

THE EXPERIENCES OF SIXTH- THROUGH TWELFTH-GRADE STUDENTS
IDENTIFIED AS HAVING AUTISM SPECTRUM DISORDER AND CLASSIFIED AS
ACADEMICALLY AND INTELLECTUALLY GIFTED: A MULTIPLE-CASE STUDY

by

Callie Sa'Dena Everett

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

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ABSTRACT

The purpose of this qualitative multi-case-study was to shed light on the lived experiences of students in sixth through twelfth grade who are identified with an autism spectrum disorder and academically or intellectually gifted. Four students along with his/her parents and teachers participated in this study. Each student and his/her parent(s) and teachers formed one case. The problem that this study sought to examine was the lived educational experiences of twice-exceptional students who have autism spectrum disorder and are academically gifted. The central research question addressed how students in sixth through twelfth grade who are identified with autism spectrum disorder and academically and intellectually gifted viewed their educational experiences. Theoretically, the study was based on Heider's attribution theory and Bandura's social cognitive theory as they explain how these students view themselves as they attach meaning to the behavior of others towards them. All data for each case were first analyzed individually before cross-case analyses were conducted, grounded in the work of Yin. Five themes emerged from the analyzed data. The major emergent themes of this study were (a) social interactions, (b) masking giftedness, (c) student achievement, (d) feelings about the school, and (e) access to resources. Overall students were happy at school and had a group of friends that they used for emotional support. Students also identified teachers that they liked and enjoyed. Recommendations include a call for further research in regard to the way twice-exceptional students experience the education system in order to gain more insight.

Keywords: autism, autism spectrum disorder, twice-exceptional, self-attribution theory, social cognitive theory, academically or intellectually gifted

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Dedication

This dissertation is dedicated to my loving mother, Dana Everett, who has been the most caring and supportive person in my life. Although she has faced immense challenges when raising me, she did it with grace and dignity and has remained optimistic no matter what. It is her optimism that gave me the strength to carry on with my work and set ambitious academic goals. Thank you, my dearest friend, for always putting me first and being there for me when I need you the most. You taught me not to take things for granted and work hard on fulfilling my dreams. I would never have made it through without your selfless love, dedication, resilience, and faith. You have been my guidance, inspiration, and empowerment. When I think about you, mommy, I recall a quote by Michael Jordan: “My mother is my root, my foundation. She planted the seed that I base my life on, and that is the belief that the ability to achieve starts in your mind.”

I also want to dedicate this work to my grandfather, who passed away three years ago. Although he is no longer with me, he still affects my life. He has been a father, mentor, and friend to me, and the way his eyes would light up when I entered a room was the greatest motivation for me to succeed. He never doubted that I would make it to the final part of this journey, and his steadfast belief in me helped me to achieve my goal. My grandfather’s contribution to my personal and professional development can hardly be overestimated, and he is one of the reasons why I became a teacher and keep expanding my horizons.

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List of Abbreviations

Academically and Intellectually Gifted (AIG)

Autism Spectrum Disorder (ASD)

Emotional Intelligence (EI)

Gifted and talented (GT)

Individualized Education Program (IEP)

Individuals with Disabilities Education Act (IDEA)

Naturalistic Developmental Behavioral Interventions (NDBI)

Overexcitability (OE)

Students with a Learning Disability (LD)

U.S. Department of Education (USDE)

CHAPTER ONE: INTRODUCTION

Overview

One out of every 10 students with autism is also intellectually gifted (Paterson, 2000). However, in many educational settings there tends to be more focus on the autism classification than the intellectually gifted classification (Drury, 2017). In fact, according to Paterson (2000) these students' giftedness may go unidentified by the very educational systems whose goal is to help them realize their potential. Teachers who work with these students are sometimes confused on which aspect to emphasize since the student is twice-exceptional (Galat, 2012) and may make educational decisions leading to poor learning environments for the student (Drury, 2017). The central research question in this study addressed how students in sixth through twelfth grade who are identified with autism spectrum disorder (ASD) and academically and intellectually gifted (AIG) view their educational experiences.

Background

This study provides a historical, social, and theoretical perspective on the phenomenon to enhance the understanding of how students with ASD and are AIG have been educated. Students with ASD and AIG are considered to be twice-exceptional and occupy a special place among the continuum of student educational labels. It is vitally important to understand the background of twice-exceptionalism in order to understand why the current system of education may be ineffective for some students.

Historical Context

The historical background of the phenomenon of autism traces its roots back to the 1700s. At that time, the disability faced challenges within the educational sector, since individuals were not fully integrated into the system (Reagan, 2012). The first recorded case of

autism was in 1747 when Hugh Blair was the first person to be diagnosed (Atkins, 2011). Initially, autism was confused with a psychosis due to poor parent-child relationships. The poor parent-child relationships were attributed to lack of evidence-based medical practice (Mintz, 2016). Scholars such as Eugen Bleuler described the disorder as schizophrenia, but in the 1940s children with the disability were labeled as emotionally or socially disturbed (Zaky, 2017). This condition was first classified as a diagnostic category in 1943 (Barazzetti, Barbetta, Bella, & Valtellina, 2016).

Autism is now considered a broad spectrum of disorders (Atkins, 2011; Barazzetti et al., 2016; Regan, 2012; Zaky, 2017). Originally, those with this condition were thought not to respond to any medical interventions. However, in the 1960s new information became available that changed the mindset of educators regarding children with ASD (Schreibman et al., 2015). Researchers stopped trying to find how to mitigate the condition using medication and began examining the behaviors of the patients themselves (Bertelli, Rossi, Keller, & Lassi, 2016). The field has gained traction in recent times with the development of approaches to teach learners with an ASD (Bertelli et al., 2016). In 1975 Public law 94-142 was passed. This law guaranteed a free and appropriate education to each child with a disability. This law is commonly called the Individuals with Disabilities Education Act (IDEA). This law had a profound impact on children who had been identified with a disability in public schools in this country (U.S. Department of Education [USDE], Office of Special Education and Rehabilitation Services, 2010). The law had three major goals: “(a) improve how children with disabilities were identified and educated, (b) evaluate the success of these efforts, and (c) provide due process protections for children and families” (USDE, 2010, p. 5). The law also provided for financial incentives to help states and local school districts come into compliance. The USDE (2010) asserts that, “through such

sustained federal leadership, the United States today is the world leader in early intervention and preschool programs for infants, toddlers, and preschool children with disabilities” (p. 6).

Social Context

This study, when examined through a social lens, sheds some light on how twice-exceptional students fit into the larger academic culture of the school by examining how they experience the education system from three points of view: the parents, teachers, and students themselves. The societal stigma of students with ASD has a profound effect on how these students experience the educational system (Cai & Richdale, 2016). This stigma has a negative effect and can be a barrier to the students’ realizing their full potential. It further impedes them for taking advantage of the benefits that should be afforded to them by virtue of their giftedness (Rubenstein, Schelling, Wilczynski, & Hooks, 2015). In many cases, schools have no clear strategy for educating these students, and their giftedness is often set aside in favor of their ASD (Bertelli et al., 2016). As a result, these students may become isolated and alone during their education (Carter et al., 2017). The goal of education should be to get to a point of pluralization in which differences are respected and valued in our society (Wang & Neihart, 2015b).

Theoretical Context

This study was based on the attribution theory (Yayie, 2015) as well as the social cognitive theory (Bandura, 1986). Attribution theory explains how these students view themselves as they attach meaning to the behavior of others toward them (Yayie, 2015) while the social cognitive theory may be helpful in understanding how students socialize their actions by learning from the school environment. Combining these theories could help with understanding how twice-exceptional students experience the education system.

Attribution theory was first described by Heider (1958). Heider was concerned with how

people perceive and rationalize the actions of others. A person's perceptions, according to the attribution theory, are filtered through his or her own beliefs, desires, emotions, and traits (Heider, 1958). The attribution-based theory of motivation demonstrates how different causal ascriptions lead to motivational outcomes. Attribution theory provides a frame of reference as to how the behavior of the learners is perceived by observers, which in this case involves the parent and the teacher (Weiner, 1985; Yaiye, 2015). Attribution theory deals with how the social perceiver can use information to arrive at causal explanations for events in the environment (Weiner, 1985; Yaiye, 2015). The theory examines what information is gathered and how it is combined to form a causal judgment. Moreover, attribution theory explains the perceptions parents have towards their children's educational success or failure (Weiner, 1985).

In 1986, Bandura published his seminal work on social cognitive theory, developed by conducting a series of experiments in which he observed and described human behavior. He defined the social cognitive theory in the context of three modes: individual agency, proxy agency, and collective agency (Bandura, 1986). Bandura believed that individuals learn from the environment by observing others with whom they identify. For example, if someone who is afraid of snakes saw a person handling snakes who he or she knew was also afraid of snakes, it reduces the observer's fear of snakes (Bandura, 1986). Social cognitive theory is suited to this study because of its focus on the social aspect of learning. This theory helps shed light on how the twice-exceptional student experiences the educational system through the lens of social learning and modeling.

Individual agency is how an individual can influence his or her own environment. In the case of twice-exceptional students, individual agency speaks to how much control students feel that they have within their own environment. Proxy agency has to do with how other social

actors advocate for a person. Twice-exceptional students' perception of how others view them may be examined through proxy agency. Collective agency is how a team can have shared values and beliefs and work together to achieve a common goal (Bandura, 1986). Collective agency may reveal how much twice-exceptional students feel that they are a part of the social society at their schools. All of these agencies taken together reveal how twice-exceptional students experience their school environment.

Situation to Self

The rich experiences that I have had with twice-exceptional students has led me to this research focus. I should point out here that when I refer to a student as twice-exceptional, I mean that they are AIG and ASD. In my search for the lived experiences of twice-exceptional students, it was vitally important that I set aside my biases and examine this topic objectively. In doing so, I acknowledge my values and beliefs which can color my view and lead to errors. My axiological assumptions are shaped by my educational experiences. As a teacher's assistant I was often asked to work one-on-one with students who were twice-exceptional. I had very positive experiences working with these students and looked forward to building relationships with them.

The reason I became a teacher was because I realized that God gave me a gift to connect with and understand learners with different levels of disabilities. Since then I have watched several students who were academically gifted in math be clustered with students who identify with their disability instead of their giftedness. It seems that the ASD takes precedence over the student's giftedness, which is why the student received this placement. This leads to the student's disability being serviced at the expense of their giftedness. Paterson (2018) found that gifted students with ASD often have their giftedness overlooked. Because many educators lack

sufficient knowledge concerning twice-exceptional students, this has limited the creation of techniques to teach these learners. This barrier caused me to become concerned that possibly none of the students' needs were being met in the education system. During my decade-long career of working with all types of special needs students, I have heard them express their concerns, needs, and frustrations. I believe that the perceptions of students have great value and that they should be allowed to express themselves in a safe environment.

My research paradigm is pragmatism as it relates to the method of research that I chose for this topic. I believe that the language, perceptions, beliefs, and meaning are all best viewed in terms of their practical uses and successes (Ronksley-Pavia, 2015). This study offers the opportunity to understand the phenomenon of being twice-exceptional, specifically referring to those students identified with ASD and AIG. Most importantly, the research was based on a participatory approach which provided me the ability to explore the experiences and perspectives of others who are key stakeholders regarding the student's wellbeing. The topic lends itself to a pragmatic paradigm in that it is an examination of what students, parents, and teachers perceive as the practical effects of language, beliefs, and other factors that provide meaning in the school environment of twice-exceptional students (Ronksley-Pavia, 2015).

When I consider this study in terms of the world of the twice-exceptional learner, I wanted to investigate the nature of their existence and how they structure their own reality. My ontological assumption is that I was able to know this by asking open-ended questions of the child, the parent, one or more of the child's teachers, and using my own direct observations. By understanding the nature of their reality, I was able to craft a view of the child's world in the education system (Ahmed & Bruinsma, 2006).

Understanding the child's own perceptions of his or her environment is important and the

central goal of this study. However, epistemologically speaking, I do not believe that I can know that the information that I'm gleaning from the child helped me to fully understand and explain the child's experiences. The concern here is that the view I'm constructing should be adequate and legitimate. I do not believe that this can happen based solely on the child's perceptions (Crotty, 2003). My epistemological assumptions have led me to interview the child's parent and teacher as well as use direct observation of the child's environment. My assumption is that knowledge is not possible without considering different aspects of a topic and different points of view (Crotty, 2003).

Problem Statement

The problem this study seeks to examine is the lived educational experiences of twice-exceptional students who have ASD and are AIG from the voices of the students, their parents, and teachers. These students are not being effectively educated and many fail to realize their full potential (Denning & Moody, 2013; Trail, 2011). Special education plays a vital role in the training of children with disabilities since it aligns the needs of the learners with pedagogical frameworks in the United States (Trail, 2011). Students with autism face unique challenges in an educational system that is struggling to understand how to effectively education them (Denning & Moody, 2013). Notably, the categorization of students into a single group when they are twice-exceptional is an issue that plagues students with this condition (Denning & Moody, 2013). Moreover, these twice-exceptional students are labeled with a disability which becomes the priority for the educational system, and often their talents are not nurtured. The issue presents a dilemma to teachers and parents since they are confused on the best method to employ in teaching the affected students (Denning & Moody, 2013). There is a need for research to be conducted regarding how these students experience the educational systems at the secondary

level. Currently, students with autism who are twice-exceptional are handled in a similar manner to special needs students who are taught in smaller settings (Denning & Moody, 2013). There is little research that gives a voice to these affected students. The problem is that students who have autism face challenges, especially those who are twice-exceptional (Denning & Moody, 2013; Reagan, 2012). The problems twice-exceptional students face include being socially awkward, quiet and withdrawn, overexcited about certain topics, being bullied, and unable to cope with change (Denning & Moody, 2013). Nonetheless, most schools have not embraced a holistic approach to educating twice-exceptional students but instead rely on instructional decisions made solely by the teacher. I believe that this is because the voices of these students and their lived experiences are absent from the literature. By shedding light on the lived experiences of twice-exceptional students, their voices may change the way future students who are twice-exceptional are educated for the better.

Purpose Statement

The purpose of this qualitative multi-case-study was to shed light on the lived educational experiences of students in sixth through twelfth grade who are identified with an autism spectrum disorder and academically or intellectually gifted. The research focused on the phenomenon of twice-exceptionality, which for the purpose of this study is defined as having been classified with ASD and AIG in a one or more core subjects (Bell, Taylor, McCallum, Coles, & Hays, 2015; Ng, Hill, & Rawlinson, 2016; Wang & Neihart, 2015a). The research was underpinned by the social cognitive (Bandura, 1986) and attribution theories (Heider, 1958) that posit that individuals with disabilities are perceived using social and cultural lenses which inform the actions or behaviors of the twice-exceptional individual. Attribution theory was first described by Heider (1958). Heider was concerned with how people perceive and rationalize the

actions of others. A person's perceptions, according to the attribution theory, are filtered through their own beliefs, desires, emotions, and traits (Heider, 1958). Bandura's (1986) seminal work on social cognitive theory was based on a series of experiments in which he observed and described human behavior. He defined the social cognitive theory in the context of three modes: individual agency, proxy agency, and collective agency (Bandura, 1986). Twice-exceptional students' experiences could tell us what social models they use to learn within the educational environment.

Significance of the Study

The problem that this study sought to examine was the lived educational experiences of twice-exceptional students who have ASD and are academically gifted. Accordingly, I gathered evidence that was analyzed based on theory with the intention of shedding light on the challenges faced by twice-exceptional students who are being educated in a system that is struggling to find effective ways to disseminate knowledge to them. My aim was to understand the impact of the current approach to the stakeholders who include teachers, students, and parents (Drury, 2017). The phenomenon of twice-exceptionalism was investigated to determine the impact of the current educational learning environment on students with autism who are also gifted.

Most importantly, this research is significant since it leads to an understanding of the needs of gifted children with ASD, and the development of the best practices for teaching these students in a holistic manner. Notably, the current methods have proven to be insufficient since they emphasize one aspect of the twice-exceptional student and limit the opportunity to analyze the other (Trail, 2011). In summary, this study may inform the development of training strategies for students with ASD who are academically gifted. Further, this study could

potentially influence future policy, giving officials the ability to make decisions from an informed point of view (Denning & Moody, 2013).

Theoretically, this study may improve the social perceptions that impact the experience of the learner. The attribution and social cognitive theories could inform the formulation of strategies that are favorable to the student (Yayie, 2015). Importantly, attribution theory bridged empirical deficiencies that may limit the implementation of a holistic plan due to lack of information. This may inform the practices of teachers, parents, administrators, and policymakers regarding the lived experiences of students who are AIG and have ASD in the public education system in this school district and beyond.

Research Questions

The purpose of this study is to shed light on the lived educational experiences of students in sixth through twelfth grade who are identified with an autism spectrum disorder and academically or intellectually gifted. The interrelationship between individual, family, and environmental factors, also called a child's ecosystem, must be considered. Part of that ecosystem may reveal the context in which students view their own educational environment. It is within this context that the voice of the student was analyzed. The research questions were aimed at getting to the heart of how twice-exceptional students experience the public educational system through the lens of attribution and social cognitive theories. The answers to these questions when examined through the theoretical framework of attribution and social cognitive theories may shed some light on how the educational system needs to change to better serve these students.

