal exposure to students with autism for most respondents, and those who student-taught during the pandemic reported feeling unprepared to teach students with autism. This data is crucial when examining why some educators feel ill-prepared for students with autism, particularly as many educators enter schools without prior experience in learning about autism during their coursework and fieldwork. During the study, 19.6% (n=10) of respondents
reported having courses that covered autism, while others had students with autism in their fieldwork. Understanding where educators received their knowledge and how it influenced their preparedness to support students with autism is vital.

To add another lens into how educators report their preparedness, they could share the impact each training area received. Respondents ranked training areas, and Table 4.12 portrays the percentage of respondents that chose each area to be the most impactful. The respondents felt that colleagues were the most impactful when obtaining knowledge about teaching students with autism, followed by family members and or friends with autism. Eighteen respondents total felt that professional development and teacher preparation was impactful with professional development ranking higher. This data is consistent with what respondents are reporting about feeling ill-prepared, and as educators previously stated, 88% of them emphasized that they did not have any focus on autism in their general education coursework, which showed to have a lesser impact on their inclusion abilities.

A major component for educators, as shown in the data from research question #2, is the need for additional coursework opportunities related to teacher preparedness. Educators could affirm areas of planning and comfort related to students with autism. The category with the strongest response at 82.4% was the statement I would have benefited from additional coursework to support students with autism. Educators *Strongly Agreed* that this would have been a major benefit to add to more of their educational abilities. To further examine the effects of teacher preparation, a biserial correlation was run, and it was found that educators’ ability to have comfort with planning and behavior management was directly correlated to teaching students with autism, which was covered in their general education coursework. The data
showed that the more coursework that highlighted teaching students with autism, the more educators’ ability will increase.

Research question #2 showed that educators are asking for additional training to feel better prepared. The teacher preparation programming that they have received has not been as impactful as support offered from friends and or family with autism and their colleagues. Participants reported professional development is not as impactful for educators as is intended. Data on educators’ beliefs about the type of professional development needed should be considered when planning for educators because they are reporting that what they do receive is not enough to be effective.

Results for Research Question # 3

The presentation of findings for research question #3 will commence with an overview of the question's purpose. Subsequently, the quantitative data collected from six survey questions pertaining to RQ3 will be presented. The qualitative data obtained from four interview questions will be highlighted. Lastly, both methods will be analyzed and synthesized to illustrate how they collectively substantiate the overarching findings for the research question.

RQ3: How do professional development experiences and teacher preparation programs support teachers in effectively educating students with autism in the general education classroom?

a. What aspects of teacher preparation do general education teachers report are the most beneficial to help them address the needs of students with autism in their general education classrooms?

b. What preparatory experiences do general educators in grades K - 8 believe would have helped them to better support students with special needs in the general education classroom?
Research Question #3 explores how well participants believe their professional development and teacher training prepared them to educate students with autism. It also investigates which aspects of their teacher preparation programs they found most helpful and how these experiences contribute to inclusive classroom practices. We employed descriptive statistics to present and elucidate the findings derived from survey items (12, 26, 27, 29, 31, and 32). Our goal was to illustrate how both pre-service education (teacher preparation programs) and in-service education (school-wide professional development) influence educators' ability to support students with autism. Additionally, I used insights from coded interview responses to address interviews (items 3, 4, 5, and 6) and to provide further explanations for the findings of Research Question #3.

**RQ3. Quantitative: Descriptive Statistics**

Primary Content of Special Education Coursework. Descriptive statistics were run to understand what educators completing the survey felt was the primary content of their special education courses. They could choose multiple options as many courses offer more than one special education topic. Table 4.15 shows how educators reported on each category. Topics around the IEP, Instructional Strategies, Law, and Disability Characteristics were the topics chosen the most by 45% of the participants. The participants were allowed to add other areas not outlined and 12% (n=6) had individual reflections to share about their primary content. Two of the respondents did not feel like the course content was clear and another felt it was a “smattering of everything.” Lastly, one participant reported autism was a primary topic in their special education course.
Table 4.15

Primary Content of Special Education Courses

<table>
<thead>
<tr>
<th>Course Content</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>The IEP and Paperwork</td>
<td>24</td>
<td>47.1</td>
</tr>
<tr>
<td>Instructional Strategies</td>
<td>23</td>
<td>45.1</td>
</tr>
<tr>
<td>Special Education Law</td>
<td>23</td>
<td>45.1</td>
</tr>
<tr>
<td>Disability Characteristics</td>
<td>21</td>
<td>41.2</td>
</tr>
<tr>
<td>Behavior Management</td>
<td>11</td>
<td>21.6</td>
</tr>
<tr>
<td>Assessments</td>
<td>9</td>
<td>17.6</td>
</tr>
<tr>
<td>Special Education Reading Instruction</td>
<td>8</td>
<td>15.7</td>
</tr>
<tr>
<td>Special Education Math Instruction</td>
<td>2</td>
<td>3.9</td>
</tr>
</tbody>
</table>

Other Topics

- Autism Spectrum Disorders                          | 1  | 2   |
- Basic Overview                                     | 1  | 2   |
- Primary Content “Unclear”                          | 1  | 2   |
- Can’t recall                                       | 1  | 2   |
- “Smattering of Everything”                         | 1  | 2   |
- An Adaptive Physical Education Course              | 1  | 2   |

Additional Content Should be Added. Table 4.16 outlined the autism related content that respondents felt should be added. The survey allowed respondents to suggest additional coursework they believed should have been included in their preparation programming regarding students with autism, with the option to select all that they deemed necessary. Results revealed that the content area considered most essential to be added was social skills, chosen by 78.4% (n=38) of respondents. Similarly, respondents indicated that Behavior Management should be incorporated into the curriculum, with a selection rate of 72.5% (n=37). Notably, educators prioritized learning to provide social skills and behavioral support over instruction in language and communication. Three respondents expressed the need for other topics not listed in the survey. These topics included coaching and support involving families and strategies for
communicating with them. Conversely, one participant felt that no additional content was needed in the coursework.

**Table 4.16**

*Autism-related Content Added to College Coursework*

<table>
<thead>
<tr>
<th>Content Should be Added to Coursework</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Skills</td>
<td>40</td>
<td>78.4</td>
</tr>
<tr>
<td>Behavior Management</td>
<td>37</td>
<td>72.5</td>
</tr>
<tr>
<td>Instructional Teaching Strategies</td>
<td>32</td>
<td>62.7</td>
</tr>
<tr>
<td>Language and Communications</td>
<td>2</td>
<td>60.8</td>
</tr>
<tr>
<td>None should be added</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Communication Strategies/Coaching with student and family</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Explaining autism to caregivers in a way they can comprehend. Working with families to support students with autism</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Parental involvement</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

**Professional Development Topics.** Understanding educators' priorities in professional development topics is crucial for informing school leaders about preparing educators to teach students with autism. Most respondents selected Behavior Management as their top priority, with a selection rate of 72.5% (n=37). Additionally, Social Skills training was deemed important by 62.7% (n=32) of respondents. When comparing the topics of Social Skills training and Behavior Management as outlined in coursework Table 4.17, the two areas were equally prioritized by respondents in Professional Development. Lastly, educators equally desired support in Social Skills and Instructional Strategies, both with a selection rate of 60.8% and (n=31). Respondents were also encouraged to suggest additional areas for professional development, with one respondent opting for training in Communicating with Parents.
Table 4.17

*Educator Suggested Professional Development Topics*

<table>
<thead>
<tr>
<th>Topic Areas</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavior Management</td>
<td>37</td>
<td>72.5</td>
</tr>
<tr>
<td>Social Skills</td>
<td>32</td>
<td>62.7</td>
</tr>
<tr>
<td>Instructional Teaching Strategies</td>
<td>31</td>
<td>60.8</td>
</tr>
<tr>
<td>Language and Communications</td>
<td>31</td>
<td>60.8</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communicating with Parents</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

**Additional Professional Development Skills.** Participants were asked to drill down to suggest specific content and skills within the professional development topics, that they would find useful. This item was open-ended allowing the participants to identify skills they would like to work on. A portion of respondents, 21% (n=11), requested specific skills and content related to behavioral support, such as behavior management strategies, behavior plans, triggers, methods for minimizing irritability, strategies for avoiding meltdowns, and recognizing stimming. Participants noted the need to learn specific communication skills such as speaking with parents about their child and collaborating with special educators. This emphasis on parent communication came across several times, signifying the importance to teachers. Ten percent of respondents also requested support regarding instruction and planning for students. Thirty respondents offered suggestions for additional professional development topics. Four respondents indicated they had nothing to add, stating that nothing was needed. Table 4.18 below displays the additional suggested professional development skills and content provided by respondents.
### Table 4.18