Central Research Question

The central research question that this study addressed is as follow:

What are the perceptions of students in sixth through twelfth grade who are identified with ASD and AIG concerning their own educational experiences, and what do their parents and teachers perceive about these same experiences?

Sub-question 1

What are the parents' perceptions of the educational experiences of their sixth through twelfth grade child who has ASD and AIG?

The influence of the parent in the life of a gifted ASD individual cannot be overlooked. This question addressed that parents' perceptions of the students' experiences in the educational system (Valicenti-McDermott et al., 2015). Further, the social environment provided to the student at home and in the classroom was analyzed to establish its influence on the learner through the perceptions of parents and teachers (Bandura, 1986).

Sub-question 2

What are the teachers' perceptions of the educational experiences of sixth through twelfth grade students who have ASD and AIG?

The learning environment is fundamental to improving the experience of the students since it influences how they perceive experiences in the education system. This question explored the classroom environment through the perceptions of the teacher to determine what social cognitive influences may be present and how they impact the twice-exceptional student (Bandura, 1986).

Sub-question 3

What are the perceptions of sixth through twelfth grade students who have ASD and AIG of their public-school education?

This question probes the heart of what students themselves believe about the environment in which they are being educated. This question is focused primarily on the students and their view of the educational system and their everyday experiences within the system. The students' perceptions reveal their reality (Drury, 2017).

Definitions

The following terms are defined in relation to how they were used in this study:

1. *Academically or Intellectually Gifted (AIG)*: Students who have been identified as gifted in their core subject areas in public schools (Denning & Moody, 2013; Reagan, 2012).
2. *Autism Spectrum Disorder (ASD)*: This refers to having one of the many disorders on the autism spectrum (Valicenti-McDermott et al., 2015).
3. *Secondary School*: Schools that include Grades 6–12 in some combination or exclusively (U.S. Department of Education, n.d.)
4. *Twice-exceptional*: Students who have been labeled by the education system as being gifted and who have an ASD (Paterson, 2018).

Summary

The purpose of this qualitative multi-case-study was to shed light on the lived educational experiences of students in sixth through twelfth grade who are identified with an autism spectrum disorder and academically or intellectually gifted. In this multi-case-study, each of four students who have ASD and are AIG along with his or her parent(s) and teacher(s) were considered a separate case. Qualitative analysis was used to give voice to the students through one-on-one interviews. The parents and teachers of the students were also interviewed one-on-one in order to give a complete picture of the students' educational experiences. Focus groups that include all participants grouped by parent, student, and teachers as well as classroom

observations were used to give a fuller picture of the student's educational experiences. The unique problem that this study focused on was the educational experiences of twice-exceptional students who have ASD and are academically gifted.

CHAPTER TWO: LITERATURE REVIEW

Overview

In this chapter, literature related to this phenomenon of twice-exceptional students experience in the public education system is reviewed. A theoretical framework is presented based on the attribution and the social cognitive theories. A review of literature related to the autism spectrum disorders is then synthesized. After this, studies related to academically and intellectually giftedness and twice-exceptionality are presented.

Theoretical Framework

This study was grounded on the attribution theory and the social cognitive theory. Together these theories were used to help describe how twice-exceptional students experience the public education system. How students view their own environment and the motivations of adults and students who exist in this environment are related to attribution theory. How students learn in their environment can be explained by social cognitive theory. When these theories are juxtaposed, they create a lens through which the results of the study can be viewed.

Attribution Theory

Attribution theory was first described by Heider (1958), who was concerned with how people perceive and rationalize the actions of others. A person's perceptions, according to the attribution theory, are filtered through their own beliefs, desires, emotions, and traits (Heider, 1958). The attribution-based theory of motivation demonstrates how different causal ascriptions lead to motivational outcomes. Students tend to attribute their outcomes to a variety of causes, such as ability, effort, task difficulty, and luck. Attribution theory deals with how the social perceiver can use information to arrive at causal explanations for events in their environment (Korn, Rosenblau, Rodriguez Buritica, & Heekeren, 2016). This colors twice-exceptional

students' perceptions of their educational experiences. Heider (1958) believed that people's motivations and intentions for their actions were at the heart of processes that eventually manifest themselves through overt actions (Heider, 1958). When students receive both positive and negative feedback, they process it in different ways based on their perception of the motivations behind the feedback.

Fishman and Husman (2017) discovered that students attribute positive feedback internally and negative feedback externally. Fishman and Husman also found that students' perceptions of the motivation for the feedback they received affected their learning outcomes. These researchers reported that such beliefs were likely developed and relevant in their academic and motivational outcomes. The results of this study suggested that these attribution-related beliefs enhance the quality of students' causal thinking and help to sustain a sense of autonomy and well-being (Fishman & Husman, 2017).

Literature on attribution theory has shown that healthy, well-adjusted individuals exhibit a positivity bias when inferring the causes of evaluative feedback on their performance such as assessments. They tend to attribute positive feedback internally but negative feedback externally (Korn et al., 2016). The findings of Korn et al.'s (2016) study suggest that positive and negative performance feedback influences the student's evaluation of task-related stimuli such as solving a mathematics problem, as predicted by attribution theory.

Social Cognitive Theory

In 1986, Bandura published his seminal work on social cognitive theory, which he developed after conducting a series of experiments in which he observed and described human behavior. He defined the social cognitive theory in the context of three modes: individual agency, proxy agency, and collective agency (Bandura, 1986). Individual agency is how an

individuals can influence their own environment. In the case of twice-exceptional students, individual agency speaks to how much control students feel that they have within their own environment. Proxy agency has to do with how other social actors advocate for a person. Twice-exceptional students' perception of how others view them may be examined through proxy agency. Collective agency is how a team can have shared values and beliefs and work together to achieve a common goal (Bandura, 1986). Collective agency may reveal how much twice-exceptional students feel that they are a part of the social society at their schools. All of these agencies taken together reveal how twice-exceptional students experience their school environment.

Furthermore, Bandura (1986) also believed that individuals learn through reflection and modeling in a social context. An example of this would be a student observing another student not following the rules who is being ignored or rewarded by the teacher. As a result, according to Bandura's observations, the student observing the bad behavior may imitate the bad behavior in the future. Bandura (1986) believed that even if the observing student did not imitate the bad behavior, the observer still learned that bad behavior is either ignored or rewarded. Further, if the observer can identify with the bad actor in this example, he may have a sense of efficacy that would inform his decision to act similarly in future situations (Bandura, 1986). This is also conversely true according to Bandura. If a student believes that he has the same level of intelligence as a student being observed who is successfully performing a difficult task, there is a strong chance that the observing student will have a higher level of efficacy when it is his turn to perform the same task being modeled (Bandura, 1986). These social models may help to provide clarification as to why twice-exceptional students experience the educational system the way they do.

Related Literature

Students with autism are on the rise in public schools and occupy all areas of the spectrum in the literature presented in this section (Cai & Richdale, 2016; Carter et al., 2017; Corona, Christodulu, & Rinaldi, 2017). Approximately one in 59 children has been identified with ASD according to estimates from the U.S. Department of Education (n.d.). Topics in this chapter include the challenges students with ASD encounter externally and how they internalize their experiences. Students with autism deal with a variety of social problems as well as issues coping with a condition that is often misunderstood and stigmatized. In this section, among other studies, the work of Woodcock and Vialle (2016), who studied pre-service teachers' attitudes towards students with specific learning difficulties, will be presented as well as the work of LaBarbera (2017), who found that parents serve a key role in the education of students with disabilities. In order to gain a fuller understanding of this phenomenon, it is helpful to present a brief discussion on the history of ASD.

Background of ASD

When examining the history of autism, one is first struck by the controversy between Hans Asperger and Leo Kanner. They both reported their discovery of autism one year after the other. Many regard this as a coincidence; however, some say that Kanner was guilty of plagiarism as well as non-attribution of one of Asperger's 1938 papers (Cai & Richdale, 2016; Carter et al., 2017; Corona et al., 2017). Silberman (2015) discovered evidence that in 1944 Kanner rescued Asperger and his chief diagnostician, Georg Frankl, and a psychologist, Anni Weiss, who had also worked for Asperger, from Nazi Germany. Silberman concluded that Kanner did plagiarize Asperger's ideas but not his work. Asperger's original papers describing autism were written in German. They were not translated into English until 1981. Because of

this, many years went by before Asperger's understanding of autism became public knowledge. Much of Asperger's account of autism has been accepted for years by researchers without question. According to Chown and Hughes (2016), "this delay had an adverse impact on the trajectory of the diagnostic aspects of autism and led to some rather unfortunate developments in the field" (p. 2271). Kanner's works were published, and he took credit for first identifying and describing autism for 40 years. Unfortunately, in some cases, Kanner published information about autism that was inaccurate, which led to even more problems in this field of study (Chown & Hughes, 2016). Even after the English translation of Asperger's original works in which he accurately described autism, it took time for the research to come to the attention of researchers of autism and diagnosticians. It took even longer for his views to influence autism research and diagnostic criteria (Chown & Hughes, 2016). This led to a 40-year delay in any advances in the field.

In 1987 the Kanner-influenced pervasive lack of responsiveness to other people was replaced by the Asperger-influenced qualitative impairment in reciprocal social interaction in the Diagnostic and Statistical Manual of Mental Disorders of the American Psychiatric Association. According to Gillberg and Gillberg (1989), Asperger syndrome has so far been the subject of very little systematic empirical inquiry. However, in 1994 Asperger's original paper was published by the World Health Organization. Asperger's legacy is the criteria adopted for the new diagnosis of ASD. The very title of this diagnosis comes from the reference to a spectrum of autism which he first proposed in the 1940s (Chown & Hughes, 2016). Hans Asperger has since been accused of diagnosing children with autism so that they could be sent to the gas chamber during his time under Nazi rule in Germany (Baron-Cohen, Klin, Silberman, &

Buxbaum 2018). Although there is evidence to support this claim, Asperger's works have not been discredited because of it.

Munkhaugen et al. (2019) described the characters of students with ASD in the following categories: social, executive, emotional, and behavioral. In regard to social behaviors of students with ASD, Munkhaugen et al. noted that they would only communicate when they themselves initiated the interaction with others and that they only interacted with others to get something they desired. Many times, students with ASD did not show interest in their peers and seemed content being by themselves. In regard to executive functioning these authors noted that many students with ASD were slow to develop needed skills to help them be successful in school, such as writing and speech development (Munkhaugen et al., 2019). The ASD students' emotional behaviors ranged from joy and excitement to being quiet and withdrawn (Munkhaugen et al., 2019). When describing the behavioral aspect of the student who has ASD, the researchers noted that students would sometimes throw tantrums when given instructions or when asked to participate in activities in which they had no interest or which had no emotional meaning to them (Munkhaugen et al., 2019).

Since the year 2000, parents have begun advocating for their children to receive early intensive behavioral intervention, which has led to changes in educational policy and, more recently, health insurance reform that increases availability and funding for early intervention (Schreibman et al., 2015). Developmental science has also begun to focus on atypical as well as typical learning and growth trajectories; a corresponding interest in autism intervention has arisen in the field across disciplines (Schreibman et al., 2015). More changes are on the horizon as researchers are starting to tackle the root causes of autism and the genetic code that may cause the condition.

Issues Related to ASD

Being able to recognize students with ASD at an early age has given researchers new opportunities and challenges. Students diagnosed with ASD have seen a significant increase over the past 20 years according to Sugita (2016), making ASD one of the fastest growing disabilities in the United States. The last two decades of research have demonstrated ways for identifying ASD in younger children as well as methods for improving outcomes of these children through targeted early intervention practices (Schreibman et al., 2015). These advances now allow for the opportunity to begin intervention much earlier in life. However, the challenge that remains is finding a way to tailor interventions for young children so that outcomes can be optimal (Schreibman et al., 2015).

The literature documents that children's experiences define and shape their psychological development (Chun, Connor, Kosciulek, Landon, & Park, 2016) and that experiences have a showering effect on development. Students with disabilities face challenges resulting from their attitude, environmental, and organizational issues when they first try to enter school that can lead to them dropping out of school in later years.

Bertelli et al. (2016) found that issues related to persons with ASD required a pharmacological approach in addition to the naturalist holistic approach recommended by Schreibman et al. (2015). This study focused mostly on the pharmacological treatments such as with different medications. Bertelli et al. concluded that some medications were useful to treat students with ASD.

Education of Students with ASD

Special education regulations in the United States have provided guidelines for the active participation of parents in the education of their children (LaBarbera, 2017). The Individuals

with Disabilities Education Act, revised in 2004, has specific provisions for parent participation in their children's education. Furthermore, research has demonstrated the benefits of collaborative relationships between school and home that include improved academic and social outcomes (LaBarbera, 2017). Other research findings indicate that for meaningful collaboration to occur, parents value receiving information from educators about their child's progress. Parents also valued opportunities to participate in decision making and incorporating the needs and desires of the family when developing interventions (LaBarbera, 2017). Parents serve a key role in the education of students with disabilities, and for that reason, schools should undertake efforts to encourage parent involvement and to facilitate meaningful home-school partnerships that will ultimately benefit the students (LaBarbera, 2017).

Parents rated a higher degree of satisfaction with teachers who understood the unique learning needs of children with ASD. Parents also highly rated teachers who they felt created a safe and calm learning environment, who kept them updated on their child's progress, and who possessed an overall eagerness to help children with ASD make progress academically and socially (LaBarbera, 2017). Parents of children with ASD want their children to have teachers who show genuine respect for their children, possess the training and skills necessary to successfully support their children's appropriate behaviors, and continually search for new knowledge and resources to update their skills (LaBarbera, 2017).

The lack of training and professional development of staff to address issues in autism was cited as a barrier to collaboration by many of the parents. In the study conducted by LaBarbera (2017), one parent said, "The special education teacher is not trained in dealing with a child that has autism" (p. 48). Many of the parents in the LaBarbera study blamed the dispositions and attitudes and lack of effective communication exhibited by teachers.

According to Sugita (2016), “Special education teacher education training programs have shifted practices to address evidence-based strategies and supports for students with ASD” (p. 307). The lack of professional development with regard to serving students with ASD has led to low performance by students with special needs. This is starting to be evident in public schools according to Sugita (2016). Pre-service training has begun to focus on preparing teachers to instruct students with ASD when they begin their careers in education (Sugita, 2016). These teachers are mentored by colleagues who can help them in the task of implementing researched based strategies to meet the needs of students with ASD (Sugita, 2016). New teachers are also supported in attempts to identify when to refer students to counseling for mental health needs.

Forty percent of students with ASD do not receive counseling in regard to their mental health according to Sugita (2016). The researcher goes on to say they students do not receive speech therapy, life skills training, and much needed health services after the age of 18 (Sugita, 2016). Some students with ASD drop out of school not having developed the skills needed to be successful in adult life (Sugita, 2016). However, there is an urgency in education to find ways to better support students with ASD into adulthood (Sugita, 2016). The public education of a student with disabilities ends at age 21; however, schools bear a responsibility to ensure that students with ASD are equipped for adulthood (Sugita, 2016).

Instructional methods should move to strategies that effectively serve students with ASD (Sugita, 2016). Teachers need guidance in regard to how to handle temper tantrums when students with ASD are required to complete a task that they do not prefer doing. Moreover, teachers need to develop strategies to help ASD students cope with change and withdrawal from social situations. Methods for teaching students with ASD are evolving to better address the needs of students. More research is needed so that new research-based practices can be

developed to further address the needs of students with ASD (Sugita, 2016). The number of students with ASD will continue to rise. Better ways to educate these students need to be developed across disciplines (Sugita, 2016).

Even with inclusive general education classrooms, high school students with ASD often have few social interactions with classmates. Peer support arrangements hold promise for increasing peer interactions and shared learning within general education classrooms (Cai & Richdale, 2016). Cai and Richdale (2016) examined the impact and social validity of peer support arrangements for high school students with ASD. The researchers arranged for peers to support students with ASD both socially and emotionally for a period of time. The students with ASD increased their social interactions with peers, while academic engagement either increased or maintained the same (Carter et al., 2017). Social validity data from peer partners and students with ASD indicated they both groups considered the intervention to be a successful (Carter et al., 2017).

Inclusive education must be accompanied by the practice of delivering individualized supports to students with ASD for them to be successful. The social and academic advantages that are credited to inclusion in the general education environment cannot occur unless there is an intentional effort to tailor the environment to a student's individual needs (Carter et al., 2017). The types of support that are important for peers to provide may vary based on the needs of a student with special needs and the nature of the student's situation. The findings in Carter et al.'s (2017) study highlight the importance of considering additional strategies by both peers and educators that may promote a deeper engagement in curricular activities by students with ASD. Support models for students with ASD should be comprehensive and include ways that foster both rigor and relationships in the academic setting (Carter et al., 2017).

Linton, Germundsson, Heimann, and Danermark (2015) asserted that support from experienced teachers is a key strategy for accommodating students with ASD in the inclusion setting. The Linton et al. study examined the idea that the way teachers understand and interact with students identified with ASD is influenced by their previous experience with students with autism. Swedish mainstream classroom teachers were invited to anonymously answer a web-based questionnaire ($N = 153$). The researchers surveyed teachers about their previous experience with ASD students. Researchers made comparisons between phrases reported by teachers who had experience with ASD and teachers who did not. Linton et al. concluded that there is a correlation between the teachers' experiences with students with ASD and how they accommodated and treated these students. If teachers had positive prior relationships with ASD students, they were more likely to view the students favorably.

Academic and Intellectual Giftedness

Students who have been identified as intellectually gifted do not fare any better in the public education system in the U.S. or overseas (Miller, 2002). These gifted students do not operate within the norm of general public-school practices and procedures (Bell et al., 2016; Burke et al., 2008; Miller, 2002). They sometimes struggle to fit in and are many times bullied for being different (Burke et al., 2008).

Background of AIG. According to Noemy, Ines, Cristina, and Patricia (2017), giftedness can be viewed as a social construct. This perspective implies that the meaning of the concept gifted is highly sensitive to the culture, belief system, and policy of the country (Noemy et al., 2017). The concept of giftedness is a useful construct and its effects are tangible (Noemy et al., 2017). The concept of educational giftedness influences educational policies and clinical practice (Renati, Bonfiglio, & Pfeiffer, 2017).

Over the last two decades there has been growing interest in the educational community regarding understanding the emotional characteristics of gifted and talented students (Miller, 2002; O'Sullivan, Robb, Howell, Marshall, & Goodman, 2017; Townend & Brown, 2016; Wang & Neihart, 2015a). This surge of interest is largely motivated by the socialization of gifted students and their educational wellbeing (Zeidner & Matthews, 2017). Gifted individuals are not at great risk for lower mental health or a lower adaptive status as is the case with non-gifted individuals (Zeidner & Matthews, 2017). Nevertheless, the image of the intellectually outstanding yet socially awkward and emotionally unstable individual is still found in the media in the U.S. and abroad (Preckel, Baudson, Krolak-Schwerdt, & Glock, 2015).

Issues related to AIG. There is limited research on the families of gifted students. Renati et al. (2017) sought to discover how the families support gifted children and attempted to understand the nature of the relationship experienced by gifted students with their siblings. Renati et al. suggested that gifted children experience difficulties differently than those who are typically developing. But giftedness adds a wrinkle to the development of the individual. Because of their giftedness, these students have to overcome psychological issues that are unique to their condition (Renati et al., 2017). The interrelationship between individual, family, and environmental factors, also called the child's ecosystem, can influence a child's wellbeing and healthy adjustment in a desirable or negative way. The ecosystem as a whole is the most important factor when it comes to attempting to measure a child's resilience (Renati et al., 2017).

Renati et al. (2017) noted that the parents of gifted children experienced problems with them starting at birth such as being active and intellectually curious. The researchers discovered that parents dealt with other problems that included academic and behavior problems at school (Renati et al., 2017). Parents of these gifted students were not equipped with any knowledge of

developmental issues of their gifted child. Further, they did not possess the strategies to help their gifted child in regard to their well-being and ability to adjust (Renati et al., 2017). The study concluded that “the parents of gifted and talented children face many of the very same parenting challenges of any parent. They also must deal with stress because of unique concerns about their gifted child’s psychosocial and intellectual development” (Renati et al., 2017, p. 154).

Zeidner and Matthews (2017) believed that there is a moderate correlation between students who are classified as AIG who are also lacking emotional intelligence. These authors conducted research on emotional intelligence and giftedness and found that the emotions of gifted students varied widely from positive to negative with differing intensity within a classroom setting as well as in daily social situations. Gifted students displayed pride, interest in assignments, and the enjoyment of social activities (Zeidner & Matthews, 2017). However, they also experience negative emotion such as anxiety, envy, anger, guilt, and shame (Zeidner & Matthews, 2017). Despite the many positive and negative emotions the students experienced every day at school, they can be taught emotional control through the development of emotional intelligence (Zeidner & Matthews, 2017). Zeidner and Matthews defined emotional intelligence (EI) as “a set of hierarchically organized core competencies and skills for identifying, expressing, processing, and regulating emotions—both in self and others” (p. 165). They concluded that “there is a solid theoretical basis to suggest that cognitive ability and EI, conceptualized and assessed as an ability, are moderately correlated” (p. 177). Despite the fact that not all gifted students need EI training in order to control their emotions, they do need to develop emotional skills that they can learn and improve on over time (Zeidner & Matthews, 2017).

Winkler and Voight (2016) asserted that current textbooks, websites, research articles, and popular resources have stated that gifted individuals have longer and more pronounced responses to stimuli than the general population. They conducted a meta-analysis to investigate the existence and strength of giftedness–overexcitability (OE). They found that gifted samples were found to have higher mean OE scores than nongifted samples (Winkler & Voight, 2016). There is some disagreement among scholars about the nature and strength of the giftedness–OE relationship. Some have argued that gifted individuals are overexcitable, noting that gifted samples have often outscored nongifted samples on measures of OEs (Winkler & Voight, 2016). Piirto, Montgomery, and May (2008) went as far as to say that overexcitability was a characteristic of students with a higher IQ. However, Winkler and Voight (2016) cautioned that there is much about overexcitability that is still unknown. Alloway, Elsworth, Miley, and Seckinger (2016) examined ways to mitigate overexcitability in the classroom. They posit . . . that for the gifted students, playing computer games and watching TV showed a trend in predicting inattentive behaviors at home, but not in a classroom setting. In order to maintain a cognitively stimulating home environment, one possibility may be to limit exposure to such media sources and encourage the natural curiosity of gifted learners. In contrast, classroom learning could benefit from the integration of computer-based learning in light of the reported potential benefits of digital-based learning. Such tools, when used for learning, could maximize learning and maintain motivation in a gifted population. (p. 120)

Wilson (2015) used regression analysis in order to investigate very young children who demonstrated advanced ability in mathematics and literacy. Many studies report varying results when it comes to differences in social and emotional characteristics of gifted students as

compared to general populations of students (Wilson, 2015). Wilson originally asked parents and childcare providers questions that focused on the socially maladaptive behaviors. This research included questions about concentration, empathy, worry, and friendships. The study was limited to children who were born in 2002 (Wilson, 2015). The research concluded that parents and childcare providers had different patterns related to the observations of social and emotional characteristics of the children in the study (Wilson, 2015). The presence of socially maladaptive behaviors was significantly related to the child being gifted in literacy at an early age. However, Wilson failed to find any significant relationship between mathematics and social behaviors.

Twice-Exceptional Students

Students who have been diagnosed with an ASD and identified as AIG are considered twice-exceptional (Bell et al., 2015; Townend & Brown, 2016; Wang & Neihart, 2015b). Twice-exceptional students present a dual paradox for education systems in terms of having giftedness and disability simultaneously (Wang & Neihart, 2015b). The paradox of two exceptionalities in schools is due primarily to behavioral issues, lack of community knowledge, and challenges with identification (Townend & Brown, 2016). The main problem here is the masking of the giftedness of twice-exceptional students in favor of their disability. Because of this masking, the gifted part of the student fails to be nurtured (Bell et al., 2015). Not nurturing the giftedness of a student can be detrimental considering the research already presented in this chapter. The studies presented here mainly focus on students who are gifted and have learning disabilities which does not include ASD. However, despite there being a gap in the literature regarding students who are AIG and ASD, the studies that follow may still be instructional and aid in examining the overall phenomenon of twice-exceptionalism.

Wang and Neihart (2015a) observed that twice-exceptional students' problematic psychological traits negatively impacted their academic achievement. Twice-exceptionality in students presents unique challenges in terms of identification of both giftedness and learning disabilities. These challenges are often due to the variability in twice-exceptional students' performance across subjects or the tendency for giftedness to obscure the need for a learning disability diagnosis. This phenomenon, called masking, is perhaps the most problematic aspect of identifying twice-exceptionality (Bell et al., 2015).

Because twice-exceptional students display the paradoxical psychological and behavioral traits that risk academic failures, Wang and Neihart (2015a) suggested several practices to achieve the best developmental outcomes for these students. These practices include programs to identify and develop their gifts and strategies to remediate their deficits and develop psychological strengths. The psychological strengths recommended are a will to succeed (perseverance), self-regulation, social connection, and self-advocacy (Wang & Neihart, 2015a).

IQ Testing and Twice-Exceptionality

The subject of how students are identified as twice-exceptional cannot be complete without a discussion about intelligence testing and methods of assessment. Different educational institutions have varied methods of identification of the gifted and talented as well as the learning disabled, but it is far from an exact science and researchers do not agree on what constitutes intelligence (Alloway et al., 2016; Francis, Hawes, & Abbott, 2016; Miller, 2002; Omichinski, Van Tubbergen, & Warschausky, 2008; Preckel & Brüll, 2008). In 1962 a researcher named Guilford found that certain individuals possessed abilities that IQ testing could not account for, such as creativity (Kim, 2005). Many students who do not excel on standardized tests such as the IQ test stand a good chance of being labeled learning disabled, while students

who excel are typically labeled gifted and talented (GT; Baudson & Preckel, 2016). But the twice-exceptional child occupies a unique space in this continuum as some of these children who have been identified as GT may also possess certain traits that could identify them as having a LD, ASD, or other disorders that impact their ability to socialize and/or cope with events that occur in their environment. Further, these students process events differently than their peers and react to events in ways that make them stand out or that may seem odd to others (Baudson & Preckel, 2016). IQ and other intelligence testing stops short in providing educators with a prescription for how to educate identified students. Educators would be wise to examine many other indicators beyond the IQ test in order to accurately ascertain a child's intelligence. These tests also do not account for the social and mental aspects of the day-to-day experiences the students have in their educational environment.

Moreover, Noemy et al. (2017) posited that educators should assess beyond the score a student makes on a test and consider the student's emotional intelligence when assessing their achievement and level of overall intelligence. Ziegler and Stoeger (2010) proposed that an assessment of fine-motor skills should be included in any assessment of intelligence and can be effectively used to identify students with LD. However, identification is the first step in addressing and meeting the needs of the twice-exceptional and IQ testing and other methods that are akin to IQ testing are overwhelmingly used (Ziegler & Stoeger, 2010). However, not all students who are assessed for a possible LD should also be evaluated for emotional intelligence. Townend and Brown (2016) sought to understand the entire ecosystem of the child in order to ascertain his or her level of emotional intelligence. These authors posited,

Ways of knowing (epistemology) and ways of being (ontology) are intertwined with the social dynamic of relationships. These interactions characterize learning and

development, including the development of academic self-concept, and are part of the processes of being and becoming, of shaping and developing identity. (p. 22)

Here the identity construct and the self-concept of the twice-exceptional student are more important than emotional intelligence (Townend & Brown, 2016).

Background of IQ testing. In 1903 the French government asked Binet to develop something to help educators identify students who are struggling in school. The Binet-Simon Intelligence Test was developed and first given in 1905. It was one of the first tests of intelligence (Omichinski et al., 2008). Binet and his colleague Simon began developing questions that focused on areas not explicitly taught in schools, such as attention, memory, and problem-solving skills. Using these questions, Binet determined which ones served as the best predictors of school success. Binet and Simon played a profound role in psychology, making intelligence testing among the most important contributions psychology has made to society (Omichinski et al., 2008).

Building on the Stanford-Binet test, American psychologist Wechsler created a new measurement instrument that improved the Binet-Simon Intelligence Test. Much like Binet, Wechsler believed that intelligence involved different mental abilities. Wechsler (1925) compared the scores of his participants to the scores of other participants their same age. Rather than doing a mental age based on a predetermined standard as the Binet scale had done, Wechsler favored a mean comparison scale (Wechsler, 1925). Both these tests and others that came shortly afterward, considered technological advances at the time, changed very little over the next 60 years and were consistently used to make educational, legal, and other important life decisions regarding individuals (Boake, 2002). Boake (2002) elaborated,

It is paradoxical that the Wechsler-Bellevue scale, which was a model of technical innovation in 1939, represents in its current revision one of the oldest mental tests in continuous use. The intelligence scale that is relied upon to make medical, educational, and legal decisions does not reflect advances in understanding of cognitive functioning during the past 60 years and contains tests from the 1800s. (p. 401)

However, the interpretation of what the test means has changed over the years and taken on different tasks. Some researchers favor picture arrangement as part of intelligence assessment, but Wechsler was a strong critic of picture arrangement because it was more of a social intelligence (Boake, 2002). Wechsler believed that social intelligence was just general intelligence applied to social situations. IQ testing has little room to consider outliers such as the twice-exceptional and has fallen short of being perfect. But these tests and ones closely related to them do have value at predicting future performance as well as identifying students who may be in need of extra assistance such as academic accommodations (Khasu & Williams, 2016; Miller, 2002; Omichinski et al., 2008; Preckel & Brüll, 2008). In fact according to Vandenberg and Emery (2009), “research with non-LD children has consistently demonstrated IQ to strongly predict academic performance, school success and occupational status” (p. 45).

IQ testing and special education. Remediation may serve as a measure to aid students and help them achieve more, particularly students who may be LD and have a higher IQ as is the case with twice-exceptional students (Vandenberg & Emery, 2009). According to Vandenberg and Emery (2009) because “IQ is closely associated with school-related skills and activities, it would be expected that for children with LD, higher IQ would be associated with greater gains from remediation” (p. 45). Accordingly, IQ may be a valuable tool to aid in the selection of interventions for remediation for twice-exceptional students who generally score higher on IQ

tests than do students who are just identified as LD. According to Harman and Bruce (2008), the sooner an LD can be identified, the sooner remediation can be implemented and could mean the difference between success and failure. The whole goal of the Individuals with Disabilities Education Act (IDEA) was to identify students who have special needs and to get them remediation as soon as possible as early as possible (Cortiella, 2006). This is delivered in schools through special education programs that design an individual education plan (IEP) for each child who is identified. IQ testing plays a vital role in the design of such a plan by identifying the student's present level of functioning that is then used to develop specific goals and set benchmarks (Cortiella, 2006). According to (Omichinski et al., 2008):

Assessing the gifted and talented. Kim (2005) believed that the talented and creative mind possesses divergent thinking skills that cannot be measured by IQ tests. Some twice-exceptional students who carry the GT identification may fall into this category. Kim goes on to say that creativity and intelligence are two separate constructs. It may not be possible to know in any individual case if a twice-exceptional student is more creative than intelligent or more intelligent than creative. IQ tests can provide educators with the level of intelligence to a certain degree, but creativity is much harder to quantify (Kim, 2005). Kim, in her attempt to “synthesize empirical research in the areas of creativity and intelligence for the purpose of creating a generalization about the relationship between creativity and intelligence” (p. 57) found the following:

The negligible relationship between creativity and IQ scores indicates that even students with low IQ scores can be creative. Therefore, teachers should be aware of characteristics of creative students—this will enable teachers to see the potential of each child. (Kim, 2005, p. 65)

Assessment for emotional intelligence. Miller (2002) believed that IQ tests may not always be complete because they may not paint a full picture of the child's overall abilities. In such cases, Miller recommended including some type of assessment that included emotional intelligence. Emotional intelligence is one's ability to interpret the emotions of others during interactions. When children seem to have difficulty interpreting the emotions of others, Miller favored an emotional intelligence scale to assess student's abilities to socialize and adapted to the environment. By not including the emotional intelligence factor, educators may be missing a vital piece to the child's overall ecosystem of development. Noemy et al. (2017) seemed to agree with Miller by recommending that educators look beyond quantitative assessments of intelligence and include a broader scope that included the qualitative assessments of a student's intelligence. While assessing why a child makes good grades, a personality assessment may be an important factor (Noemy et al., 2017):

Aside from general traits that people use to interact with each other and the world, emotions and feelings are characteristics that cannot be ignored in the human being, as they determine and modify their behavior, and even their health, proving to hold an important role in life. (p. 1106)

However, in this study Noemy et al. failed to confirm their hypothesis that personal traits correlated with a level of intelligence. Because traits such as emotional intelligence and personality are complex and ever changing, it may be that individual situations and cases differ to the extent that no general theory can be developed at the current level of knowledge in the literature (Noemy et al., 2017). These findings may be informative as the experiences of the twice-exceptional child in the public education system is analyzed and evaluated in this and future studies.

Current Research on Twice-Exceptional Students

Townend et al. (2016) applied interpretative phenomenological analysis (IPA), a qualitative approach, to investigate the perceptions of academic self-concept and academic self-efficacy in six twice-exceptional students from a Singapore secondary school. Students who were diagnosed with an ASD and identified as AIG participated in the study. Results from the Townend et al. study demonstrated that twice-exceptional students could possess high-academic self-concept and academic self-efficacy that empower their academic success. The results of their study suggested that academically successful twice-exceptional students possessed positive academic self-concept and that such positive self-beliefs affected their learning outcomes. Students expressed that they were aware of their strengths in some subject domains (Townend et al., 2016). At the same time, students mentioned that they experienced failures with some subjects and showed low-academic self-concept in these subjects.