*Suggested Skills to be added to PD Topics*

<table>
<thead>
<tr>
<th>Content added to PD for teaching autistic students</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning of the year planning meetings with Special Education team to review individual student plans</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Behavior Charts and Sensory activities</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Behavior Management</td>
<td>4</td>
<td>6.9</td>
</tr>
<tr>
<td>Classroom Design and Layout, Restraint Training, Additional Differentiation Strategies</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Classroom Management and Multi-Sensory Lesson Planning</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Strategies to Implement school-wide behavior programming with students with autism</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Learning from sped colleagues</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Family Communication</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Managing meltdowns and how to avoid them</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Supporting autistic girls and autistic students without cognitive delays and those who are twice exceptional</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Resources to keep engagement when there is no additional staff for support</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Instructional/teaching Strategies</td>
<td>4</td>
<td>7.9</td>
</tr>
<tr>
<td>Language and Communication, Behavior Management, Social Skills</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Meltdowns, how to manage other behavior issues related to irritability and autism</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Navigating Group Work</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Recognizing stimming</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Protocols for students that everyone is aware of their plan and coaching on what to do in specific situations. No books around “Helping My Students with Autism”</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Talking with parents about their child and collaboration with the special education teacher</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Understanding, Consistency, and Flexibility</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Use and implementation of communication devices</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>No additional skills needed</td>
<td>4</td>
<td>8</td>
</tr>
</tbody>
</table>

**Thoughts to Consider.** Survey item # 31 provided educators with an additional opportunity to amplify their voices during the survey. Educators were asked if there was any additional information they would like to share with teacher preparation programs or school leaders that would be beneficial when planning to include students with autism. Eighteen
educators shared what they thought leaders should know as they plan coursework and training for teaching students with autism. Overall, participants reinforced prior concerns about where they attain information and emphasized the importance of additional knowledge about teaching students with autism. Similar to the results provided in Table 4.12, respondents noted the importance of learning from colleagues. The respondents provided clear feedback for leaders regarding their concerns about including students with autism and how they acquire new knowledge.
Table 4.19

Thoughts to Consider from Educators
Information to share with teacher preparation programs or school leadership

- Autistic children vary, and everyone should be equally aware of how autism presents itself in academic environments.
- Because inclusion is often more typical than not, having practicing field experience in varying classrooms (from life skills to general education classrooms) would be beneficial.
- Behavioral Plan, Rest, and Assignment Modification
- Definitely a course dedicated to teaching students with autism. So many students are included in the regular ed classroom. I was not prepared early in my career. I did not have any experience or resources.
- Every student is different. You need to reach out to families and develop relationships at the beginning of the school year. Have a meeting and learn their triggers as well as their strengths.
- I feel unprepared but can identify students who may be autistic.
- If you have a student with autism, taking time to educate yourself about autism as well as open communication with the student's family is paramount.
- In my experience, I believe teachers need to have training in behavior management of students with Autism.
- It needs to be included in the general Ed curriculum. All teachers teach all students. We need to be prepared.
- It would have been beneficial to know how to differentiate based on autistic characteristics. It would have been beneficial to be taught how to interact with family and support them.
- Just more of how to help them adjust in the classroom and how to teach to their skill level.
- No two scholars who have autism are the same, so there is no “one-size-fits-all” approach to effectively teaching them and helping them to grow. Working with families who know the scholars best is the ideal way of learning how to teach them and to provide them with a quality education.
- Paraprofessional or assistant support is needed.
- Preparation must be prioritized over marketing. I know students want to get that degree in four years or a master’s in 5, like in other areas, but if the preparation cannot be squeezed in that time, do not do it. Also, the learning and preparation happens in classrooms in k-8 schools, not college campuses. Pre-service teachers must be in the classrooms of k-8 schools from the beginning of the declaration of their major for a long time.
- Professional development for the general Ed teachers teaching in an inclusive environment.
- Programs should allow more field placements with inclusion classrooms. i.e., the student population has scholars who receive general and special education in the same classroom.
- We were not prepared, and what we learned was not enough. It is different in the classroom. It is downplayed in college and then when we are in class, we are solely responsible. Professional development never talks about students with disabilities or autism, so we do not know where we would get knowledge unless we ask each other.
- We need training on meltdowns. We need training in helping navigate social norms.
**Teacher Preparation Reflection.** In survey question #32, educators were queried about whether they felt it would have been beneficial to be informed about the importance of being prepared to teach students with autism. Out of 51 respondents, 46 indicated they would have appreciated such information. Moreover, they were provided with the opportunity to elaborate on why they believed this awareness would have been essential, and the responses echoed similar sentiments. Many underscored the significance of feeling unprepared when teaching students with autism, the need to conduct independent research, and the reassurance gained from having autistic students in their classrooms due to their prevalence, which helped to alleviate intimidation.

**Research Q3. Qualitative: Interview Data Results**

Interview questions three through six provided the data responding to research question three. Interview participants were asked to share insights into skills they believe to be necessary for teacher preparation programs and professional development. Additionally, when looking at teachers’ feelings of efficacy, they reflected on how skill gaps in teacher preparation programs and limitations in professional development affect their feelings of preparedness. The qualitative responses were coded using a three-phase coding strategy. The coding commenced with in Vivo coding, followed by axial coding with a final review of the results for themes. Each interview question was associated with codes that corresponded to the specific themes discussed in that question.

**Interview Question Three: Necessary Teacher Preparation Skills.**

Educators were asked to discuss what skills should be developed in teacher preparation programs. The theme, *Teacher Preparation Needs* was supported by the codes connected to
research question #3 which are Differentiation, The IEP, De-Escalation Techniques, Understanding Autism, and Parent Communication.

**Differentiation.** When asked about the necessary teacher preparation programming skills for educating students with autism, two participants emphasized the importance of including differentiation in the coursework. Participant #10 emphasized the importance of differentiation when they stated, “Learning realistic ways to differentiate instruction and like scaffolding appropriately to the many different learning needs is important.” Additionally, Participant #5 identified what they felt would be beneficial when discussing the need for differentiation. They stated, “Differentiation instruction and different manipulatives that would support the student while being able to teach the gen-ed curriculum regardless of grade level would be helpful.”

**The IEP.** Two interview participants stressed the need for proficiency regarding the awareness and implementation of the Individualized Education Program (IEP). They felt that their coursework should include this topic to feel adequate. Participant #3 stated, “I do not feel that there is enough about the IEP in teacher preparation programs, especially for general education teachers.” Additionally, participant #3 wanted to understand their responsibilities for the IEP process. Participant #3 emphasized, “In terms of what a general education teacher would need to know in order to go into a classroom and have special education students, you need to know like what an IEP is, what is on an IEP, and what are my responsibilities as a general education teacher?” Participant #6 states, “IEP training would have been really helpful.” However, reflecting on how some of his friends who attended different colleges than he did felt better prepared, he stated, “I know some of my peers were able to sit in on IEP meetings and things like that, and it was helpful for them. However, I do not think it was required in our
student teaching.” The participants emphasized the importance of understanding the IEP as an essential aspect of teacher preparation,

**De-Escalation Techniques.** Four participants highlighted the need for de-escalation techniques to be added to teacher preparation programs. Participant #1 said, “There is a lack of training on de-escalation of behaviors.” Participants #4 and #8 both expressed that there is an importance in “Learning different techniques on how to de-escalate.” As additionally noted by Participant #4, de-escalation strategies are important for when they [students] are “triggered.” Participant #10 reflected on her teacher preparation programming, “In order to either calm scholars or de-escalate any situations in which they may become, you know, overstimulated or upset, or anything like that. I think that is something that was missing during my teaching education.” These experiences are significant to grasp, as participants deem the ability to de-escalate students with autism an important aspect that should be included in teacher preparation programming.

**Understanding Autism.** Interview participants emphasized the importance of obtaining a proficient understanding of autism following their graduation from teacher preparation programs. Seventy percent (n=7) of the participants expressed the need to understand autism, which was present under the two themes, *Teacher Preparation Needs* and *Professional Development Needs*. During their interviews, the needs expressed for coursework around autism were important to participants.

The participants emphasized the importance of coursework due to their own limitations and the prevalence of autism. Participant #8 called attention to the growing population of children with autism as compared to the need for pre-service teacher understanding and emphasized, “Since autism has become so prevalent, I think they need a course on
Participant #9 stated, “I just needed a course, and I feel like I still need a course. Now, I mean. I still at times show ignorance towards children with autism, because I don't know as much as I think I do.” Reflecting on his desire for autism coursework, the participant also acknowledges that to date, he still feels insufficiently informed. Participant #6 also shared a reflection about their program when stating, “I know for myself. While I was going through college, I never had a class that was dedicated to teaching students with autism ever.” As a suggestion, Participants #1, #2, #5, and #9 shared their ideas that the course should provide more information about characteristics and typical behaviors.

This insight was shared by participant #10 as another important reason for teacher preparation, “As someone whose life has not been affected by autism. I would like to know more of the dimensional side of it, and how to be better and better teach those scholars.” Participant #10's statement underscored their lack of personal connection to autism, highlighting the necessity of training for their growth and ability to understand how to teach their students effectively.

**Parent Communication.** The participants emphasized the significance of communicating with parents under the themes, *Teacher Preparation Needs* and *Professional Development Needs*. Two participants believe mastering this skill should be a priority before entering the classroom. Participant #9 said, “You need a course on how to properly approach a parent because a lot of parents may be in that mode of, there's nothing wrong with my child. There is nothing wrong. So, you need to also have a proper course on how to properly address that situation with a family.” The ability to connect with parents is a legal necessity that Participant #4 says is needed because she was not aware of what is legally okay to say to parents, in her interview, she shared that when it comes to families of children with autism, “it's just like I
want to be able to know as much as possible. But I don't know if I'm allowed to tell the parents what to do to exercise their parental rights.” Both interview participants and survey respondents, as outlined in Tables 4.12, 4.15, and 4.18, advocate for the introduction of practicing communication skills with parents during teacher preparation programming. The participants' contributions underscore the importance of teacher training programs prioritizing collaboration and effective communication with parents, as highlighted in the study by Bolourian et al. (2021).

**Interview Question Four: Professional Development Skills**

Educators were prompted to identify the skills they believe should be covered during professional development concerning students with autism. One code was relevant to answering interview question #4, *Professional Development Needs*. Professional development needs will be outlined in Table 4.20 as reported by participants.

**Professional development Needs.** During the interview, all participants gave insight into skill areas and delivery options that should be addressed during school-wide professional development that would enhance their ability to teach students with autism. While analyzing the data, I found that educators chose four emerging needs the most when reflecting on necessary skills and ideas for professional development, as outlined in Table 4.20.

In total, thirty-nine suggestions emerged around professional development, however four emerged as the most crucial according to educators' responses. The training area with the most responses were opportunities for co-planning/collaboration. Fifty percent of those interviewed (Participants #3, #4, #5, #6, and #8) wanted to obtain skills by having opportunities for collaborative planning with special education teams and other general education teachers. Four of the educators (Participants #1, #6, #7, and #9) highlighted the importance of receiving personalized coaching tailored to their individual students. Participants also stressed the
significance of professional development tailored specifically to their students rather than being overly generalized, as this ensures that they derive the maximum benefit from the skills acquired.

Three of the educators (Participants #7, #8, and #10) emphasized the importance of having access to educational videos that demonstrate effective teaching techniques for students with autism. Participant #10 stated that they wanted less papers [given during training]. All three participants stressed the value of observing autistic behaviors in these videos and gaining a deeper understanding of how educators can offer support in such situations. Lastly, two of those interviewed (Participant #'s 5 and 10) shared that they needed to experience hands on training opportunities to learn skills to support their students.
Table 4.20

Educators' Suggestions for Professional Development

<table>
<thead>
<tr>
<th>Participant PD Skill Suggestions/ training options</th>
</tr>
</thead>
</table>
| 1. Antecedent, behavior and then consequences of these actions  
  Behavior Management Plans  
  Starting the year with staff understanding that all students are welcome, regardless of diagnosis, cognitive development or skill, academically, socially  
  Offering specifics on to help their own students effectively |
| 2. Various activities or strategies  
  Giving teachers examples and allowing brainstorming |
| 3. What we should do for students with high functioning ASD.  
  Opportunities to collaborate with previous teachers |
| 4. Ongoing professional development about autism throughout the year to support needs being met for teachers and students  
  Collaboration with all team members  
  What do we do when student needs aren’t met  
  How to de-escalate and keep scholar's calm |
| 5. Having someone coach while teaching a student with autism  
  Teach the skill then follow-up  
  Training on what to look for with autism that are specific to the students in your building  
  Hands on training  
  Offering a resource hub where teachers can find supports for autistic students  
  Co-planning opportunities |
| 6. Communicating with scholars with autism  
  Training for educators to support social skills within the classroom between student and peers  
  Training targeted towards our scholars  
  Time to sit and plan with case managers around curriculum for our scholar needs |
| 7. Professional development that creates awareness around autism  
  Providing specific strategies so that you know how to serve our own individual students with autism  
  Using videos for us to observe others in classes servicing students with autism  
  Inviting educators to be a part of the process that know about autism |
| 8. Sensitivity training  
  Modification and differentiation of assignments  
  Time for collaboration with special education team  
  Videos to teach teachers about autism and how to teach |
| 9. More PD’s outside of beginning of the year  
  Offer a survey that asks educators what they know about autism and then teach them that  
  How to make the curriculum in sync with autistic students  
  Bring in an expert to train teachers and coach and model  
  Videos so that we can see and hear and less papers |
| 10. Showing us the people in the building that are resources like autism support teachers  
  Show us something outside of just differentiation  
  Something hands-on and videos to watch and let us go to conferences  
  De-escalation strategies |
**Interview Question Five: How Teacher Prep Skill Gaps Affect Preparedness**

Interview question five asked educators to offer insight on how skills gaps in teacher preparation programs affect teacher feelings of preparedness. The codes that addressed interview question five were *Teacher Preparation Should Include*, and *Inclusion Feelings*.

**When Teachers Aren’t Equipped.** The statements provided by educators resonate with literature stressing the importance of educators receiving adequate training to effectively support students with autism (Al Jaffal, 2022). The participant responses revealed that when they face limited skills, they resort to finding ways to teach their students by any means necessary.

Themes that emerged from Participants #1, #2, #3, #4, and #7 included feelings of frustration and defeat stemming from lacking skills in teacher preparation programs. Both Participants #1 and #3 described teaching children with autism as a process of "trial and error" due to the missing skills during teacher preparation. Participant #3 further explained the difficulty they experienced, stating, "it made it very, very hard to teach them [students with autism], and there was so much extra research on my part." When discussing their limited preparedness because of their teacher preparation, Participant #7 mentioned, "I took my education courses in college and did not learn about autism or how to serve them, so I end up using YouTube." Participants #3 and #7 highlighted how limitations in skills during training led them to rely on alternative research methods and the internet to educate students with autism. Finally, Participant #2 expressed feeling inadequately prepared, leading to the belief that "The students with autism just suffer because we were not taught anything."

**Interview Question Six: School-Wide Professional Development and Preparedness**

Interview participants were given a chance to expand on the insights shared during the survey related to preparedness and professional development. One code emerged from the data,
Things Professional Development Planners Should Know. The theme connected to the code was Professional Development Needs. These data overlapped with and supported the findings from the survey previously discussed.

**Professional Development Planners Should Know.** Interviewees were very clear about what they felt was missing in their professional development, changes that needed to be made, and what was effective for them to feel prepared. Participants were also asked if there was anything else they felt was necessary to share about training or professional development. This was asked as an opportunity for them to provide any additional information that wasn’t shared previously.

Table 4.20 showcases educators' desired insights for PD planners, usually administrators, regarding their training-related feelings and its impact on teaching students with autism. The themes from educators' input highlighted lack of training, the necessity for practical and specific training, and the importance of leaders initiating efforts related to autism in the school. Participant #8 ask the question of PD planners, “If you don't get taught about autism during PD, then where [would we learn].” This statement overarches the importance of the targeted training educators are asking for as related to Professional Development.

Many of the participant responses were interconnected. Participants #1, #2, and #8 share their perspectives on not receiving training about autism, how they resort to others for help and how the internet and sources outside of school plays a role in them trying to figure out how to teacher their students with autism. Participants #7, and #9 have a high expectation of administration/planners to take the lead and ensure that autism is talked about and not dismissed in the learning community. Lastly, Participant #3 echoed the sentiments from educators
throughout the study in they that they reiterated, “It is important to have PD to cater to the specific students we have.”