In the discussion about the subjects with which they were struggling, Townend et al. (2016) found that the subjects requiring memorizing ability and understanding of texts were difficult for them. Subjects such as languages, history, and geography were mentioned by most of the students as difficult for them (Townend et al., 2016). Although they had struggled with that abstract nature of these objects, five out of the six twice-exceptional students interviewed by Townend et al. reported that they had done their very best to study and indicated that they were satisfied with their results. Their overall academic self-concepts were high. They affirmed that the positive self-concept in the area of their strength played an important role in achieving their academic goals (Townend et al., 2016). Positive academic self-efficacy was another theme clearly indicated by the twice-exceptional students as a psychological strength. The students in the Townend et al. study indicated that this self-belief influenced their academic performance.

They regarded self-confidence and self-expectation as inspiration and encouragement for their academic success (Townend et al., 2016). The findings from this study showed that although twice-exceptional students struggled with some subjects that required memorizing ability and reading skills, they still seemed to possess positive academic self-concept and academic self-efficacy that empowered their academic achievement.

In 1990 Baum identified three twice-exceptional groups that experience a masking effect: (a) students identified as gifted who exhibit difficulties in school and may be considered underachievers, (b) students identified as having a learning disability whose giftedness may not have been recognized or addressed due to average or low achievement in one or more academic areas, and (c) students identified as neither having a learning disability nor displaying giftedness due to abilities and disabilities masking each other. Although students appear to be achieving at an average level academically or seem to be getting by in the classroom, their performance may be far below that which would be predicted from their overall intellectual ability level (Bell et al., 2015). In early grades, twice-exceptional students may be able to successfully compensate for academic weaknesses stemming from their learning disability (Bell et al., 2015). Eventually, as these students progress through school, their learning disability-related challenges may become more difficult to overcome due to the increase in academic intensity and load. Consequently, if twice-exceptional students are identified at all, they tend to be recognized as twice-exceptional in the upper grades or in college (Bell et al., 2015).

Townend and Brown (2016) found that academic self-concept of twice-exceptional students is influenced by sociocultural forces within the environment, which initially influences the construction of academic self-concept. In order to explore the academic self-concept of twice-exceptional students, Townend and Brown utilized different data collection mechanisms in

a multiple case-study design. The case-study data illustrated that the formation of academic self-concept is a result of interactions primarily with teachers, closely followed by interactions with peers. The sociocultural framework presented in this study sought to provide a deeper understanding of academic self-concept through its focus on the three elements of situated learning, participation-in-practice, and legitimate peripheral participation (Townend & Brown, 2016). Townend and Brown believed that there are three implications for classroom practice. First, teacher education programs need to be alert to unidentified students presenting as twice-exceptional. Secondly, tiered counseling needs to be provided to support the psychosocial needs of twice-exceptional students. Finally, environmental and programming adjustments need to be made available to twice-exceptional students, adjustments that recognize that they are gifted first, but may require additional support for learning disabilities (Townend & Brown, 2016).

Wang and Neihart (2015b) explored what supports twice-exceptional students perceived to be helpful to them, and how these supports from parents, teachers, and peers interacted with their academic motivation and engagement to affect their academic achievement. Their study aimed to investigate twice-exceptional students' experiences through their own voices because only a few empirical studies had included these students' perspectives (Wang & Neihart, 2015b). Results showed that supports from teachers, parents, and peers were endorsed by the students to be one of the biggest contributing factors to their good academic performance (Wang & Neihart, 2015b). The findings from this study suggested that external supports from parents, teachers, and peers are enablers of twice-exceptional students' academic success. These supports enhanced students' academic engagement and academic self-efficacy and reinforced the use of particular learning strategies. External supports are important in helping twice-exceptional students achieve.

Talented Students Who Have ASD

The giftedness of individual students can be a gray area because educators do not agree on how to identify the traits (Zeidner & Matthews, 2017). The school's inability to identify these students may lead to them being overlooked. Talent, however, can be more easily recognized as a student who is an autistic savant in a particular area (Preckel & Brüll, 2008). Normally schools combine the terms gifted and talented (GT) into one category. Participants in a study conducted by Preckel and Brüll (2008) were identified as academically and intellectually gifted by the school itself using their method of selection and labeling. However, since these methods of identification of giftedness are not universally agreed upon, here I will briefly discuss the student who is talented and has been diagnosed with a learning disability (LD). A student who is talented and LD normally possesses a high aptitude for achievement in a few specific areas. These areas are not necessarily academic but could range from artistic, athletic, computer, or any other specific area of interest (Kim, 2005). However, in the literature the word talented is rarely written without the word gifted in front of it. Because of this, literature that uses GT as the identifier of twice-exceptionality will be presented. Also, studies that use LD, not necessarily ASD, will also be considered.

A small minority of students with ASD or who are LD are characterized by remarkable areas of talent despite their pervasive disabilities in communication and social development. Students with learning disabilities are an underrepresented group within GT education. This could be because they possess traits that are not typical of a GT student (Josephson & Mehrenberg, 2018). This may lead to confusion for those who have not been trained to recognize the identities of those GT students who also have learning disabilities. Because of this, there is no way to know how many of these students make up the population in the United

States (Josephson & Mehrenberg, 2018). One possible difficulty in identifying GT students who are LD is how each population is defined. Both fields, GT education and the education of students with LD, have different definitions for students in those groups and separate terminology in their publish research and journals (Josephson & Mehrenberg, 2018). Because of these differences, semantics could play a part in the underrepresentation and misidentification of GT students who are LD (Josephson & Mehrenberg, 2018).

Gifted and talented and LD students generally score higher on IQ tests than students who just have a LD. However, Noemy et al. (2017) reported that teachers are reluctant to provide students who are labeled GT and LD with higher level challenging work. Further, students who are GT and LD may experience difficulty at school because organization, participation, and long-term planning play a role in their success (Baum, Bade, & Neumann, 2015). These students can be highly creative, verbal, imaginative, curious, with strong problem-solving ability, and a wide range of interests or a single, all-consuming expertise (Baum et al., 2015). But, at school, they may have difficulty keeping up with course rigor, amount, and demands which may result in inconsistent academic performance, frustration, difficulties with written expression, and labels such as lazy, unmotivated, and underachiever (Baum et al., 2015). All this may hinder their excitement for school and be detrimental to their self-efficacy, self-confidence, and motivation (Baum et al., 2015). This could lead to the development of social and emotional issues, such as increased frustration, lowered self-esteem, and increased antisocial behaviors, and can cause challenges later in life if left unaddressed (Mohammed, 2018).

The masking effect presents a challenge for students who are GT and LD as well. The LD label and behaviors displayed by the student could have the effect of masking the GT aptitude of the student. This is also noted when considering the student who is AIG and ASD.

The masking effect could have an adverse effect on many twice-exceptional students. The resulting effects lead to the GT portion of the child's educational experience being left unnurtured (Baum et al., 2015; Mohammed, 2018; Wormald, Rogers, & Vialle, 2015).

Baudson and Preckel (2016) pointed to the challenge of teacher stereotyping of students leading to misidentification and hinderance of development of GT students. The researchers concluded that "educational practitioners should be aware of the persistent association between giftedness and social-emotional issues" (p. 222). The authors recommended that educators receive special training that would enable them to better address the social emotional aspects of a GT student. Francis et al. (2016) examined the empirical research in regard to the association between giftedness and psychopathology in childhood and adolescence. They found that high ability was a predictive factor and recommended that future research be conducted with a larger sample size.

Education of Students Who Are Twice-Exceptional

Twice-exceptional students experience unique academic strengths and weaknesses, but these characteristics are often difficult to identify because of the stigma of an ASD label (Bell et al., 2015). The way most schools have chosen to educate these students is through co-teaching. Co-teaching occurs in the classroom with two teachers each providing services to the student.

According to Sugita (2016),

As students with ASD are being served in general education classes, the need for interdisciplinary collaboration is increasingly recognized. Co-teaching has gained recent attention as an evidence-based practice that increases student engagement and access to the curriculum. In co-teaching models, general and special education teachers collaboratively plan, teach, and assess all students. (p. 309)

Most general education teachers feel ill-equipped to handle students with ASD according to Sugita (2016), who believed that “the combination of the two areas of expertise provides students with ASD academic, social, and behavior supports needed” (p. 311). This extra support may positively contribute to the social emotional development of the child with ASD.

Computer interventions. O’Sullivan et al. (2017) researched how the video game Minecraft can facilitate learning environments that embody evidenced-based research on how to educate twice-exceptional students. The goal of computer interventions is to nurture both the giftedness of a student as well as account for the ASD. The authors described in detail a variety of specific techniques for implementing such environments, including contextualized learning artifacts and puzzle rooms. The researchers then provided examples of learning environments that the authors had previously implemented using these techniques. These environments are currently being used in an empirical evaluation, as part of a larger project investigating the effectiveness of Minecraft as an educational resource for twice-exceptional students. Twice-exceptional learners are intellectually or creatively gifted yet also experience one or more learning difficulties. These students face a unique set of challenges in educational settings. Recommended strategies for accommodating twice-exceptional learners focus on the following:

- (1) providing freedom and variety, so that students can engage with learning in a way that interests them, plays to their strengths, and compensates for their learning difficulties;
- (2) allowing students to engage with simulated and real-world problems; and
- (3) providing an adaptable environment that is pleasing to students, and sensitive to any specific needs they may have as a result of learning difficulties. (O’Sullivan et al., 2017, p. 120)

O'Sullivan et al. (2017) identified 36 learning principles found in video games. As a result, there are three themes identified in their study that are important.

Firstly, freedom and variety were found in the fact that video games allow players to progress via multiple routes, experiment and discover things for themselves, and learn through probing and reflecting upon the game world. Secondly, video games are often essentially simulations of real (or fantasy) worlds, in which the player must actively and critically engage to solve problems. Thirdly, video games are enjoyable, engaging environments, which provide information and feedback just-in-time (on-demand), incremental learning, rewards and achievements, and allow the player to operate in a safe zone, or regime of competence in which they are challenged, but the challenges are not perceived to be too difficult. (O'Sullivan et al., 2017, p.121)

Twice-exceptional learners face a variety of challenges in education, and strategies for curricular interventions to overcome these challenges have been identified in previous research. In this study the authors showed that several of the factors addressed by these recommended interventions are found in video games, and further that Minecraft allows the teacher to easily implement learning environments which embody these factors (O'Sullivan et al., 2017).

Strengths-based intervention. Bell et al. (2015) found that many students who were identified as being exceptional in math struggled in reading. They concluded that this contributed to a masking effect and recommended that educators take a different approach to identifying giftedness. According to the authors, these students also display low self-esteem at times that may affect their ability to grow. Because of this, Bell et al. recommended a “strengths-based model of intervention for twice-exceptional students, maintaining a balance between attending to a child’s giftedness and maintaining a challenging curriculum, yet also

remediating and compensating for deficits” (p. 310). Wang and Neihart (2015a) believed that in order to successfully educate twice-exceptional students they needed the support from the people who make up their ecosystem. They pointed to peers, teachers, and parents as being vitally necessary and important in the education of twice-exceptional students. Wang and Neihart (2015a) concluded,

The supports from parents, teachers, and peers can affect 2e [twice-exceptional] students’ academic motivation and their engagement. They may also help them overcome their learning disabilities and cultivate their effective learning habits. Among all the external supports perceived by 2e students in our context, peers’ support was the most frequently cited influencing role in their social adjustment, academic achievement, and overall well-being. (p. 157)

The authors recommended future research on the effects of external supports on the overall achievement of twice-exceptional students (Wang & Neihart, 2015a).

Recommendations for intervention. Ronksley-Pavia (2015) believed that the main issues preventing the effective education of twice-exceptional students as the inability of educators to properly define what it is. Ronksley-Pavia stated that a “lack of consensus on what constitutes twice-exceptionality, slippery definitions, and problems with quantifying and measuring both giftedness and disability impede research in this area” (p. 334). The author concluded that research will continually focus on certain areas of twice-exceptionality and not others and recommended that a discussion needs to take place regarding clearly defining the condition first. Despite the uncertainty regarding defining twice-exceptionality Mayes and Moore (2016) believed that if students view their culture as a source of strength they are more

likely to develop academically. These authors made the following recommendations for educators of students who are African American and twice-exceptional:

1. Develop collaborative and consultative relationships with other educators to develop culturally responsive practices to identify and meet the needs of twice-exceptional, African American students.
2. Provide support for the student, parent, and teachers in understanding and navigating the Individual Education Plan (IEP) process and legal protections.
3. Work with parents and students to help them understand the strengths and challenges that they may experience as a result of being twice-exceptional. In addition, share community resources that may serve as extra support for parents and students.
4. Help twice-exceptional, African American students develop positive identities (e.g., academic, racial, and disability) and prosocial skills. (Mayes & Moore, 2016, p. 102)

Cultural responsiveness. Mayes and Moore (2016) concluded that despite the challenges faced by twice-exceptional African American students, parents and culturally responsive schools can meet their needs and be successful in educating more of them.

Finally, Dixon (2018) believed that equivalence-based instruction could be used to successfully teach students with ASD. The author found that “equivalence based instruction can be used to teach advanced educational topics of history, mathematics, and chemistry to this population. This provides the first demonstration of EBI to teach these topics to individuals with adolescents with autism” (Dixon, 2018, p. 359). Equivalence based instruction is teaching concepts through relational aspects. Understanding how things are related to each other greatly decreased the time in which student acquired certain skills (Dixon, 2018).

Learning activities with emotionally meaningful social interactions. There is evidence regarding the academic development of students with ASD being enhanced when the learning includes activities that have an emotionally meaningful social interaction. This technique is compared to situations in which instruction occurs that does not lead to meaningful social engagement. Schreibman et al. (2015) argued that providing children with the opportunity to learn in a socially engaging context sets the stage for children to learn about the social landscape around them. Schreibman et al. (2015) recommended naturalistic developmental behavioral interventions (NDBI). The researchers described NDBI as implemented in natural settings and involving shared control between the ASD child and therapist. These interventions utilize natural contingencies and a variety of behavioral strategies to teach developmentally appropriate and prerequisite skills (Schreibman et al., 2015). A natural consequence would include the same consequences a non-disabled student might receive. Developmentally appropriate prerequisite skills might include the ability to hold a conversation and stay on topic about a classroom project or assignment (Schreibman et al., 2015).

Summary

The challenges faced by twice-exceptional students who have AIG and ASD is well documented and studied on many levels except the one proposed in this study. So far no one has examined the perceptions of secondary students who have AIG and ASD. These students often face several problems including bias, socialization, hyperactivity, misdiagnosis, ineffective instruction, and a lack of peer support. Furthermore, parents and teachers have problems agreeing how to effectively educate these students. The masking of the students' giftedness by the perceived disability of ASD prevents the nurturing of their giftedness. With the numbers of these students on the rise in the American education system, policymakers, parents, teachers, and

clinicians must come together to understand how the education system can better serve students with AIG and ASD.

CHAPTER THREE: METHODS

Overview

I employed a qualitative multi-case-study design to examine the experiences of students with autism who are also considered by their teachers to be gifted. The specific design was multi-case-study. The study focused on the lived experiences of these twice-exceptional students and identified emergent themes from the narratives of the students, their teachers, and their parents. Individual interviews of students, teachers, and parents were employed as well as group interviews. In this chapter the methods that were used to study this phenomenon were delineated including the design, the setting, the participants, the data analysis procedures, the trustworthiness, and the ethical considerations of this study.

Design

This study concerns itself with the learning experience of students with ASD who are also identified as AIG who attend public schools in North Carolina. Qualitative case-study was an appropriate methodology for this study because of the nature of the inquiry. I delved deeply into the lived everyday experiences of gifted students with autism. Further, a qualitative method was selected since the research aimed to describe the experiences of the participants, which is critical in understanding the issues involved (Sutton & Austin, 2015). Qualitative studies tend to go deeper and seek to understand a problem by exploring the opinion and experiences of the affected individuals by use of the in-depth interview. This study examined four individual students who had been identified by their school as having ASD while also being gifted. The student and his or her parents and teachers formed the four cases that were examined.

A multiple-case study design was determined to be the best methodology for this study because it gave me the flexibility needed to bring the complex views of participants to light (Yin,

2013). Furthermore, the case-study design allowed for a holistic analysis of individual cases so that descriptions, themes, and interpretations or assertions related to the whole case could be examined (Creswell, 2007). The advantage of the multi-case-study methodology is to enable the researcher to examine the complex systems, cultures, subcultures, perceptions, policies, and organizational functioning of a school while still treating it like a whole unit (Blaikie, 2009; Creswell, 2007; Vogt, 2005). Each student, including his or her parent(s) and teachers(s), was analyzed as a separate case. I then contrasted the individual cases by conducting a cross-case analysis in order to identify emergent themes (Yin, 2013). The multi-case-study design enabled me to analyze the perceptions and the lived experiences of each individual student and examine differences and similarities between cases (Yin, 2013). A multiple case-study enabled me to explore differences within and between cases. The goal was to replicate findings across cases. Because comparisons were drawn, it was imperative that the cases were chosen carefully so that the researcher could predict similar results across cases, or predict contrasting results based on a theory (Yin, 2003).

Research Questions

The purpose of this qualitative multi-case-study was to shed light on the lived experiences of students in sixth through twelfth grade who are identified with an autism spectrum disorder and academically or intellectually gifted.