**Table 4.21**

*Professional Development Planners Should Know*

<table>
<thead>
<tr>
<th>Participant #</th>
<th>Insights for PD planners</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>So many times, training does not occur, which leads to burnout. Preservice programs don’t prepare teachers to train other teachers, we are having to train each other about autism We need to collaborate with the support teachers, but it never happens</td>
</tr>
<tr>
<td>2</td>
<td>PD’s need to be useful. I love the ones where you teach something, and we can put it into action the next day Anytime you say PD we are supposed to get something to help develop us We end up going to grade partners to get support I end up Googling or reading books or magazines or talking family or friends with autism</td>
</tr>
<tr>
<td>3</td>
<td>It is important to cater PD to the specific students we have We need time to do that actual planning and creating of manipulatives Checking in or following up after PD</td>
</tr>
<tr>
<td>7</td>
<td>If the admin doesn't have passion for autism, you are setting a low ceiling for the teachers.</td>
</tr>
<tr>
<td>8</td>
<td>If you don't get taught about autism during PD, then where [would we learn]</td>
</tr>
<tr>
<td>9</td>
<td>There is a higher rate of students with autism, and it is not being addressed at all It’s scary, it's like a part of your student population is doing totally disregarded Any issues we see now won’t be addressed until next year, PD is already pre-planned</td>
</tr>
</tbody>
</table>

**Beneficial Training.** An additional subset of Research Question #3 asked for educators to share the aspects of teacher preparation that were the most beneficial for addressing the needs of students with autism. Throughout the interviews educators shared many barriers, however, I also asked educators to verbalize what they felt was the most beneficial during their teacher training.
The reflections noted on Table 4.2 were pulled from the codes Teacher Preparation should Include, The IEP Process, and Differentiation. Participants #6, and #9 noted opportunities to engage with autistic students in the field experience setting, complete observations, and being able to sit in on IEP meetings were helpful. Participant #5 shared the school she attended ensured that educators in their Early Education program took a dual degree in Special Education as a part of their undergraduate degree program. This allowed them to receive an additional layer of special education coursework attached to their programming.

Table 4.22

*Beneficial Teacher Preparation Experiences*

<table>
<thead>
<tr>
<th>Participant #</th>
<th>Beneficial Teacher Preparation Experiences</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>My gen-ed program made sure that we learned about special education. When I signed up for General Early Education, they made me take Special Ed, so my degree says Early Ed and Special Ed K-4. It was helpful</td>
</tr>
<tr>
<td>6</td>
<td>Being able to sit in on IEP meetings</td>
</tr>
<tr>
<td>9</td>
<td>Applied Behavioral Analysis</td>
</tr>
<tr>
<td></td>
<td>Having an autistic student in the field experience</td>
</tr>
<tr>
<td></td>
<td>In my program we went out and did observations and took notes, we didn't engage with students but rather just utilized our journal to jot notes</td>
</tr>
<tr>
<td>10</td>
<td>We focused a lot on differentiation</td>
</tr>
</tbody>
</table>

Research Question #3 Mixed Method Analysis

Research Question #3 provided survey respondents and interview participants with a platform to express how professional development and teacher preparation programs can enhance future teachers’ capacity to work with students with autism. Quantitative data were utilized to scrutinize the coursework components participants undertook and the supplementary coursework recommendations they proposed. Specifically, I examined the topics educators received during professional development, juxtaposed with educator suggestions for augmenting
skills within those topics. The qualitative responses, framed using predetermined codes, were presented for dissemination to leaders at both the teacher preparation and school levels. These codes were used for research question #3: Differentiation, The IEP, De-Escalation Techniques, Understanding Autism, Parent Communication, Teacher Preparation Should Include, and Inclusion Feelings.

Teacher Preparation Analysis

Educators shared insights from their teacher preparation programs and suggested additions to future programming. The outlined areas below were emphasized by educators during the surveys and interviews.

Behavior Management Training. It was expressed from the surveys and interviews that educators felt they needed more support in their preparation programming around behavior management. Throughout the surveys, respondents outlined the importance of behavior plans, de-escalation strategies, and Applied Behavior Analysis (ABA). Participants #1 during their interviews also highlighted the need for training connected to the Antecedent Behavior and Consequences (ABC’s of behavior) as well as behavior management plans. Additionally, Participant #4 desired to learn behavioral techniques to “de-escalate and keep scholar’s calm.”

Limitations in Teacher Preparation. As an additional insight, on teacher preparation, participants discussed the consequences of educators not receiving adequate tools during their pre-service programming. Participants #1 and #3 described the experience of teaching students with autism as "trial and error" when reflecting on their limited teacher preparation. Because of limitations reported by educators, they have resorted to alternatives; as Participant #3 shared, "I took my education courses in college and did not learn about autism or how to serve them, so I
ended up using YouTube." Lastly, participants shared what proved to be beneficial in their preparation experiences.

**Professional Development Analysis**

Educators provided insights on Professional Development, detailing specific topics, and enhancements for preparedness. The desire for behavior management, social skills, family communication, and delivery of content were spoken about the most among the educators.

**Behavior Management.** The need for behavior management training was selected the most from the survey respondents with a 72% (n=37) selection rate. Under the topic of behavior, survey respondents asked for content related to behavior charts, de-escalation of meltdowns and how to minimize them and strategies to implement school-wide behavior programming. Additionally, three respondents suggested skills around the ABCs of behavior and Behavior Management Plans, De-escalation (Participants #1, #4 and #10). The educator responses showed that they were interested in proactively planning for the behavioral needs of their students and desired programming to do so.

**Social Skills Training.** The request for Social Skill training was secondarily selected from survey respondents at a rate of 62.7% (n=32) when asked about necessary professional Development Topics. Participant #7 felt that social skills training was needed when she emphasized the need for, “Training for educators to support social skills within the classroom between student and peers.” The literature acknowledges social skills as challenging for students with autism and educators require training to provide necessary support (Watkins et al., 2023).

**Family Communication.** Both survey respondents and interview participants emphasized the importance of parental communication. On an opened-ended response, it was suggested from a professional development standpoint that educators should be given the skills
to reach out to parents/families as soon as school starts so that educators feel comfortable talking to families. A respondent emphasized the importance of early preparation for educators by stating, “Every student is different. You need to reach out to families and develop relationships at the beginning of the school year. Have a meeting to learn their [student’s] triggers as well as their strengths.” When questioned about content for professional development concerning families, four respondents emphasized the significance of family communication in ensuring their children receive a quality education.

Research Question #3 provided educators with an opportunity to share their preparedness levels based on their experiences in teacher preparation programs, their desired training, and preferred delivery methods. This question received significant input from educators, with only three survey questions offering yes or no responses. Conversely, the remaining survey questions allowed respondents to provide open-ended answers and utilize text options to elaborate on their choices. For instance, participants frequently utilized the "other" option to supplement their responses. The inclusion of respondents' own words enriched the survey, encouraging readers to consider their suggestions. Additionally, the quotes provided by participants were intended to guide higher education leaders, professional development planners, and school administrators in making informed decisions about preparing educators for students with autism.

**An Emerging Code: Advice from Educators**

During the final phase of the interview, participants were asked if they wanted to share any additional information, as my goal of the research study was to ensure that the voices and experiences of educators were amplified through the research methods. All participants offered something additional which would typically be statements that could be added to previously stated interview questions (e.g. if they added last statements around needing more information.
about autism, that response would be connected to the code that formed Understanding Autism), however educators began to share statements that created their own category which was called Advice From Educators. Educators shared personal qualities that they felt teachers should have to be effective educators. Table 4.23 presents direct statements from participants.

Table 4.23
Word of Advice to Present and Future Educators

<table>
<thead>
<tr>
<th>Participant #</th>
<th>Advice</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Teachers who are more accepting tend to lead the way and open doors for other general education teachers. Teachers should be reflective on their practices every single day, to ensure that we are better for our students.</td>
</tr>
<tr>
<td>3</td>
<td>They [Educators] need to know that they’re responsible to teaching everybody in front of them, and don’t put anyone out [of the classroom]. Build relationships with the kids. Everyone has something to contribute.</td>
</tr>
<tr>
<td>4</td>
<td>You need to be flexible, and have patience.</td>
</tr>
<tr>
<td>7</td>
<td>If you don’t love kids, don’t do this. Ask yourself, do I have the passion and love for this? Students with autism are not broken students.</td>
</tr>
<tr>
<td>9</td>
<td>Students should create a journal student about the student [autism] population and reflect on what you observed.</td>
</tr>
</tbody>
</table>

Chapter 4 Summary

In this chapter I presented the results from the 51 educators that completed the survey and 10 participants that completed the interviews. Each research question was connected to survey questions and or interview questions. The research questions were answered using quantitative data review and/or qualitative data review and then an analysis that mixed the methods. Research Question #2 was answered using only survey items. All quantitative data from the survey was presented via descriptive statistics and when possible, a biserial correlation was conducted to
find connections between preparedness and ability to plan. Regarding the qualitative sections, codes and themes were used to provide context to participant responses.

The survey data and participants' responses reveal that some educators are grappling with limitations when educating students with autism. Many educators have turned to colleagues and individuals with autism in their network to serve as resources when they feel restricted in their abilities. They express a desire for additional preparation during their teacher training and professional development. While they reflect on their teacher preparation experiences and express a need for more, they currently expect professional development to enhance their training options and presentation methods to feel proficient in educating and supporting students with autism. Additionally, educators have specified areas where they feel they lack in teaching students with autism, and they have outlined specific steps for higher education and professional development planners to consider in their planning process.
Chapter 5: Discussion

This convergent mixed methods study aimed to highlight Pennsylvania Kindergarten through 8th grade general education teachers' perceptions of preparedness for the inclusion of students with autism. The study's primary focus was to amplify educators' voices quantitatively and qualitatively as they reflected on their preparation programming and professional development experiences. The research study allowed educators to offer coursework suggestions to higher education leaders and propose professional development topics to elementary and middle school administration as they prepare educators to include students with autism.

There were three research questions with two sub-questions created to capture a full picture of educator perceptions of preparedness for teaching students with autism. The following questions guided the research study:

1. What are the experiences of K-8 general education teachers working with students with autism?
2. How do general educators report their preparedness for teaching students with autism (e.g., autism-specific programs, professional development, field experiences, and coursework related to autism)?
3. How do professional development experiences and teacher preparation programs support teachers in effectively educating students with autism in the general education classroom?
   a. What aspects of teacher preparation do general education teachers report are the most beneficial to help them address the needs of students with autism in their general education classrooms?
b. What preparatory experiences do general educators in grades K - 8 believe would have helped them to better support students with special needs in the general education classroom?

**Summary of Study**

This convergent mixed methods research study enabled me to gather information from educators using surveys and semi-structured interviews. The 40-question survey was initiated with gateway questions and included a consent form. Participants encountered various question types, including multiple-choice, open-ended, rank-order, and matrix table inquiries. Subsequently, educators could sign up for interviews after completing the survey.

After collecting surveys, I reviewed them to ensure suitability for the study. Out of 130 respondents who began the interview process, four declined consent, 14 failed to meet the inclusion criteria, 13 only partially met the criteria, and 48 skipped major sections or allowed the survey to time out after 48 hours. Following data cleaning, 51 valid responses remained for analysis. Ten educators signed up for interviews via the study's provided link.

Interviews were conducted via Zoom, recorded, and transcribed by the platform. Transcriptions were meticulously reviewed line by line while listening to the recordings. Once finalized, interview transcripts were sent to participants for member checking before being uploaded to the Dedoose platform for three coding phases. A subset of codes was shared with an experienced researcher to ensure interrater reliability before being utilized to address the research questions.

In line with the recommendation of Creswell and Clark (2018), interviews and surveys underwent simultaneous analysis and integration, facilitating effective comparison, contrast, and synthesis of the findings. Both research methods provided insights into educators' experiences
with teacher preparation programming and professional development. Analysis of response data and participant interviews revealed the degree of preparedness educators felt in teaching autistic students and their motivations to support them. However, identified limitations in social skills, behavior management, family communication, and instructional techniques prompted extensive reflections on teacher preparation programs and a call for more comprehensive support in professional development planning.

**Application of Theoretical Framework to Findings**

A robust sense of self-efficacy can result in feelings of accomplishment, overall well-being, and the motivation to persevere in the face of obstacles. When teachers do not feel successful, it can significantly stifle their self-worth as educators, impacting everything they do within their classrooms. Badura's theory of self-efficacy is the framework connected to this research study. Bandura (1994) proposed the self-efficacy theory, which suggests that individuals with high confidence in their abilities are more likely to perceive challenging tasks as opportunities for mastery rather than avoidance.

The need for educators to feel prepared to teach their students is not new. Over the years, educators have expressed feelings of despair as they navigate learning students for whom they were unprepared. In 2002, Macmillan and Meyer's study highlighted educators' experiences with inclusion. Budget cuts in their district resulted in more students with disabilities, heightening their sense of unpreparedness. The study by Macmillan and Meyer (2006) revealed two types of guilt among educators faced during that time. Omission guilt stemmed from a lack of resources and skills, which they openly acknowledged. Commission guilt arose when educators admitted to not attempting to help students due to time constraints with other children or a perceived inability to teach them, leading to continued avoidance of their educational needs. The feelings
that educators shared were tied to limited feelings of self-efficacy, which at that time was noteworthy to consider when educating students in inclusion settings as it could impact student progress.

The feelings educators experienced previously still apply to educators today, as presented in my current research study. During their interviews and surveys, some general educators openly shared feelings of frustration, fear, and avoidance; however, they could provide precise suggestions linked to successful feelings of confidence, which could help them persevere through the difficulties they faced in their classrooms. Educators in the study outlined that teaching students with autism was highly challenging due to limitations experienced with teacher preparation programming and lack of professional development. This feeling of impairment was connected to their self-efficacy as continued statements around unpreparedness emerged when reviewing survey data and interviewing participants. Given the requests for training, educators continue to grapple with the challenge of teaching students with disabilities, particularly as the prevalence of autism rises (Al Jaffal, 2022).

As reported in the study and outlined in the research, students with autism frequently encounter challenges related to communication, social skills, behavior, and academics, which can overwhelm educators who lack the necessary skills to facilitate their progress (Silveira-Zaldivar & Curtis, 2019). Within the research study, some educators gave accounts of feeling unprepared and the feelings of defeat associated with teaching students while having their own limitations. In the study, educators could share information with leaders about their needs, and it was stated, "We were not prepared, and what we learned was not enough [during teacher preparation]. It is different in the classroom. It is downplayed in college, and when we are in class, we are solely responsible." Many educators repeated this sentiment; the fact that they are
unprepared and must still work through it anyway causes educators to feel frustrated and destroys their confidence, impacting their pedagogy. When the 51 educators from the study reflected on their training programs, they shared the source of their limitations: coursework, where 81% (n=41) reported no coursework around autism. Additionally, educators were asked if they felt they could have used more coursework around autism; 82.4% of them agreed that it would have been beneficial.

Educators emphasize that they need training and more confidence due to going to colleagues and friends to obtain support. They might be planning incorrectly due to colleagues also needing to be trained. During the survey, educators reported receiving the most information from colleagues over administration. When asked about professional development needs, an educator replied, "Professional development never talks about students with disabilities or autism, so we do not know where we would get knowledge unless we ask each other." An educator shared that preparation must be prioritized. The desperation of educators results in them finding additional resources wherever they can. Educators reported searching YouTube and Google for resources due to not receiving support from professional development. Wu (2016) emphasizes the significant role of mastery experiences in shaping self-efficacy development, particularly among educators.

The need for opportunities for success is vital because if educators are not allowed to experience success with inclusion, they will continue to go alternative routes to find resources. Educators in the study outlined ways they felt would provide them with opportunities for feelings of success. In the survey, respondents suggested that coursework and professional development should be centered around social skills, behavior management, instruction, and family communication.
While analyzing the data, I observed educators' eagerness and commitment to educating students with autism. However, despite expressing the need for coursework, coaching, and practice, their frustrations regarding the lack of adequate support and resources were disheartening. Bandura et al. (1999) emphasize the importance of educators' self-efficacy beliefs, closely tied to their confidence in their abilities, as a central focus of professional development efforts. It is crucial to recognize that if educators do not feel prosperous, it will impact their confidence, ultimately affecting students' outcomes. This understanding is essential when preparing teachers to support students with autism.

**Discussion of Results**

This study examined K-8th grade general education teachers' perceptions of preparedness for the inclusion of students with autism. Given the prevalence of students with autism in inclusion classrooms, the study extends the need for general education teachers to receive training in the specific needs of the students they support. The findings from this study aligned with other researchers' examination of teachers’ viewpoints on preparedness and students with autism (Able et al., 2015; Al Jaffal, 2022; Bolourian et al. 2021; Lindsay et al., 2014; Silveira-Zaldivar & Curtis, 2019; Van Der Steen et al., 2020).