Central Research Question

What are the perceptions of students in sixth through twelfth grade who are identified with ASD and AIG concerning their own educational experiences, and what do their parents and teachers perceive about these same experiences?

Sub-Question 1

What are the parents' perceptions of the educational experiences of their child who has ASD and AIG?

Sub-Question 2

What are the teachers' perceptions of the educational experiences of students who have ASD and AIG?

Sub-Question 3

What are the perceptions of sixth through twelfth grade students who have ASD and AIG of their public-school education?

Setting

The site of the study is important since it influenced the research and the quality of information gathered. The study was based in a school environment since the main subject of the research was to investigate the experience of students with ASD in the education system. I explored the learning experience of students with ASD who are also gifted. Moreover, my desire was to examine the challenges faced by these students, since the education system often focuses only on the impact of the challenges of the learners due to the diagnosis of ASD. Specifically, the study was based on a district in North Carolina with two secondary schools. A secondary school serves students from the sixth grade to the twelfth grade. These schools were selected for this study because they have identified students as ASD and gifted. The overall characteristics of the schools had nothing to do with their selection other than the fact that they are attended by the participants.

North Carolina City Schools (pseudonym) has approximately 4,600 students with five elementary schools, two middle schools, and one high school. The district also has a preschool

program and an alternative learning center for students that need a special setting to learn. The school district is 32.9% White, 13.7% Black, 46.4% Hispanic, 1.8% Asian, and 5.2% multi-racial. Seventy-four percent of the students in this school district are on free or reduced lunch programs. Seven percent of the teachers are Black while 87% of the teachers are White and 3.5% are Hispanic. According to district records obtained on the North Carolina City Schools website, the district performed between 47% and 67% on federal and state mandated standardized testing. The district has performed average to slightly above average despite constant adjustments to the accountability system by the state. According to North Carolina City Schools records in 2017, half the schools in the district were awarded “Exceeds Expectations” on state accountability while the other half were rated as “Met Standards.”

Participants

The student participants were in sixth through twelfth grade with the sample population being drawn from all ethnicities. All names were pseudonyms with the first letter indicating what group they were in. Example: Penelope is a parent, Sam is a student, and Tess is a teacher. The participants are presented as they are related to the primary participants (the students). Importantly, I led the study and oversaw the fidelity of the research.

Each case included three groups of people: the student, his/her parent(s), and teachers. The students were designated as the primary participants, while the teachers and the parents formed the secondary sample population. This was a purposeful sample of key stakeholders (Sutton & Austin, 2015). In order to participate in this study, the student must have been diagnosed with an ASD as well as being identified as gifted and enrolled at East Carolina Secondary School (pseudonym) in any grade sixth through twelfth grade. Further, the student must have had an IEP on file with the school in order to participate in this study. I first sought

help from the school guidance counselor to identify a pool of possible candidates for the study. I then contacted the parents of the identified students using a recruitment letter (Appendix B) to schedule a meeting and acquire their consent to participate in the study. To ensure that each student meets the criterion, I asked the parents for a copy of the student's records and other documentation that would support the identification of the student such as reports from special education and gifted and talented program documentation. The student participants were of secondary school age and development. Further, the maximum variation was considered by selecting different stakeholders to elicit their perception on the phenomenon since different participants come from different points of view such as age, behavior, and level of maturity. The demographic characteristics include different ethnicities with most of the participants originating from the African American, Caucasian, Hispanic, and Latino community members. If the student met the criteria for participation in the study and the parents gave their permission, I had the parents sign a parent consent form (Appendix E) and their child sign the child assent form (Appendix F). The use of the demographic survey (Appendix C) was critical since it enabled the participants to provide information on the subject being reviewed.

Students, parents, and teachers were all considered stakeholders regarding this research. Stakeholder sampling involved identifying who the major participants were in this research study by determining who was involved in the caretaking, development, and education of the twice-exceptional students (Given, 2008). The students themselves were also stakeholders. The 12 participants chosen for this study were key stakeholders because they were in contact with all parts of twice-exceptional students' educational experience and could give context to the perceptions of these students (Given, 2008). Using the stakeholder sampling method allowed me to identify key informants in different roles who care for twice-exceptional students. These key

informants provided me with the information needed to develop an accurate picture of the educational experiences of the students identified for this study (Given, 2008).

Procedures

I contacted the testing and accountability department of North Carolina City Schools to conduct research in the district. I provided the district with any information that they required about the proposed study. This district required that I first acquire a provisional IRB approval from Liberty University before they granted me the required permission to conduct research.

Pilot Study

After IRB approval, I conducted a pilot study in which data collection instruments were field tested to ensure that they were clear to the participant and that they collected the intended data. I conducted interviews with three of my peers to ensure that the questions were clear and concise. I also wanted to ensure that the questions were helpful in gaining insight to the participants' views of their lived experiences. After reviewing feedback from my pilot study, I found that the questions were indeed clear and concise and were very well worded. There were no major issues in the results of the pilot study.

Recruiting Participants

Recruiting participants for the study was based on the invitation with the school channel being used to request the sample population to engage in the research. A recruitment letter (Appendix B) was emailed to the parents and the teachers along with a demographic survey. Potential candidates for this study were identified using the help of the school counseling department. Once potential candidates for the study were identified, I reached out to them using a recruitment letter sent via email to schedule a meeting with them. Parents were given an informed consent letter to sign. Students also reviewed an assent letter in person before being

interviewed letting them know about the study, and I answered any questions that they had as well. Once the parents and the students had officially agreed to participate in the study, the teachers were issued invitations via emailed recruitment letters (Appendix B) to join in the study, and signed informed consent letters were gathered from all stakeholders (Appendices D, E, F). I answered any questions the teachers had about the study. Gathering data is a primary function of any research (Sutton & Austin, 2015). This study relied on interviews, focus groups, and direct observation.

The Researcher's Role

The researcher's role in this study was a non-participant observer. This role was essential because I was the human instrument of research and as such, I had to acknowledge my own biases in order to objectively analyze the perceptions of my participants. I am a professional special education teacher; however, I had no prior relationship with the participants, and I had never worked in the participants' school. Questions asked were designed to enhance objectivity and avoid issues with influence that would taint the outcome of the study (Given, 2008). I desired to serve as an advocate for students; I wanted to give them a voice and to help others understand these twice-exceptional students' experiences and needs so that they might reach their full potential in an educational setting and successfully transition to the real world. The selection of the participants was designed to avoid any emotional connection that could have led to bias concerning data collection and analysis.

Data Collection

The study employed specific procedures complying with the Liberty University Institutional Review Board (IRB). Prior to submitting my IRB application, I enlisted the help of two educational professionals who have doctorates and over 25 years of experience at the

secondary school level to review all the data collection tools used in this study. I asked these individuals to review all interview and focus group questions, the demographic survey, and the observation protocol to ensure face and content validity. I then addressed feedback and made changes suggested by the expert reviewers. The main forms of data collection for this study were individual interviews with the parents and teachers, classroom observation with field notes, and three focus group interviews: one for student participants, one for parent participants, and a third for teacher participants. These participants were the same as in the individual interviews.

Collecting data for qualitative research means interacting with real-world situations and the people who are in them (Yin, 2013). This all is part of the field setting for a research study. Yin (2013) posited that “the variety of field settings adds to the numerous important and interesting human events that can become the subject of qualitative studies” (p. 109).

Individual Interviews

In-depth interviews are interviews in which the stakeholders were encouraged and prompted to talk about their everyday experiences in the secondary school. I kept the participants on topic by using an interview guide. For this study I prepared a list of questions to be explored with each participant based on the literature that was reviewed in Chapter Two. In-depth interviews conducted in this manner are suitable for data collection in a variety of research methodologies including the case study (Blaikie, 2009; Creswell 2007; Vogt, 2005). With over 10 years of experience working with students who have deficits in verbal communication, I took this into account and clarified any questions in the student interviews as needed.

Standardized Open-Ended Interview Questions for Students (see Appendix G):

1. Please introduce yourself.
2. Please talk to me about how you feel when you are at school and the things that may happen to you each day.
3. Which educational experiences would you say are most significant to your experiences?
4. What made them significant?
5. How do you think other people view you in the school?
6. What is your view of other people in the school?
7. What does your teacher do or say that makes you feel smart?
8. What does your teacher do or say that makes you feel like you may have difficulty learning?
9. How do you believe your parents view the school?
10. How does your parents' view of school compare to yours?
11. What experiences do you think have played a role in your feelings about the school either being good or bad?
12. Tell me about the struggles you've experienced in school or any particular class.
13. What questions do you ask in class when you don't understand something?
14. If you were a teacher how would you treat a student like yourself?
15. We've covered a lot of ground in our conversation, and I so appreciate the time you've given to this. Is there anything else you would like to add?

Questions 1–5 are knowledge questions and are structured to gain a rapport with the participant. These questions are designed to be nonthreatening and straightforward (Patton,

2015). The questions were tailored to fit the role of the participant. How the student answers the questions told me about how they view themselves. Questions tied to Sub-question 3 were based on research conducted by Rubenstein et al. (2015). The lived experiences of the students can be best derived from the students themselves.

Beyond the initial opening, remaining nondirective throughout a qualitative interview also is important. This is especially true if one's inquiry is trying to get at the salience of some topics in the participants' world by using their own words (Yin, 2013). Questions 3–5 were grounded in the work of Rubenstein et al. (2015), who examined the lived and shared experiences of parents in dealing with issues that arose from having a child with an ASD. Questions 6–7 were grounded in the research of Wang and Neihart (2015a). This study examined how supports from parents, peers, and teachers influenced the academic success of twice-exceptional student at the secondary level. These questions were designed to explore the perceptions of the people that make up the students' ecosystem. Questions 8–9 were grounded in the work of LaBarbera (2017), who compared the perceptions of teachers and parents in regard to students with autism. Questions 10–15 were grounded in a study conducted by Carter et al. (2017) which explored the efficacy of peer interventions for students with ASD. These questions were also grounded in the work of LaBarbera (2017). Question 15 gave the participant an opportunity to express any thoughts and feelings that failed to come out in the preceding questions and was grounded in Yin (2013). To make sure that the parents understand the common language used in the interview questions, I clarified the terms as needed.

Standardized Open-Ended Interview Questions for Parents (see Appendix H):

1. Please introduce yourself.
2. Talk to me about your feelings about your child's experiences at the school and how they are being educated.
3. As you think about your experiences with the school, which of your child's experiences seem to be the most significant for him or her?
4. What made them significant?
5. How do you think other people view you in the school?
6. What is your view of other people in the school?
7. What does the teacher do or say that makes your child feel smart?
8. What does your child's teacher do or say that makes your child feel like they may have difficulty learning?
9. What do you believe is your child's view of the school?
10. How does your child's view of school compare to yours?
11. What experiences do you think have played a role in your view of the school either being a positive or negative experience for your child?
12. Tell me about the struggles you've experienced in school advocating for your student.
13. What questions do you ask school officials when you don't understand something?
14. If you were a teacher how would you treat a student like yours?
15. We've covered a lot of ground in our conversation, and I so appreciate the time you've given to this. One final question. . . What else do you think would be important for me to know about the development of your view of society at school?

As with the student questions, Questions 1–5 were knowledge questions and were structured to gain a rapport with the participant. Again, these questions were designed to be nonthreatening and straightforward (Patton, 2015). These questions were tied to Sub-question 1 and were based on research conducted by Rubenstein et al. (2015). How the parent perceives the lived experiences of the student can be very informative. Questions 3–5 are again grounded in the work of Rubenstein et al. (2015) just as with the student set of question. These questions examined the lived and shared experiences of parents in dealing with issues that arose from having a child with an ASD. Questions 6–7 are again grounded in the research of Wang and Neihart (2015a). These questions are designed to explore the parental perceptions of the people that make up the student’s ecosystem. Questions 8–9 are again grounded in the work of LaBarbera (2017) which compared the perceptions of teachers and parents regarding students with autism. Fully understanding the parents view contributed to the understanding of how teachers and parents alike view the students’ experiences. Questions 10–15 are again grounded in a study conducted by Carter et al. (2017) which explored the efficacy of peer interventions for students with ASD. These questions are also grounded in the work of LaBarbera (2017) as stated before. Questions 15 gave the parent an opportunity to express any concerns or say anything that the questions did not bring forth (Yin, 2013). To make sure that the teachers understand the common language used in the interview questions, I clarified the terms as needed.

Standardized Open-Ended Interview Questions for Teachers (see Appendix I):

1. Please introduce yourself.
2. What are your experiences working with twice-exceptional students in your career to this point?
3. Which experiences would you say are most significant?

4. What made them significant?
5. How do you think other people at school view twice-exceptional students in the school?
6. How do you view twice-exceptional students?
7. What do you say to twice-exceptional students that might make them feel smart or encouraged?
8. What are some things that you may have said that might make a twice-exceptional student feel inadequate?
9. How does the students' view of school compare to yours?
10. What formative experiences do you think have played a role in your school experience with twice-exceptional students?
11. Tell me about the struggles you've experienced with twice-exceptional students.
12. What questions do twice-exceptional students ask in class when they don't understand something?
13. If you were a parent of a twice-exceptional student how would you like your child to be treated?
14. We've covered a lot of ground in our conversation, and I so appreciate the time you've given to this. One final question. . . What else do you think would be important for me to know about the development of your view of society at school?

Questions 1–5 were knowledge questions and were structured to gain rapport with the participant. These questions were designed to be nonthreatening and straightforward (Patton, 2015). Questions tied to Sub-question 2 were based on research conducted by Rubenstein et al. (2015). The lived experiences of the students through the eyes of their teacher may provide

insight into the nature of the social cognitive aspect of this study. Questions 3–5 were once again grounded in the work of Rubenstein et al. (2015). This illuminated any obstacles or perceived problems that the teacher has by having a twice-exceptional student in their classroom. Questions 6-7 were grounded in the research of Wang and Neihart (2015a) as with the other question sets. This study examined how supports from teachers influenced the academic success of twice-exceptional students. The teacher is the main individual in the student’s ecosystem of learning when he or she is at school. Questions 8–9 were again grounded in the work of LaBarbera (2017). The answers to these questions may provide a comparison of the teachers’ perceptions of the twice-exceptional student with the parents perceptions. Questions 10–15 were once again grounded in a study conducted by Carter et al. (2017). The teachers’ perception of how other peers intervene in the students’ learning can be gleaned from these questions. These questions are also grounded in the work of LaBarbera (2017). Question 15 gave the teacher an opportunity to express any thoughts and feelings that failed to come out in the preceding questions. This was grounded in Yin (2013).

Direct Observation

Observation is the close monitoring of an individual or event while collecting data as a narrative (Sutton & Austin, 2015). This approach is appropriate since it ensures that a researcher can observe the behavior of the sample population firsthand in line with the qualitative approach (Sutton & Austin, 2015). This data-collection strategy involved sitting in a class while recording field notes of the experience of the learner in the classroom during preapproved times. I observed primarily the students and their interactions with their environment while taking field notes for later analysis. I used an observation protocol to collect data while observing the students (Appendix M). A script was written of the students’ behavior and a description of the

students' surroundings. The students were observed in the classroom environment during the school day. I observed the student participants one time during the study on a date that was worked out with administration and the teacher. These direct observations were no longer than 45 minutes at a time. There was a follow up observation if needed.

Focus Groups

Focus group interviews were directed by the interactions of the members of the group that led to data for the study (Hatch, 2002). Hatch suggested that focus groups can provide rich information and can create an environment where members were willing to discuss their experiences because of the commonality of the group. Three focus groups were conducted during the study. One focus group was comprised of all teacher participants, another for all parent participants, and the final focus group included the four student participants. I served as a facilitator of the focus groups and preplanned questions were used to guide the discussions. The focus group interviews were audiotaped using a laptop as a primary device and a cell phone recording application as a secondary device. Recordings were transcribed by me in the NVivo software program for coding. Each participant was provided with a transcript of what he/she said during the focus group for verification. Questions were derived from the initial coding and identification of themes in the individual interviews. Participants in each group were asked to expound upon similarities and differences in responses (Hatch, 2002).

Standardized Focus Group Questions for Students (see Appendix J):

1. Describe your everyday routine when you get to school.
2. What is the best part of the day at school and why?
3. What is the most challenging part of your day at school and why?
4. What makes you feel good about learning in your classroom?

5. Describe a situation in which you felt bullied in school.
6. Who is your favorite teacher and why?
7. Why do you believe that you make the grades that you do in school?
8. If you could change anything about your school or classes what would it be?

Questions 1–4 find their base in social cognitive theory. Bandura (1986) believed that individuals learn through reflection and modeling in a social context. By having the students describe their daily routine, the best, and most challenging part of their day, I was able to see how they learned either good or bad behavior from their environment. Question 5 was grounded in the research of Wang and Neihart (2015b), who examined how supports from parents, peers, and teachers influenced the academic success of twice-exceptional student at the secondary level. Question 5 also served the purpose of the social cognitive theory in that its aim was to determine the level of proxy agency the child believes they have access to in their school environment from their peers (Bandura, 1986). Questions 7–8 were based on the work of Heider (1958). Heider was concerned with how people perceive and rationalize the actions of others. A person's perceptions, according to the attribution theory, are filtered through their own beliefs, desires, emotions, and traits. I was concerned here with seeing how the students perceives their own success in school.