This study varied from the others in that it had a small sample size and it focused only on educators from the state of Pennsylvania. However, it similarly captured viewpoints from educators as they taught in inclusion classrooms.

The educators in the study openly acknowledged the barriers they encountered, including limitations in teacher preparation, professional development, and training to support behaviors typical in autistic individuals. They emphasized the necessity for collaboration with colleagues and the importance of establishing relationships with families to effectively support their
students. Furthermore, they articulated the challenges inherent in modern education, particularly regarding inclusion.

Moreover, educators expressed concerns about how their peers perceive students with disabilities, teaching practices, and mindset. Although not directly prompted, many educators felt compelled to address this topic during their discussions. The overarching theme conveyed during the interviews emphasized the mindset educators should adopt when entering the classroom.

**Teacher Preparation**

Several educators from the study shared limitations with coursework around autism and access to students with autism during their fieldwork and student teaching. The survey data highlighted that over half of the respondents felt they would have benefited from additional coursework to support students with autism. During their interview when asked about autism, an educator shared, “I just needed a course, and I feel like I still need a course. I still at times show ignorance towards children with autism” (Participant 10). In a study conducted by Al Jaffal (2022), educators emphasized the necessity for additional coursework, particularly at the preservice level. A recurring theme emerged, suggesting that numerous courses should be incorporated into undergraduate programs, as these students will become future teachers.

**Professional Development**

All teachers need to possess basic knowledge of special education, which stems from professional development, to successfully include students with autism. Educators need a combination of preservice teacher training an in-service (teacher preparation program) as it relates to Professional development. During the study educators shared information that school leaders should now, with regards to professional development a survey respondent wrote, “Professional development never talks about students with disabilities or autism, so we do not
know where we would get knowledge unless we ask each other.” This statement is vital to reflect on as educators that are admittingly untrained are relying on fellow colleagues to ensure their success with inclusion. If educators are unsure where they would learn about students with autism, it necessary for educator voices to continue to be heard.

The importance of autism-specific professional development was confirmed when Kossewska et al. (2022) shared a study in which general education teachers received a training series on communication, social skills, understanding and managing challenging behaviors, sensory needs, emotional understanding, and the adaptation and modification of the environment. The findings revealed that educators were able to implement skills within their classroom quickly, educator confidence and self-efficacy was increased, educators experienced improved classroom performance and were willing to recommend the training to other educators. The training series outlined in the study shared by Kossewska et al. (2022) mirrored some of the requests that educators made in the research study I conducted. Educators outlined the need for training in social skills, behavior management, and instructional strategies, which supports the idea that if educators get the training they require, it will impact their teaching ability and confidence, which will boost their self-efficacy and impact student outcomes.

**Behavior Management**

To tackle particular inclusion challenges, educators need fundamental skills in supporting the behaviors they encounter (Bemiller, 2019). The behaviors discussed in the research study, such as meltdowns, stimming, sensory overload, injurious behaviors, tantrums, social barriers, communication limitations, and outbursts, all reflect the different characteristics of autism. However, educators encountered barriers that prevented them from recognizing these behavioral displays as manifestations of autism rather than purely behavioral issues.
During the study, educators shared they were unaware of how to support their students’ needs; during an interview, a participant shared, “A lot of times in general education classrooms, autism [characteristics] will sometimes present as behavior problems.” Educators shared their inability to support or respond with what children needed regarding de-escalation, meltdowns, tantrums, stimming, or self-stimulatory behaviors. Understanding these needs is crucial, as participants consider the ability to provide behavioral support an important aspect that should be included in teacher preparation programming. When questioned about content to be incorporated into coursework, 72% (n=32) of the respondents expressed the necessity of including behavior management. Additionally, educators in the study requested coaching tailored to the needs of the children in their classrooms and allocated time for collaboration with knowledgeable colleagues and the special education team to access resources and receive overall support.

Bolourian et al. (2021) found in their study on educator needs regarding autism that educators require training on evidence-based behavior management strategies, including fostering positive relationships, utilizing interest-based incentives, establishing routines, and employing antecedent-based strategies. These topics were actively discussed among educators in focus groups, where they exchanged classroom needs and best practices with facilitators and peers. This collaborative model of supporting peers aligns with my study's findings, underscoring the significance of educators and practitioners working together to address behavior management concerns.

**Collaborating with Colleagues**

Collaboration necessitates the expertise of two or more educators to share responsibilities, accountability, and resources (Da Fonte & Barton-Arwood, 2017). The desire for educators to ask for collaboration opportunities occurs regularly when planning for students
with autism. When asked about skills added to professional development topics, collaboration was mentioned during the survey and the interviews. Educators in the research study stressed the importance of collaborating with colleagues as a final option when they feel their abilities are limited. Additionally, they emphasized the proactive necessity of seeking expertise from the special education team when planning for academics and offering behavioral needs for students with autism. Opportunities to collaborate with special education team around behavior and academic planning, and guidance specifically from the autistic support teacher was highlighted to help with supporting instructional strategies and lesson planning.

Van Der Steen et al. (2020) also highlighted the importance of collaborating with the special education team, specialists, and school leaders in a qualitative study involving four groups of educators. The findings showed educators highlighted the need for collaboration with co-workers and specialists and for everyone to be responsible for supporting the students. The participants also indicated that they would like an explicit school policy to share knowledge about ASD with everyone, followed by support for challenging behaviors. The need for collaboration that educators are requesting is found to be not a request from only the participants in my research study, but it extends to others as well as it is needed for the successful implantation of inclusion.

**Involvement of Families**

Parent-teacher collaboration and parental advocacy are mutually integral. Literature acknowledges parents of children with ASD as strong advocates for their child (Schultz et al., 2016). Participants in the study shared the need for collaborating with families as a means of input for their student’s success. Educators additionally asked for training on how to talk with parents as an additional supportive outlet for their students. During the study, an educator shared
the importance of contacting families to develop relationships at the start of the school year to discuss triggers and strengths. It was additionally shared in the survey that working with families who know the scholars best is the ideal way of learning how to teach them and provide them with a quality education. The strength of parent and educator voices related to students with ASD was highlighted by Hodges et al. (2020), in the results of two focus groups, one containing parents and the other with educators. One of the significant findings was that both educators and parents felt that educators were limited in their abilities and needed training to support their children. The study's findings suggest that fostering an understanding of each other's expertise, capabilities, and limitations can establish the groundwork for a positive relationship.

Opening the door for collaboration with families is crucial for the success of students with autism. Students face limitations when all stakeholders are not prepared and available to address their needs. As highlighted in my research study and by Hodges et al. (2020), educators and families' collaborative efforts are undeniable.

*Advice From Educators*

Educators often seek college advice regarding difficult classroom situations, planning, instruction, and providing feedback when necessary. The relationship with colleagues was evident in the research findings, where educators heavily relied on their peers to pick up where they had shortcomings related to teaching. As the participants shared their insights from their training, professional developments, additional needs, and strategies, educators began sharing ideas with future and current educators about teaching students with autism and the overall necessary mindset needed for being a good teacher.

When thinking about teaching students with autism, Participant #7 wanted educators to know that “Students with autism are not broken students.” This message is a challenge for educators to
look at the needs of the students and work to meet them. An additional message around educating students with autism and equity from Participant #3 was, “They [Educators] need to know that they are responsible for teaching everybody in front of them, and do not put anyone out [of the classroom].” With regards to mindset, noted Participant #1, “Teachers who are more accepting tend to lead the way and open the door for other general educators,” and Participant #4 stated, “[As a teacher] You need to be flexible and have patience.”

**Limitations of the Study**

The study focused on the preparedness of educators that teach in Pennsylvania districts and charter schools in kindergarten through eighth grades. Researchers need to note the limitations experienced during the research study as it provides transparency and implicates information for further research (Creswell & Clark, 2018). There were moments within the research study where limitations emerged around the areas of population and sample, survey respondents, time constraints, and data analysis.

Although the research study called for certified general educators only from Pennsylvania, it did not provide opportunities for educators from other states to share their experiences. If I had allowed additional educators to share their views, I might have had a larger sample size and made comparisons with teacher preparation programs, coursework, and certification parameters, which could impact their preparedness and professional development suggestions. Varying viewpoints could have made the study richer.

The sample size from the study started with 130 responses but then decreased dramatically to 51 viable respondents utilized for the study. After concluding the survey collection, I went into the Qualtrics system and uploaded it into the SPSS program. During the process of cleaning and organizing the respondent data, there was a significant number of
surveys that could not be used for the study. I had to remove responses from participants who did not complete the consent form, only completed demographics, did not complete the Likert item, let the study time out, and did not go back and finish the survey after 48 hours. Due to time constraints, I had to continue with my number of responses. I felt comfortable continuing with that number due to having a qualitative portion in my study that offered additional data to enhance the study. According to Creswell and Clark (2018), the benefit of mixed methods is the ability to offset the limitations experienced in one method with the strength of the other.

An additional barrier to sample size is limited by the ability to conduct in-depth inferential analysis. Some categories had less than five respondents in the response category, so I needed more data to conduct an inferential analysis. I was able to conduct descriptive statistics and analysis for all survey questions, which allowed me to report the findings and results from the participants in the study. However, only the Likert scale item served enough data for me to analyze more profoundly, so the respondents who did not complete that item were deleted.

Implications of Future Educational Research

This research study was conducted to highlight the training that educators experience as it related to their feelings of preparedness to educate students with autism in their inclusion classrooms. Although there is research that discusses limitations that educators are experiencing while teaching students with autism based on their own training limitations, this continues to be an ongoing concern amongst educators. Rather than only focus on presenting the areas that educators found difficult or expose limitations that survey respondents or interview participants shared, I wanted the research to share suggestions for those in charge of planning for their training at the pre-service (college level) or in-service (school professional development) levels.
If educators have undergone training that school leaders and higher education committees have deemed adequate, it is important to consider their field insights as a progress report when educating students with autism. The research study discussed training recommendations from educators based on their current or previous experiences educating students with autism. Future research should explore the strides students with autism make when educators receive training in social skills, behavior support (e.g., meltdowns, minimizing triggers, injurious behaviors, noise control, sensory needs), learning strategies, and family communication, as suggested by the educators.

**Future Research Topics**

The study results provided suggestions for future research topics, drawn from the findings of both surveys and interviews. As outlined in the research study, the ongoing need for teacher training enhancement is evident and must be consistently emphasized. The following topics could serve as next steps for future researchers, guided by the findings and recommendations from educators in the study:

- Advancements in Student Progress: The Influence of Educator Training.
- Colleague Support: Boosting Confidence among Team Members Educating Students with Autism.
- Administrative Support and Staff Outcomes in Autism Student Education.
Future Teacher Preparation and Professional Development Design

When designing teacher training, both in preservice (teacher preparation programs) and in-service (professional development), it's crucial to listen to educators' needs. Not only is autistic-specific training important, but the delivery is also vital. They may encounter challenges in teaching students with autism and offer valuable insights into what is necessary for success. Reflecting on their teacher preparation coursework, many educators emphasized the importance of several components: access to students with autism during fieldwork, comprehensive courses on understanding autism, opportunities to participate in Individualized Education Program (IEP) meetings, training in behavior strategies, effective parent communication, and collaboration skills with school teams.

In the research study, educators shared their insights on preferred professional development (PD) methods. Recommendations included implementing school-wide training, minimizing reliance on handouts, integrating interactive videos, providing coaching, modeling best practices, and offering feedback. Van Der Steen et al. (2020) similarly emphasize the importance of hands-on PD focused on autism, providing practical skills that educators can implement, tailored to meet their individual needs. Additionally, interviewees suggested distributing a survey to assess educators' current knowledge levels and identify areas for improvement. Given educators' diverse ages and experiences, this survey approach will provide customized support and differentiation to enhance their confidence in their teaching abilities.

Summary

All the educators in the research study shared their thoughts via the surveys and in the interviews. The goal of the study was for educator voice to be the main focus of the research so that it was not a question as to what they felt should be included in the teacher preparation
programs for future educators, or current professional development for educators that are currently in front of students with autism trying hard to figure out ways to support them. One of the things to be highlighted, during the research, the participants did not mention the children being the primary problem or at any point did they say that students with autism should be put in different settings, but rather they made suggestions and offered feedback and considerations for leaders both at institutions of higher education and schools. While connecting the current research study to other findings, it is evident that this problem is not new which is why the research needs to keep going. Due to the continued identification of autism, it is important that general educators understand that the probability of having a student with autism in their classroom is higher than before.

Students with autism deserve to have competent, proficient, and confident educators in front of them no matter what setting they are in throughout their school building. To ensure that they have what they are legally entitled to as a person with a disability, but also simply because they are students in a school setting. The barriers students with autism face in classrooms are often exacerbated by their educators' limitations.
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Appendix A: IRB Approval

Aug 15, 2023 3:33:20 PM EDT

To: Erica Munson-Tate
Col of Education & Social Work, Special Education, Early and Middle Grades Ed.


Dear Erica Munson-Tate:

Thank you for your submitted application to the West Chester University Institutional Review Board. Since it was deemed expedited, it was required that two reviewers evaluated the submission. We have had the opportunity to review your application and have rendered the decision below for General Education Teacher Perceptions of Preparedness for Autism Inclusion.

Decision: Approved

Selected Category: 6. Collection of data from voice, video, digital, or image recordings made for research purposes.

Sincerely,
West Chester University Institutional Review Board

IORG#: IORG0004242
IRB#: IRB00005030
FWA#: FWA00014156
Appendix B: IRB Approval Modification

Feb 23, 2024 1:45:35 PM EST

To: Erica Munson-Tate
Col of Education & Social Work, Special Education, Early and Middle Grades Ed., Ed Leadership & Higher Ed Adm

Re: Modification - IRB-FY2023-334 General Education Teacher Perceptions of Preparedness for Autism Inclusion

Dear Erica Munson-Tate:

Thank you for your submitted modification to your West Chester University Institutional Review Board approved project General Education Teacher Perceptions of Preparedness for Autism inclusion. We have had the opportunity to review your modification and have rendered the decision below effective February 23, 2024.

Decision: Approved

Sincerely,
West Chester University Human Subjects Review Board

IORG#: IORG0004242
IRB#: IRB00005030
FWA#: FWA00014155
Appendix C : Informed Consent Form

Project Title: The Perceptions of K-8 General Education Teachers on Preparedness for the Inclusion of Students with Autism

Investigator(s): Erica Munson-Tate; Merry Staulters

Project Overview:

Participation in this research project is voluntary and is being done by Erica Munson-Tate as part of their Doctoral Dissertation to:

The research aims to get insight from K-8th grade general educators' perceptions of preparedness to teach students with autism in their inclusion classrooms. Data from the study is intended to provide suggestions for future teacher preparation programs and professional development ideas that would benefit teachers that support students with autism.

Your participation in the survey will take about 20 minutes. If you opt to complete the 1:1 interview it will take an additional 40 minutes totaling approximately 60 minutes. There is a minimal risk of discomfort with providing insight into teacher preparedness as it relates to students with autism. However, you can end the survey and skip questions if you begin to have feelings of discomfort. There is an opportunity for you to share your viewpoints and insights on your experiences as an educator that has taught children with autism. You may also inform higher education, elementary, and middle schools on what educators need to feel prepared to instruct students with autism. Additionally, this research may suggest ways to educate future K-8 general education teachers within teacher preparation programs and provide beneficial professional development recommendations to support general education teachers.
You may ask Erica Munson-Tate any questions to help you understand this study. If you don’t want to be a part of this study, it won’t affect any services from West Chester University or your school district. If you choose to be a part of this study, you have the right to change your mind and stop being a part of the study at any time.

1. What is the purpose of this study?
   o The research aims to get insight from K-8th grade general educators’ perceptions of preparedness to teach students with autism in their inclusion classrooms. Data from the study is intended to provide suggestions for future teacher preparation programs and professional development ideas that would benefit teachers that support students with autism.

2. If you decide to be a part of this study, you will be asked to do the following:
   o Consent to Research
   o Complete Survey on Qualtrics
   o Complete the optional 1:1 interview.
   o This study will take About 60 minutes of your time if you complete both the survey and interview.

3. Are there any experimental medical treatments?
   o No

4. Is there any risk to me?
   o Possible risks or sources of discomfort include: There is minimal risk of discomfort with providing insight into teacher preparedness as it relates to students with autism. However, participants can end the survey or skip questions if they feel uncomfortable.
• If you become upset and wish to speak with someone, you may speak with Erica Tate or Merry Staulters.
• If you experience discomfort, you have the right to withdraw at any time.