Standardized Focus Group Questions for Parents (see Appendix K):

1. Describe your child's everyday routine when they get to school as you understand it.
2. What do you think is the best part of the day at school for your child and why?
3. What is the most challenging part of your child's day at school and why?
4. What do you believe makes your child feel good about learning in their classroom?
5. Describe a situation in which your child was bullied in school.

6. Who is your child's favorite teacher and why do you believe they are your child's favorite?
7. Why do you believe that your child makes the grades that they do in school?
8. If you could change anything about your child's school or classes what would it be?

Similar to the questions asked in the students' focus group, Questions 1–4 were based in social cognitive theory. Bandura (1986) believed that individuals learn through reflection and modeling in a social context. By having the parents describe the daily routine of their child, the best, and most challenging part of their child's day, I was able to see how they learned either good or bad behavior from their environment. Question 5 was grounded in the research of Wang and Neihart (2015b) just as with the student questions. In this case it is parents who influence the academic success of twice-exceptional students at the secondary level. Question 5 also served the purpose of the social cognitive theory in that its aim was to determine the level of proxy agency the parent believes that their child has access to in their school environment from their peers (Bandura, 1986). Questions 7–8 were based on the work of Heider (1958). Heider was concerned with how people perceive and rationalize the actions of others. A person's perceptions, according to the attribution theory, are filtered through their own beliefs, desires, emotions, and traits. I was concerned here with seeing how the parents perceive their own success in school.

Standardized Focus Group Questions for Teachers (see Appendix L):

1. Describe your student's everyday routine when they get to school as you understand it.
2. What do you think is the best part of the day at school for your student and why?
3. What is the most challenging part of your student's day at school and why?

4. What do you believe makes your student feel good about learning in your classroom?
5. Describe a situation in which your student was bullied in school.
6. Who is your student's favorite teacher and why do you believe they are your student's favorite?
7. Why do you believe that your student makes the grades that they do in school?
8. If you could change anything about your school or class what would it be?

The first four questions were based in social cognitive theory. Question 5 was grounded in the research of Wang and Neihart (2015b) who examined how supports from teachers influenced the academic success of twice-exceptional student at the secondary level. Question 5 also served the purpose of the social cognitive theory just as in the other sets of questions in that its aim was to determine the level of proxy agency the teacher believes that the student has access to in their school environment from their peers (Bandura, 1986). Questions 7–8 were also based on the work of Heider (1958).

Data Analysis

While coding, I kept a copy of the research questions, conceptual framework, and purpose of the study to remain focused on coding decisions (Saldaña, 2009). In addition, I kept in mind the following questions while coding: What are people doing, what are they trying to accomplish and how, what means or strategies are they using, how do participants talk about/characterize/understand what is going on, what assumptions are being made, what do I see going on here, what am I learning from the notes, why did I include them, and what strikes me? (Saldaña, 2009). Because multiple participants were a part of this study, I coded one participant's data first and progressed to the next participant's data.

From Codes to Categories

A code is an abbreviation for the more important category yet to be discovered (Saldaña, 2009). Codes are essence capturing and important aspects of the research story, but when grouped together according to similarity, they facilitate the development of categories (Saldaña, 2009). To generate categories, I used pattern coding (a second-cycle coding method), which grouped coded data based on similarities after initial coding took place. Pattern coding pulled together a lot of material into a more meaningful unit of analysis and were used to develop themes from the data (Saldaña, 2009). I reviewed the descriptive codes, assessed their commonalities, and assigned them a pattern code.

Identifying Themes

After looking inward at categories, the next step was to take a step back and look for connections among categories; this is known as searching for themes or looking for relationships among relationships (Hatch, 2002). In this step, broad elements were identified for the purpose of making connections (Hatch, 2002). The connections were repeated patterns in the data and linked different parts of the data (Hatch, 2002). The categories were used to develop statements that described a major theme (Saldaña, 2009).

Emergent themes were established by looking for relationships among the relationships by identifying relating patterns in the data. Once the themes that existed among the categories were identified, they were analyzed for co-occurrence and uniqueness. For meticulous analysis, a visual matrix was created and used to compare themes. The matrix also aided in developing a framework for the findings of the study.

Outlining the Relationships

A master outline was created to organize the completed analysis in a logical manner (Hatch, 2002). The master outline brought closure to the analyses (Hatch, 2002). The outline was helpful in organizing information and statements from the interviews. The information that was gathered from the responses in the interviews acted as evidence for the results of the study. For this reason, it was essential for information to be organized appropriately.

For this study each group of participants (each student, his/her parents, and his/her teachers) was treated and analyzed like an individual case. Interviews were transcribed, and themes were identified. After this process emergent themes that are similar were group together for each individual case. A summary for each case was then developed and compared to the research questions. Each case was examined through the lens of the theories in which this study is grounded. Theoretically, the study was based on attribution theory (Heider, 1958) as well as social cognitive theory (Bandura, 1986). See Figure 1 on the following page for a visual presentation of the step-by-step process that was followed in coding the qualitative data for this study.

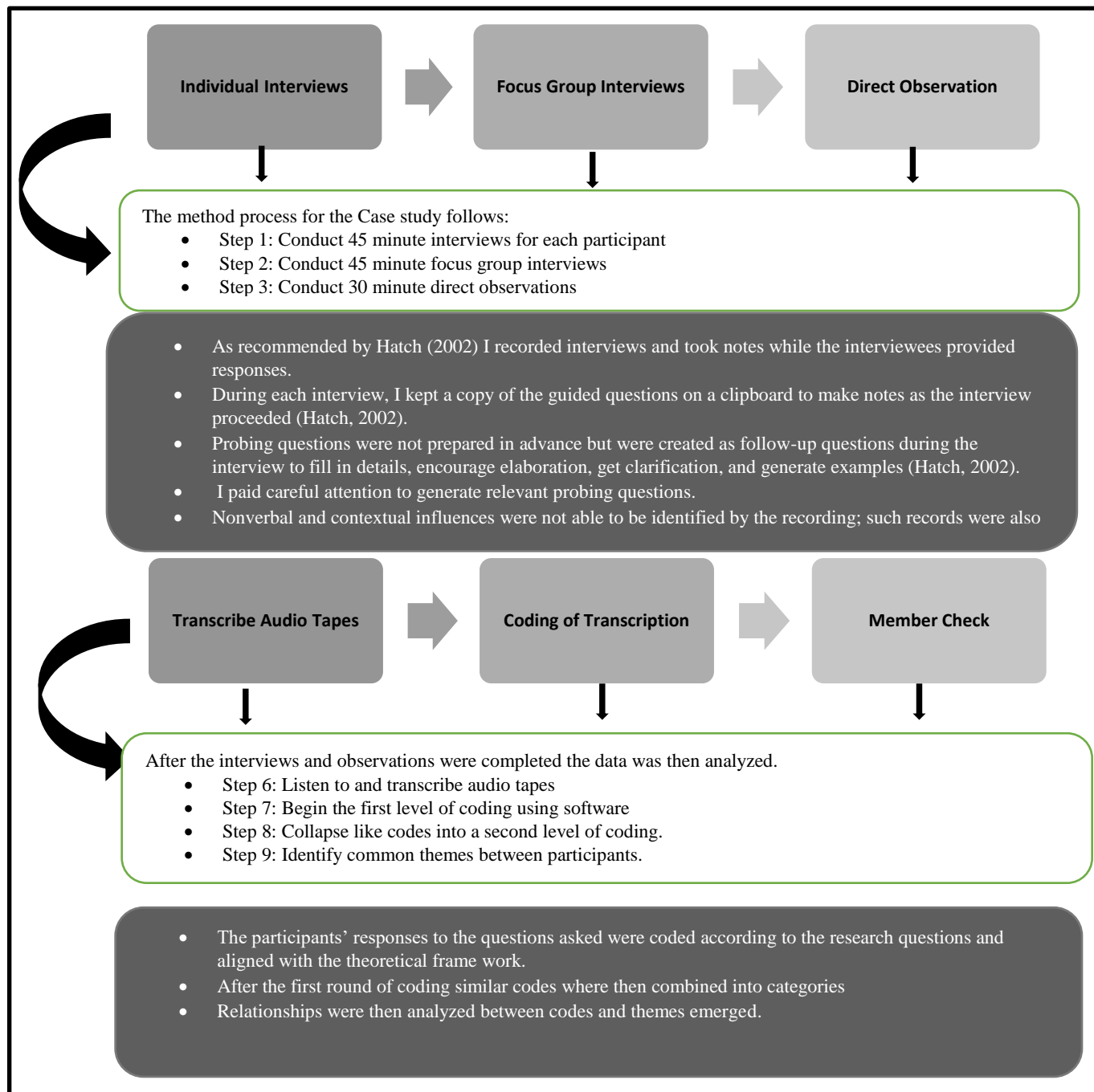


Figure 1. This shows the step-by-step process of coding qualitative data in this study.

Cross-Case Analysis

According to Creswell (2007), an analysis that examines themes, similarities, and differences across cases is referred to as a cross-case analysis. Cross-case analysis is used when the unit of analysis is a case, which is any bounded unit, such as an individual, group, artifact, place, or time. After each case has been analyzed and themes identified, like themes across cases were identified and compared. Similar themes from each case were grouped, contrasted, and compared. A summary of the entire study was developed using attribution theory and social cognitive theory as a lens. Each of the research questions was then addressed in light of the emergent themes. The Software package NVivo 10 was used in order to transcribe and identify themes, common words, and common phrases. Once the audio was transcribed, word searches and phrase searches were performed. The context of what the participant said and how they said it could be easily found and analyzed. The software helped the researcher keep track of how many times a theme occurred and also generated reports on similar words and phrases. All this was used to construct a cross-case analysis. During an initial reading of the transcript, I listened for what the participants were saying and coded accordingly. As I continued to read over the transcripts, like views were identified and grouped under a certain code. These codes served as containers that held the voices of each participant in relation to a certain theme. I continued to read, code, and re-read the transcript until I was satisfied that major themes had been identified.

Trustworthiness

Trustworthiness is an important concept in qualitative research because it allows researchers to demonstrate the care employed during the carrying out of the study to ensure that the research is worthy of being a scholarly work. In qualitative research there are a set of parallel criteria that ensure the trustworthiness of the research study as a whole (Lincoln & Guba,

1985). In their seminal work, Lincoln and Guba (1985) substituted reliability and validity with the parallel concept of "trustworthiness," containing four aspects: credibility, transferability, dependability, and confirmability. Within these were specific methodological strategies for demonstrating qualitative rigor, such as the audit trail, member checks when coding, categorizing, or confirming results with participants, peer debriefing, negative case analysis, structural corroboration, and referential material adequacy (Lincoln & Guba, 1985).

Credibility

Credibility refers to the extent to which the findings accurately describe reality (Lincoln & Guba, 1985). Credibility depends on the richness of the information gathered and on the analytical abilities of the researcher (Lincoln & Guba, 1985). Credibility was addressed in this study using audio recording from the interview that I coded by using NVivo, and the recording directly corresponded with transcriptions of what the person said. Member checking and triangulation of different data sources were also used to guarantee credibility. Each of the participants had an opportunity to read the transcript of his/her interview and verify that it truly reflected what had been said (Creswell, 2007). Themes identified were also confirmed using triangulation, which involves comparison of the results generated to ensure that all three data points lead to the same conclusion.

Dependability and Confirmability

Dependability is another important element since it ensures the data are consistent. This was captured through the provision of enough information to explain critical factors in the research (Sutton & Austin, 2015). To ensure confirmability, I linked the recordings of in-depth interviews with the actual transcribed responses of the participants. To confirm that the transcription was an accurate record of the participant's words, I also provided an audio file

along with the transcriptions. Within the NVivo software, I was able to not only read the transcript of each interview but also hear the participant say each word in exactly the way he/she said it in the interview. Findings should to the greatest extent possible reflect the perceptions of the participants and not reflect the feelings and beliefs of the researcher (Lincoln & Guba, 1985). By providing an audio and written transcript I was able to ensure this was the case. Furthermore, by ensuring dependability and confirmability in this manner I created a clear audit trail from what the participant said to how the transcript read and the code assigned to it. This also ensured that a peer reviewer could follow the audit trail with few problems (Creswell, 2007).

Transferability

Transferability is another element that is critical in research since it ensures that each part of a study can be applied to a similar setting. In other words, the findings or research approach can be replicated by other scholars (Sutton & Austin, 2015). I laid out the procedure and research instruments in such a way that others could collect data in similar conditions.

Transferability refers to the extent to which the consumer of the research can apply the finding to different situations or generalize the findings of qualitative research (Lincoln & Guba, 1985). By incorporating all data into the NVivo software an audit trail could be easily followed (see Appendix N). Identified themes were accompanied with the participants own words transcribed from the interview as well as a sound recording of the participant's voice.

Ethical Considerations

Honesty, openness, and candid revelation of the study's strengths and limitations according to commonly held standards of practice are typical indicators of the integrity of the scholarship (Given, 2008). With respect to ethical integrity, "Some consider any covert work conducted in secrecy, for whatever purposes, to lack integrity because it is not amenable to the

checks of peer review” (Given, 2008, p. 276). I was open and honest about what is being studied, allowing participants to read any notes that were taken during in-depth interviews. I did not attempt to hide the fact that I was studying the educational experiences of gifted ASD students from any of the participants and kept the names of all participants confidential. No information was shared with anyone regarding the thoughts and feelings of the participant. The participant’s real names were replaced with pseudonyms and their perceptions were communicated in such a way as to maintain their confidentiality.

To ensure data security, I imported all data into a qualitative software package. The software has the capability of requiring a password to open a specific project. The password function was utilized for this study. This study was backed up on a cloud drive, the researcher’s home computer, and the researcher’s personal laptop, all of which are password protected. The raw data files, all field notes, and questionnaire results were kept in a locked cabinet located in the researcher’s home, which is also locked. The data imported into the qualitative software package will be stored on the researcher’s computer for three years after the study’s completion and then destroyed by deletion.

Summary

This qualitative study employs a multi-case-study design. The research was conducted in the North Carolina City Schools district. The participants included four students who have been diagnosed with ASD and AIG. Their parent(s) and teacher(s) also participated in this study. Data collection methods include individual interviews, three focus groups, and direct observations of the students in their classrooms. The data were analyzed by case first using qualitative software to process the information into an understandable format and identify themes. The data were then cross-analyzed in order to relate common themes. Overall, the

study was designed to acquire qualitative data that reflected the educational experiences of gifted students who have an ASD.

CHAPTER FOUR: FINDINGS

Overview

The purpose of this qualitative multi-case-study was to shed light on the lived educational experiences of students in sixth through twelfth grade who was identified with an autism spectrum disorder and academically or intellectually gifted. The central research question that this study addressed asked, What are the perceptions of students in sixth through twelfth grade who are identified with ASD and AIG concerning their own educational experiences, and what do their parents and teachers perceive about these same experiences? The sub-questions this study addressed asked, What are the parents' perceptions of the educational experiences of their sixth through twelfth grade child who has ASD and AIG? What are the teachers' perceptions of the educational experiences of sixth through twelfth grade students who have ASD and AIG? What are the perceptions of sixth through twelfth grade students who have ASD and AIG of their public-school education? The study was based on the attribution theory (Yayie, 2015) as well as the social cognitive theory (Bandura, 1986). Attribution theory explains how these students view themselves as they attach meaning to the behavior of others toward them (Yayie, 2015) ,while the social cognitive theory may be helpful in understanding how students socialize their actions by learning from the school environment.

The site of the study is important since it influenced the research and the quality of information gathered. The study was based in a school environment since the main purpose of the research was to investigate the experience of students with ASD in the education system. Each student, including his or her parent(s) and teachers(s), was analyzed as a separate case. I contrasted the individual cases by conducting a cross-case analysis in order to identify common emergent themes (Yin, 2013). The multi-case-study design also enabled me to analyze the

perceptions and the lived experiences of each individual student and revealed differences and similarities between cases (Yin, 2013). To address the research questions, one-on-one interviews, focus groups, and classroom observation were used.

Description of the Sample

Each case included three groups of people: the student, his/her parent(s), and teachers. The students were designated as the primary participants, while the teachers and the parents formed the secondary sample population. This was a purposeful sample of key stakeholders (Given, 2008; Sutton & Austin, 2015). In order to participate in this study, the student must have been diagnosed with an ASD as well as identified as gifted and enrolled at East Carolina Secondary School in any grade, sixth through twelfth grade. Four parents, four students, and six teachers participated in this study (14 total participants). All names are pseudonyms with the first letter indicating to which group they belong. Example: Penelope is a parent, Sam is a student, and Tess is a teacher. The participants are presented as they are related to the primary participants : the students. Two additional veteran teachers were interviewed for this study who have serviced multiple students with special needs including some who are twice exceptional.

Sam

Sam is a 15-year-old 10th grader. Sam really likes his history teacher and does extremely well in this subject. Despite being bullied by some students at school, Sam has a group of friends that he sits with at lunch. Sam is active in extracurricular activities and tends to focus on specific tasks for long periods of time to the point of obsession. Despite good academic achievement in some areas Sam has struggled on state mandated testing and admits that he does not do well in his morning classes. Sam has also seen a therapist because of an eating disorder.

Penelope. Penelope is the mother of Sam. Penelope described herself as a helicopter parent. She believes that Sam is being bullied at school and nothing is being done about it. Despite her displeasure with how Sam is treated at school by his peers, she states that she is happy that he has effective teachers and that he is finally being challenged. She stated that she was unhappy with how he was educated in the middle school level. She states that she regularly advocates for her child and administration is slow to answer her questions or protect Sam from being bullied.

Tess. Tess is one of Sam's teachers. Tess has been teaching 10th-grade English for 25 years. During this time, she has identified many students as twice exceptional. Tess believes that despite having some learning issues twice-exceptional students can achieve at a very high level. She states that she encourages students who are twice exceptional and raises the level of expectation for their achievement.

Simon

Simon is 13 years old and in the eighth grade; he struggles to build social relationships with his peers because of anxiety. He is a twice-exceptional student who has been raised by his grandmother. Overall Simon feels pretty good about the school despite his social anxiety. Simon states that he has high grades on state mandated testing and a high Lexile level. Despite Simon's academic accomplishments he wants to get better in science. Simon sees a therapist because of his social awkwardness; the therapist recommended that he chew gum or straws to deal with his social anxiety.

Patricia. Patricia is the grandmother and guardian of Simon. Patricia states that her grandson has social anxiety issues in addition to being twice exceptional. She believes that effective instruction from Simon's individual core area teachers has made the difference in his

improvement from elementary. Patricia worries that the ASD will mask the areas in which Simon is gifted and as a result his giftedness will not be nurtured. Overall she believes that Simon is happy with the school, but she wishes more would be done to address the bullying. She believes that Simon does not always have positive interactions with his peers.

Tomas. Tomas is one of Simon's teachers. Tomas has 20 years of experience in education teaching science. Tomas has had several students over the years who he believes were twice exceptional. He believes that his experiences with these students provide him with some insight into how to deal with these students. Tomas uses a strategy of being very repetitive with twice-exceptional students and gives them frequent reminders to stay on task. He is also very careful how he talks to these students by providing details that he would not include when addressing students who are not twice exceptional.

Stan

Stan is a 17-year-old 11th grader. Stan generally likes school and has four teachers that he especially likes. Stan has had success in these classes despite struggling on state mandated standardized testing due to a lack of motivation. Stan has a group of friends that he hangs out with during lunch and after school. Stan admits that he has trouble staying organized and sometimes focusing out what his teacher is saying because of his lack of motivation.

Pam. Pam is the mother of Stan. She believes that the school is a life saver and the support that she receives is phenomenal. Stan has managed to make some good grades but failed the state mandated standardized test in math, according to her. Stan has no executive functioning at all, she says. She believes that Stan has extreme difficulty organizing and completing tasks. She states that Stan has a low level of tolerance and is extremely sensitive to noise and people being in their personal space.

Trina. Trina is Stan's English teacher. She has over 12 years of experience teaching English at the high school and middle school level. She started out in communication and audio production before returning to school to be a teacher. Trina believes that it is easy to forget the gifted part of twice-exceptional students until one grades some of their work. She states that her students who are twice exceptional perform at a very high level academically but at a very low level socially. They have a tendency to want to work alone because of this. She states that while she nurtures the gifted part of their twice exceptionalism, at the same time she tries to get them to socialize with their peers in her classroom.

Stew

Stew is 11 years old and in the sixth grade. Stew has been diagnosed with ADD in addition to being twice exceptional. Stew comes from a broken home and his parents share custody of him. Overall Stew has a good opinion of his school. He likes his teachers and has a group of friends with whom he hangs out. Stew struggles with organization and would like to be a better English student; however, he does well on state mandated standardized testing.

Penny. Penny is the mother of Stew. She is working toward a degree in social work. Penny wants more support from the school, but she does not expect it because of the size of the school system. She is generally happy with the school and believes that her son has effective teachers. She is also proud of how well her son has performed academically despite his daily struggles. She has had to overcome family issues and socioeconomic challenges.

Tiffney. Tiffney is Stew's teacher for sixth grade English. She has been teaching sixth grade English for three years. Tiffney has nine years of experience in education. She also works in the adult education department at the local community college. Tiffney laments that her most difficult barrier to working with twice-exceptional students and all students with ASD is the lack

of communication. Tiffney has struggled to get them to tell her how she can support them. She states that she has tried to find ways in which she can communicate with them and help them to be academically successful.

Special Education Teacher Participants

These participants were added to the study in order to gain a fuller picture of the ecosystem of the twice-exceptional student. The extra teachers met the same requirements as the other participants included in this study. Their experiences were used to provide context for the overall experiences of the twice-exceptional student.

Titus. Titus is a sixth-to-eighth grade special education teacher and provides support for several students with special needs in the classroom including many students who are twice exceptional. Titus believes that twice-exceptional students need more support in middle school but less support at the high school level. Titus believes that twice-exceptional students struggle in some areas but achieve at an extremely high level in areas of interest. Titus does not think that state mandated standardized testing is appropriate to gauge the academic achievement of these students.

Travis. Travis is a special education teacher providing support for many students with special needs. Travis has been in education for 14 years. Travis has not had much experience with twice-exceptional students and believes that they make up a very small portion of the total student population. He believes that in the few cases of twice exceptionalism that he has seen the giftedness greatly outweighed the ASD. Despite this Travis laments that he has not been trained in regard to how to handle the gifted part of the twice-exceptional so he only focuses on the ASD.

Results

Participant responses in this study were very diverse. Student and parent responses represent a clear disconnect. However, the responses from teachers and parents seem to be similar in nature. Parents and teachers both agreed that teaching students who are twice exceptional could be difficult. Parents praised some teachers for being effective and motivating their student to learn. The disconnect emerged as students wanted to be treated like everyone else to the point where they did not want praise. The diversity of views expressed in this study will be categorized and emergent themes will be presented. All quotes from participants are presented verbatim, which includes verbal ticks and grammatical errors in speech and writing to accurately depict the participants' voices.

Theme Development

The results of my analysis will be presented in this section from the individual one-on-one interviews, focus group interviews, and direct observations. There were five themes that emerged from the data that will be analyzed here. The major emergent themes of this study were: social interactions, masking giftedness, student achievement, feelings about the school, and access to resources. Table 1 presents the emergent themes and related codes used to develop the themes.

Table 1

Emergent Themes

Supporting Collapsed Codes	Themes
Bullying Behavior Negative Peer Interaction Positive Peer Interaction Personal Space Why are you like that? Feel like an outsider	Social Interactions
Autism Need to be treated like everyone else Negative feelings about the school Most challenging part of the day	Masking Giftedness
Standardized Tests Motivation Grades Extracurricular Activities	Student Achievement
Best Part of the Day Effective Teacher Parent-child disconnect	Feelings about the School
Obstacles Parent involvement	Access to Resources

Social Interactions

The first theme that emerged from the data collected was social interactions. This refers to the nature of the social interactions between the students and their peers. Participants reported many positive as well as negative social interactions.

Bullying. Parents and students had different views of bullying while teachers seemed to comment less on this topic. Some teachers did not bring it up at all. Parents weighed in more on this topic than any other group of participants. “I know there are kids that get bullied that keep

their head down and don't bother anybody,” expressed Stan’s mother Pam. She went on to say, “He tells me stuff like that but you know when we sort of talk it out . . . it's like you know yeah so some girl got in your face and said something mean.” Pam, like the other parents, advocated to the school about her child being bullied, but most parents felt that in this area the school’s response is less than effective. “I know some kids if they realize that something bothers someone kind of do it,” expressed Penelope, Sam’s mother. She continued, “I think in middle school is where he I think he got the impression that he was stupid. . . . It could have come from kids.” Penelope believes that the bullying is caused by Sam not being able to communicate: “When they have communication issues um they get picked on a lot and they don't know how to advocate for themselves very well and it's I mean he's been picked on a lot and he can't seem to get justice for the things that happened to him.” Sam, however, does not think bullying is that big a deal. He stated, “So what like I haven't been shoved in the lockers, I haven't been like push down stairs or anything you know. . . . I'll get like a like a smart aleck remark every now and then but it’s nothing horrible.” Stew stated, “Somebody calls me gay or something that doesn't bother me.” This trend occurred with the other students as well. Their parents believed that they were being bullied but the students minimized the impact or in some instances blamed themselves, believing that they were treated differently because of the way they are. Trina, however, reflected the sentiment of most of the teachers in this study. She believed that these students “may get razzed” from time to time but that it was nothing serious in her opinion. Tiffany expressed that she knows that it happens but failed to see how it impeded the performance of twice-exceptional students in any way.

Behavior. Behavior supported the social interaction theme because all of the statements from students about the way they behaved were based on social situations. One example is when

Sam stated, “Basically you know if there's some kids joking around with the teacher I'll try and join in and I might say something stupid that might get me in trouble.” This seems to be motivated by social interaction. Sam also enforced that social part of behavior by stating, “I'm standing up on the table about to punch the ceiling fan and one kid might think wow this guy he's a real character you know he's hilarious but somebody else might think wow that kid is an idiot.” In this statement Sam also points out that some students may not approve of his behavior.

However, based on Stan's statements, some of his behavior may be linked to motivation. Stan reported, “I lost motivation last semester and you know flunked three classes and kind of left RCC and uhm I don't know I guess I just lost motivation then really didn't want to do anything.” Stan could not point to any factor in his environment that caused him to lose motivation but instead blamed himself. All four students had a surprising ability to look inwardly at the motivation for their behavior. Tess as well as other teacher participants in this study expressed that twice-exceptional students were “kind of quirky” but behaved as any other student overall. Teacher participants all cited consistency as the key to addressing the behavior of twice-exceptional students. “They don't like surprises,” cited Tina. “Sometimes you have to let them do their own thing when they finish their work.”

Negative peer interaction. There were several statements that were classified as negative peer interactions that were not necessarily bullying. Just as the case with bullying, parents seemed to report these interactions while they were not a big deal to the student. Sam was punched in the face by a smaller student. “What was I going to do, beat up a smaller kid,” Sam stated. Patricia, Simon's guardian, stated, “I think that sometimes he is easily influenced by the people around him and when he gets around a bunch of kids who play around and maybe don't take it serious.” This statement infers a social aspect to the negative interaction. The

student may explain the negative interaction to himself as just being a part of school. Sam's teacher Tess takes it a step further by stating, "When it comes to kids who have learning differences even autism if a kid acts different. . . . I think that sadly even I myself as a teacher we automatically can judge what we think they can do." This judgement, according to Tess, could lead to the teacher having low expectations for the child and fuel negative interactions with their peers. Penny, Stew's mother, believes that a lack of action on the part of the school fuels negative interactions. She stated, "No one ever gets punished hardly and so kids just think that they can keep picking on him." Penny believes that the school should teach students to be more accepting toward students who are different from them. By doing this it would lessen the negative peer interactions the students experience.

Again, in regard to negative peer interactions the student participants look inwardly and almost tend to have an empathy for students with whom they have negative interactions. Sam stated, "You could be like me where you're just a little quirky and awkward but you know otherwise fine." Sam states that other students may not understand why and ask, "Why are you like that?" Stew believes that some students are nice but sometimes feels pitied by his teachers, particularly when they compliment him. This made Sam feel different from the other students and led to negative peer interactions. Interestingly, teachers failed to cite any negative peer interactions from twice-exceptional students. They believed that these students were generally accepted in the classroom environment and did not believe that bullying or harassment was as major issue.

Positive peer interactions. Penelope, Sam's mother, believes that positive peer interactions occurred by the modeling of other students for Sam. She stated, "He saw other role models of our kids working hard and I think that changed his attitude and he tried." Penelope

was the only parent that had a positive comment about peer interactions. Teachers all agreed that the student participants had a group of friends that they hung out with during the day. The students all stated that the best part of their day was when they could see their friends. Simon, who is mostly nonverbal and has trouble with social anxiety, reported having three friends that he got to see at lunch. Stew mentioned that lunch was his favorite part of the day for the same reason. Sam and Stan each stated that in classes that they liked they had at least one friend. Tina, a teacher, pointed out that twice-exceptional students hung out in “tight groups” during the day. Tina believed that these students had support from their peers and were generally accepted.

Personal space. Simon did not like people in his personal space bubble according to both him and his grandmother. All students reported, in some aspect, not being comfortable in large crowds or assemblies such as pep-rallies. Stan has a major issue with personal space. Despite the fact that he liked pep-rallies, they cause him major anxiety. The same is true with Simon. Stew does not care for class changes. He reported that the halls were crowded, and it made it hard for him to get to class. Tammy, Stew’s teacher, observed that in her experience twice-exceptional students did not prefer to work in groups with other students. Looking at the comments that support this code, the overall message is that these twice-exceptional students preferred not to be in close proximity to other students and when they were, even if they were enjoying the activity, it caused them anxiety. Teachers reported that they were careful when assigning these students to cooperative groups. They stated that sometimes they allowed twice-exceptional students to work alone rather than with their peers. All teacher participants were sensitive to the personal space requirements of twice-exceptional students.

Why are you like that? Stan’s mother Pam expressed that students want to know why her son was “like that.” Stew stated that his friends asked him questions about the way he acted.

Simon is believed by his teacher Teresa to make his classmates uncomfortable because they do not understand why he does not talk to them. The idea that students failed to understand and were not taught why the participants in this study are the way they are was evident in many of the comments about social interactions made by participants in this study.

Feel like an outsider. Pam observed when asked how other students viewed her son Stan, “Well probably like an alien from outer space to be honest with you.” Stan admits, looking internally, “I guess I'm pretty self-conscious about autism I feel like everybody sees me.” For the most part, students felt accepted by their group of peers; however, they did not feel accepted in every circle in every part of the school. This is often the case for any student; however, it may contribute to a feeling of being an outsider. It did not seem that any of the four students were unable to cope with the feeling of being an outsider. All teacher participants reported making the effort to make twice-exceptional students feel accepted in their classroom.

Masking Giftedness

Statements that referred to the masking of the student's giftedness were grouped into this theme. Many of the participants believed that behavior caused by a student's ASD masked the gifted part of his twice exceptionalism. However, students themselves showed a tendency to mask their giftedness in an effort to fit in and be like everyone else.

Autism. As one might expect, the word autism was one of the most mentioned words from the total amount of responses. The teachers generally felt that schools are not equipped to meet the needs of twice-exceptional students. Titus and Travis, two veteran teachers who have worked with multiple twice-exceptional students through the years, worried about their lack of training to address the gifted half of twice exceptionalism. Overall, parents believed that their children were not challenged in their elementary school years. They credited effective teachers

who maintained high expectations despite their child having autism with them blossoming. “We have nothing for them,” lamented Travis. Titus expressed that “we need professional development targeted specifically to twice-exceptional students.” Tess stated, “I had never heard the term twice exceptional until this study.” Tina added, “All we do for them is designed to target their autism.” Many teachers went as far as to say that they actually forget that these students were gifted until they graded their work.

Need to be treated like everyone else. Stan wants to be treated like any other student. He desires this to the point where he shuns praise. Stan recounts, “If somebody gives me a compliment like did really good on that test, I feel like they're just trying to be nice to me like out of pity. . . . They're not being sincere they just want to make me feel better.” Stan seemed to have a problem with being called out or recognized in any context. Stew expressed the desire to be given a chance like everyone else. Sam expressed being self-conscious about having autism as the reason for not wanting recognition.

Negative feelings about the school. Pam, Stan’s mother, expressed, “I don't think that our educational system accurately measures what our kids can do.” This feeling was expressed out of concern that Stan was not measured fairly on standardized testing. Pam also expressed that the school has been ineffective at regulating other students’ behavior in relation to her son. Pam states, “I know he thinks that the kids are making noise on purpose to annoy him and that people are getting into his personal space on purpose to annoy him and nothing is being done about it.” Pam expressed a feeling of helplessness in regard to her student’s experiences at school. Patricia, Simon’s guardian, complained, “There's no textbook online there's no textbook in the book bag.” Tiffany, Stew’s teacher, also expressed negative feelings about the school as it

related to twice-exceptional students. She believes that the school is ill-equipped to handle students who are twice-exceptional and training is rare in this area.

Most challenging part of the day. Patricia, Simon's guardian, believed wrongly that lunch was the most challenging part of Simon's day because of his eating disorder. However, Simon reported that lunch was the best part of his day because of his three friends. Simon expressed that "at first it was challenging to get the whole like locker bookbag notebook all that stuff." Simon struggled with organization and the challenge was ongoing throughout the day. Sam stated, "I am horrible at math I don't think it's anything autism related I feel like it's just me." Here again we see an almost innate ability of the student participants in this study to look inwardly. Overall, the students did not like situations that were not in their area of interest and situations in which they did not have the social support of friends.

Student Achievement

Student participants displayed a high level of achievement in areas in which they were interested. However, there were some areas in which students failed to achieve for a variety of reasons. These obstacles to achievement were grouped together and are discussed here.