5. Is there any benefit to me?
   o Benefits to you may include: You can share your viewpoints and insights on your experiences as an educator that has taught children with autism. As well as inform higher education, elementary, and middle schools on what educators need to feel prepared to instruct students with autism.
   o Other benefits may include: This research may suggest ways to educate future K-8 general education teachers within teacher preparation programs and provide beneficial professional development recommendations to support general education teachers.

6. How will you protect my privacy?
   o Your records will be private. Only Erica Munson-Tate, Merry Staulters and the IRB will have access to your name and responses.
   o Your name will not be used in any reports.
   o Records will be stored:
     1. Password Protected File/Computer
     2. Locked office
   o Records will be destroyed Three Years After Study Completion

7. Do I get paid to take part in this study?
   o All participants that complete the survey will have an opportunity to receive a randomly distributed $25.00 Amazon gift card. In order to be
considered for the Amazon Gift Card, email addresses are collected in a separate Qualtrics document.

8. Who do I contact in case of research related injury?

- For any questions with this study, contact:
  - Primary Investigator: Erica Munson-Tate at 484-238-5871 or em238262@wcupa.edu
  - Faculty Mentor: Merry Staulters at 610-436-2398 or mstaulters@wcupa.edu

For any questions about your rights in this research study, contact the ORSP at 610-436-3557.

If you would like to take part, West Chester University requires that you agree to this consent form prior to starting the study.

I have read this form and I understand the statements in this form. I know that if I am uncomfortable with this study, I can stop at any time. I know that it is not possible to know all possible risks in a study, and I think that reasonable safety measures have been taken to decrease any risk.

_____ I consent, begin the study (the participant will be directed to the survey)

_____ I do not consent. I do not wish to participate (the participant will exit the survey)
Appendix D: Survey Items

Exclusionary Items:

Are you a K-8 General education teacher in a Pennsylvania, public school district or charter school?
   - Yes
   - No

Did you graduate from a 4-year college/university?
   - Yes
   - No

Do you have at least 1 full year of teaching experience?
   - Yes
   - No

Do you have a Pennsylvania certification?
   - Yes
   - No

Survey Questions:

1. How many years of teaching experience do you have?
   - 1-3 years
   - 4-7 years
8-10 years
11 years or more

2. Did you receive your Pennsylvania certification before 2004?
   Yes
   No
   Certification before 2004 and certification after 2004

3. What certification(s) do you hold? Select all that apply.
   □ PK-4
   □ 4-8
   □ Special Education PK-8
   □ Special Education PK-12
   □ Other ________________________________

4. In addition to Pennsylvania, are you certified in another state?
   Yes ________________________________
   No

5. What grade do you currently teach?
   o K
   o 1
   o 2
   o 3
6. What college/university did you attend when obtaining your teacher certification?

☐ Undergraduate ________________________________

☐ Master's ________________________________

☐ Post Baccalaureate ________________________________

7. Which one describes your college/university?

☐ Public

☐ Private

8. Which one of the following represents the location of your college/university?

☐ Urban

☐ Suburban

☐ Rural

9. Did you obtain your certification with your Undergraduate studies, at the Master's level, or Post Baccalaureate?
10. How many course credits focusing on special education did you complete in your teacher preparation program during your undergraduate teacher preparation?
   - 0
   - 3
   - 4-6
   - 7-9
   - 10-12
   - 13-15
   - 15+

11. How many course credits focusing on special education did you complete in your teacher preparation program during your master’s program?
   - 0
   - 3
   - 4-6
   - 7-9
12. What was the primary content of your special education courses? Select all that apply.

☐ Special Education Law
☐ Behavior Management
☐ Disability Characteristics
☐ Assessments
☐ Instructional Strategies
☐ The IEP and other special education paperwork
☐ Trauma
☐ Special education reading instruction
☐ Special education math instruction
☐ Other (please explain)

__________________________________________________

13. Did any of your general education coursework include preparation for teaching students with disabilities?

☐ Yes
☐ No
14. Were practices on how to teach students with autism emphasized in the general education coursework?
   o Yes
   o No

15. How many courses focused specifically on autism in your general education teacher preparation program?
   o 0
   o 1-2
   o 3-4
   o 5+

16. How many of your Undergraduate general education courses had a field work requirement/student teaching experience?
   o 0
   o 1-2
   o 3-4
   o 5+

17. How many of your Master's Level general education courses had a field work requirement/student teaching experience?
   o 0
   o 1-2
   o 3-4
18. How many of your fieldwork placements/student teaching had students with autism that stayed in the general classroom while you were in the classroom?
   - 0
   - 1-2
   - 3-4
   - 5+

19. How many students with autism have you taught in your career?
   - 0
   - 1-3
   - 4-6
   - 7-10
   - 11+

20. Did you complete your student teaching during the pandemic?
   - Yes
   - No

21. Since you student taught during the pandemic, do you feel like you had enough experience with students with autism to prepare you for classroom instruction?
   - Yes, Please share some strategies that you were taught?
     
     __________________________________________________________
   - No

22. Are you currently teaching or previously taught a student with autism?
23. Have you taught a student(s) with autism in an inclusion setting for more than 50% of the day?
   - Yes
   - No

24. Please select the response that indicates your level of agreement.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am able to identify the characteristics of autism</td>
<td>o</td>
<td>o</td>
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<td>o</td>
</tr>
<tr>
<td>I am comfortable with reading and implementing my students’ IEPs that have autism.</td>
<td>o</td>
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<tr>
<td>I can plan for students with autism.</td>
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<tr>
<td>I feel comfortable helping students</td>
<td>o</td>
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</table>
with autism manage
their behavior.

I am comfortable
with teaching
students with autism
in my
inclusion classroom.

I believe I would
have benefited from
additional teacher
preparation
coursework to
support students with
autism.

25. What accommodations/modifications do you implement in your classroom for students with autism? Select all that applies.

☐ Visuals for instruction
☐ Extended time
☐ Breaks as needed
☐ Paraprofessional/1:1 support
☐ Classroom paraprofessional
☐ Modified assignments
☐ Individual behavior plan
☐ Communication plan
☐ Assistive technology
☐ Noise canceling headphones
☐ Other
26. Based on your current role, which additional content related to students with autism should have been added to your college coursework? Please select all that apply.

- [ ] No additional content necessary
- [ ] Language and communication
- [ ] Behavior management
- [ ] Social Skills
- [ ] Instructional/teaching strategies
- [ ] Other __________________________________________________

27. Based on your current role, list additional content and skills that would be helpful in supporting students with autism if added to your professional development programming within your K-8 school?

________________________________________________________________

28. Please rank the order of impact to show where you obtained the most to least knowledge about students with autism.

_____ Teacher Preparation Program
_____ Colleagues
_____ Administration
_____ Family members and/or friends with autism
_____ Outside professional development
_____ In-School (Place of employment) Professional Development

29. What areas would you have liked to receive professional development on to ensure greater comfortability with teaching students with autism? Select all that apply.

- [ ] Language and communication
- [ ] Behavior management
- [ ] Social skills
- [ ] Instructional/teaching strategies
- [ ] Other __________________________________________________

30. Please describe if and how the pandemic has impacted your experiences working with children with autism? Please reply “n/a” if this does not apply to you.

________________________________________________________________

31. As a general education teacher, is there any information you would like shared with teacher preparation programs or school leadership that would prove beneficial when planning for the inclusion of students with autism?

- [ ] No
- [ ] Yes __________________________________________________
32. Do you wish that during your teacher preparation, someone told you how important it is to be prepared for working with students with disabilities/autism? Why or why not?
   o Yes __________________________________________________
   o No __________________________________________________

Appendix E: Interview Questions

1. Please share an experience you have had while working with a child with autism. How successful was this experience for you and for the student? (If the interviewee did not have experience teaching students with autism, the interviewer skipped to interview question #4 to obtain preparation insight)

2. What instructional, learning, and behavioral strategies do you currently apply when working with students with autism? Please provide some examples of how you apply these strategies.

3. What are the skills you believe are necessary to be developed in elementary and middle years, general education teacher preparation programs as it relates to teaching students with autism? Why do you think this?

4. What are the skills you believe are necessary to be presented

5. How do skill gaps in teacher preparation programs affect general education teachers' feelings of preparedness for the inclusion of students with autism?

6. How do limitations in school-wide professional development affect general education teachers' feelings of preparedness for the inclusion of students with autism?