Standardized tests. Overwhelmingly teacher and parent participants in this study questioned the efficacy of standardized testing at truly assessing the ability of the four twice-exceptional students in this study. Pam, Stan's mother recounted, "Teacher requested an IQ test and we were just kind of mind blown that it did not show that he was a genius." Pam went on to say, "Kind of wish we could do away with standardized tests because I don't think that kids are standardized." All the parents in the focus group interview expressed that despite making A's in their classes, their child performed lower than expected on standardized testing. Of all the

participants Simon tends to excel on standardized testing but wishes he could do better in science.

Motivation. Stan admitted a lack of motivation. That feeling was echoed by his teacher and his parent. When asked about his daily schedule, Stan stated, “Unusually I just go to my first period classes try to stay awake.” Stan reported being bored. However, Stew and Sam both stated that they finish their work early and do other things that interest them during class. According to Simon’s teachers he is frequently distracted by other areas of interest despite performing well in class. This was confirmed through direct observation. The main motivator of student achievement in regard to these four twice-exceptional students seems to be the desire to do what they are interested in.

Grades. All students reported getting good grades. However, parents in the focus group agreed that they did not believe their students cared that much about grades overall. Stan’s mother reported that her student refuses to do work if he does not believe it is important. Tess stated that she forgets her student is twice-exceptional until she grades his work. All teachers expressed that twice-exceptional students perform extremely high in areas in which they are interested.

Extracurricular activities. All students reported being involved in some type of extracurricular activity. Simon is very interested in computer coding. His grandfather got him started and he does it all the time according to his guardian. Sam runs cross-country, and Stew plays the guitar in a school-sponsored club. Stew’s mother did not know he was involved in the club until she saw the guitar on the couch. Here, there is also a social aspect to all of the students’ involvement in extracurricular activities. In cases of school-sponsored extracurricular activities, the student has a group of friends that also participate in the same activity. This

speaks to social acceptance. In Simon's case, coding was a bonding activity between him and his grandfather.

Feelings about the School

Students and parents had certain feelings about the school both positive and negative. This theme is focused on what the student's best and worst part of their day consisted of. It also explores the shared and different perceptions of the school by the participants.

Best part of the day. All participants expressed that courses that were of interest to them or situations in which they had a group of friends present were the best parts of their day. The parents of these participants seemed to be cognizant of this. Both parents and students agreed that students enjoyed classes they took that were taught by teachers that they liked or that were effective.

Effective teacher. All parent participants agreed that their child had one or more teachers who were effective at teaching their child. In this area parents were very happy about the school. Pam, Stan's mother, stated, "I just think Taylor Newton (pseudonym) just walks on water." She expounded, "I don't know what she did to him but she took that hard headed child and just turned him into a kid that would actually do his homework." Sam said of his favorite teacher, "I guess he saw something in me . . . he saw that I'm exceptionally smart and that I apply myself." It's important to point out here that each of the teachers that student participants point out as their favorite challenged them academically or at something that was in their area of interest.

Parent-child disconnect. There was a disconnect in some areas of what the child believed about the school and what the parent believed about the school. Parents admitted that their students did not talk to them much about school and that it was like "pulling teeth" to get

information out of them. This is often exacerbated by the lack of verbal tools that ASD students demonstrate. On several occasions when analyzing responses to the same interview questions, the students' view would be different from the parents' view of the school. One subject that jumps out is bullying. Parents clearly believe that bullying is more of a problem at school than their students do. In some instances, students stated that they had no idea what their parent thought of the school.

Access to Resources

Access to resources emerged as a theme that consisted of obstacles that students had to overcome during the school day and how they did it. This theme emerged out of the way the participants discussed their ability to advocate. Some participants discussed how economic hardships interfered with their ability to be successful.

Obstacles. Parents reported obstacles in regard to advocating for their child. Pam did not feel like administration answered her questions adequately. Parents in the focus group setting expressed that work and finances took precedence sometime over their involvement in the school. They did not feel that their students had access to help when they were being treated unfairly at school. Teachers did not agree with this. Overall, the students believed that obstacles they experienced were just part of being at school.

Parent involvement. All parents discussed their involvement at school. Overall, they reported good experiences. They all agreed that the school could do more in regard to bullying, but they seemed to feel comfortable advocating for their child at school and generally they were satisfied with the school's response. The subject that kept coming up was bullying. Here they agreed that the school fell short.

Research Question Responses

The central research question that this study addressed asked, What are the perceptions of students in sixth through twelfth grade who are identified with ASD and AIG concerning their own educational experiences, and what do their parents and teachers perceive about these same experiences? Overall, the student's perceptions were positive, particularly in regard to social acceptance. All participants reported having a group of friends, being involved in extracurricular activities, and having a favorite teacher that challenged them to achieve. But when one examines what parents said about the same experiences, they reported being concerned about bullying and their student being treated unfairly. Parents agreed that their students had teachers who were effective and challenged their student but questioned the efficacy of standardized testing at accurately assessing their child's level of knowledge. Pam, Stan's mother, expressed, "I don't think that our educational system accurately measures what our kids can do." Teachers felt that the experience of twice-exceptional students could be enhanced if they received the training needed to address the gifted part of the student's twice exceptionalism. One of the teacher participants, Tess, stated, "I have never been to a training focused on strategies for twice-exceptional students."

Sub-question 1 asked, What are the parents' perceptions of the educational experiences of their sixth through twelfth grade child who has ASD and AIG? Parents seemed happy with the school overall. They liked the fact that their child had one or more effective teachers that challenged them. Parents overall believed that their child was being bullied at school. Pam stated, "They pick on him and nothing happens." Parents also did not believe that standardized testing effectively assessed their child's level of knowledge.

All parent participants in this study also believed that their children had a group of friends that they socialized with during the school day despite the feelings that their child could be treated like an outsider in certain circles of the school society. They felt that many students could be mean and not understand why their children acted the way that they do. They believed that the school should do a better job of educating the students to accept others who are different from them.

Sub-question 2 asked, What are the teachers' perceptions of the educational experiences of sixth through twelfth grade students who have ASD and AIG? Teachers believe that they have a challenge in addressing the gifted part of the twice-exceptional students overall and in this study. They felt generally schools are not equipped to meet the needs of these students. Teachers reported that students in this study achieve at a high level academically, particularly in the student's area of interest. One teacher participant, Tess, stated, "I forget that he is gifted until I grade his work."

All teacher participants also believed that twice-exceptional students wanted to be treated the same as any other student despite their actions showing a different belief. Students cited teachers "calling them out" for doing good. Teachers admitted that they observed students isolating themselves or not being a part of a group. They also observed students finishing their work early and focusing on other interests.

Sub-question 3 asked, What are the perceptions of sixth through twelfth grade students who have ASD and AIG of their public-school education? All student participants in this study expressed that they wanted to be treated like any other student. They did not like being singled out even for their high achievement. They expressed negative peer interactions but did not complain about being bullied. They were each able to point to one teacher that they liked and

they each had a group of friends that they associated with throughout the school day. They all reported motivation as a driver to complete work early so they could do what they wanted to do or not do the work at all.

Despite parental beliefs that their children were being bullied, the students did not feel it was much of a problem. Students reported working through negative peer interactions by not allowing it to bother them or “blowing it off.” Students were very aware of their own disabilities and abilities. They had a tendency to internalize negative interactions with their peers. They were generally happy at school and had teachers and friends that made their school experience positive overall.

Summary

The findings in this study vary between the different groups of participants. In some cases, there is a vast difference between the way the parents perceive the school and the way the student perceives the school. Students had a tendency to look inward to justify their own behavior in their environment whereas parents tended to blame other students. Parents believe that the school could do more to address bullying while students do not believe that bullying is a big issue. Teachers believe that adequate training in regard to how to educate a twice-exceptional student is needed. Teachers reported forgetting that these students were twice exceptional until they grade their work and see how high they achieve. Overall students have positive feelings about the school they attend and reported areas of social acceptance. They also reported enjoying some activities at school despite the social anxiety they felt.

CHAPTER FIVE: CONCLUSION

Overview

The purpose of this qualitative multi-case-study was to shed light on the lived educational experiences of students in sixth through twelfth grade who are identified with an autism spectrum disorder and academically or intellectually gifted. This chapter includes a summary of the findings, a discussion of the findings, the implications in light of the relevant literature and theory, the methodological and practical implications, an outline of the study delimitations and limitations, and recommendations for future research.

Summary of Findings

The central research question that this study addressed was as follows: What are the perceptions of students in sixth through twelfth grade who are identified with ASD and AIG concerning their own educational experiences, and what do their parents and teachers perceive about these same experiences? The student participants in this study generally enjoyed the social aspects of school despite having to overcome social anxiety in many cases. The students all longed for acceptance by their peers and overall enjoyed opportunities to socialize with them. All student participants reported having at least one teacher that they liked who challenged them. Students did not believe that bullying was an issue; however, all parents worried about bullying and felt that the school was not doing enough. The teachers in this study believed that there was a lack of training provided to help them to meet the needs of students who were considered twice exceptional.

Sub-question 1 asked the following: What are the parents' perceptions of the educational experiences of their sixth through twelfth grade child who has ASD and AIG? Parents seemed happy with the school overall. They liked the fact that their child had one or more effective

teachers that challenged them. Parents believed that their child was being bullied at school and that the school did not do enough to prevent it. Parents also did not believe that standardized testing effectively assessed their child's level of knowledge and pointed to other assessments that did.

Sub-question 2 asked the following: What are the teachers' perceptions of the educational experiences of sixth through twelfth grade students who have ASD and AIG? Teachers believe that they have a challenge in addressing the gifted part of the twice-exceptional students overall and in this study. The teachers generally felt that schools are not equipped to meet the needs of twice-exceptional students. However, they reported that the students in this study typically achieve at a high level academically particularly in the student's area of interest.

Sub-question 3 asked the following: What are the perceptions of sixth through twelfth grade students who have ASD and AIG of their public-school education? Student participants in this study expressed that they wanted to be treated like any other student. They did not like being singled out even for their high achievement. They expressed negative peer interactions but did not complain about being bullied. They were each able to point to one teacher that they liked and they each had a group of friends that they associated with throughout the school day. They all reported motivation as a driver to complete work early so they could do what they wanted to do or not do the work at all.

Discussion

This study was grounded in the attribution theory and the social cognitive theory. Literature regarding twice-exceptional students and how they socially interact with their peers was also reviewed. Together these studies were used to help describe how twice-exceptional students experienced the public education system.

Empirical Literature

The lack of professional development with regard to serving students with ASD has led to low performance by students with special needs. This is starting to be evident in public schools according to Sugita (2016). This was echoed by the teacher participants in this study. Teachers reported not being trained to nurture the gifted part of the student's condition and wanted to be more effective in regard to meeting students' needs. The main problem is the masking of the giftedness of twice-exceptional students in favor of their disability. Because of this masking, the gifted part of the student fails to be nurtured (Bell et al., 2015). Linton et al. (2015) asserted that support from experienced teachers is a key strategy for accommodating students with ASD in the inclusion setting.

Gifted students do not operate within the norm of general public-school practices and procedures (Bell et al., 2016; Burke et al., 2008; Miller, 2002). They sometimes struggle to fit in and are many times bullied for being different (Burke et al., 2008). However, student participants in this study felt that being bullied was not big deal, unlike their parents. Because of their giftedness, these students have to overcome psychological issues that are unique to their condition (Renati et al., 2017). The interrelationship between individual, family, and environmental factors, also called the child's ecosystem, can influence a child's wellbeing and healthy adjustment in a desirable or negative way.

Zeidner and Matthews (2017) believed that there is a moderate correlation between students who are classified as AIG who are also lacking emotional intelligence. However, the student participants in this study were often self-reflective and self-aware. They tended to blame themselves for being treated differently. Zeidner and Matthews defined emotional intelligence (EI) as "a set of hierarchically organized core competencies and skills for identifying,

expressing, processing, and regulating emotions—both in self and others” (p. 165). It seemed that the students in this study possessed skills in emotional intelligence.

Many of the student participants in this study failed to do well on state mandated testing. Noemy et al. (2017) posited that educators should assess beyond the score a student makes on a test and consider the student’s emotional intelligence when assessing their achievement and level of overall intelligence. Kim (2005) believed that the talented and creative mind possesses divergent thinking skills that cannot be measured by state mandated testing. Miller (2002) believed that IQ tests may not always be complete because they may not paint a full picture of the child’s overall abilities. Parent participants in this study agreed that their children should be assessed in a more authentic way.

Fishman and Husman (2017) discovered that students attributed positive feedback internally and negative feedback externally. This was not the case in this study. Students had a tendency to internalize negative feedback and blame their lack of motivation or their autism for any type of negative peer interaction or bad grade.

Forty percent of students with ASD do not receive counseling in regard to their mental health according to Sugita (2016). Sugita also stated that students do not receive speech therapy, life skills training, and much needed health services after the age of 18. This was not the case in regard to this study with two of the four students currently in therapy for social anxiety and an eating disorder. All student participants in this study had been in therapy at one point or another. With regard to life skills training, one of the four students struggled with organizational skills and had a hard time adjusting to having a locker and keeping up with some assignments. This student did receive support from the special education staff at the school and got better at it as time went on. The major takeaway from this research is the perception that teachers do not feel

as though they are equipped to meet the needs of twice-exceptional students. This contributed to the masking of the student's giftedness by the ASD. Further contributing to the masking effect is the students' lack of ability to effectively communicate with teachers and parents to advocate for their needs. This lack of effective communication from the student contributed to the disconnect between parental perceptions and the blindness of teachers to the students' daily struggles socially.

Theoretical Literature

Bandura (1986) defined the social cognitive theory in the context of three modes: individual agency, proxy agency, and collective agency. Individual agency is how individuals can influence their own environment. In the case of twice-exceptional students, individual agency speaks to how much control students feel that they have within their own environment. Twice-exceptional students in this study had a tendency to withdraw from society in some instances and live in their own world. They all reported finishing their work early so they could take part in activities that they enjoyed. In this light their withdrawal might be a defense mechanism whose goal is to assert control over their environment. Their parents, however, felt powerless specifically in the area of bullying. They worried that their children would not assert individual agency and advocate for themselves. Therefore, they mentioned that they often did this for their children.

Proxy agency has to do with how other social actors advocate for a person (Bandura, 1986). Twice-exceptional students' perception of how others view them may be examined through proxy agency. Students felt that they were outsiders in some situations. They reported believing that others might wonder why they are different or act the way they do. This led to

negative peer interactions. However, none of the student participants in this study believed they were being bullied at school.

Collective agency is how a team can have shared values and beliefs and work together to achieve a common goal (Bandura, 1986). Collective agency may reveal how much twice-exceptional students feel that they are a part of the social society at their schools. Each of the participants reported having a group of friends and being around these friends was the best part of their day. It is clear that the participants in this study felt as though they were a part of the social society at their school despite the fact that many social situations caused them anxiety.

Bandura (1986) believed that individuals learn through reflection and modeling in a social context. An example of this would be a student observing another student who is not following the rules being ignored or rewarded by the teacher. Student participants in this study reported acting out because their classmates acted out. However, it was also reported that students followed positive role models and began to achieve at a higher level academically.

The literature documents that children's experiences define and shape their psychological development (Chun et al., 2016) and that experiences have a showering effect on development. This was confirmed in the results of this study as well. Students and parents reported bad experiences in elementary school with negative peer interactions and low expectations from their teachers.

Attribution theory was first described by Heider (1958), who was concerned with how people perceive and rationalize the actions of others. In this study, students were suspicious of any type of attention, even positive attention, that put them in the spotlight. These twice-exceptional students wanted to blend in and didn't want to be "seen." A person's perceptions, according to the attribution theory, are filtered through their own beliefs, desires, emotions, and

traits (Heider, 1958). Twice-exceptional students' perceptions of positive attention was that of pity. Although they believed that their teachers meant well, they failed to appreciate compliments in regard to their academic accomplishments. The attribution-based theory of motivation demonstrates how different causal ascriptions lead to motivational outcomes. Twice-exceptional students in this study understood the motivation of others in the way they were treated on a daily basis. These students seemed to understand that they were different and didn't hold a grudge toward their peers when they were asked "why do you act that way."

Students tend to attribute their outcomes to a variety of causes, such as ability, effort, task difficulty, and luck. This was the case with the participants in this study. The students were self-reflective and seemed to understand the link between ability, hard work and achievement. Attribution theory deals with how the social perceiver can use information to arrive at causal explanations for events in their environment (Korn, Rosenblau, Rodriguez Buritica, & Heekeren, 2016). When examining how twice-exceptional students examine their surroundings they perceive an environment in which they have a group of friends whom of which they get the interact with during lunch time and between classes. They also discussed teachers whom of which they had an affection for because they felt accepted in their classroom. This colors twice-exceptional students' perceptions of their educational experiences. Heider (1958) believed that people's motivations and intentions for their actions were at the heart of processes that eventually manifest themselves through overt actions (Heider, 1958). It may be the case that certain teachers act overtly in ways that stifle the achievement of twice-exceptional students. The feedback in these classes may be mostly negative in ways that are not necessarily vocal. For all of their obstacles, twice-exceptional students were very perceptive. The motives perceived by the

students is the key. When students receive both positive and negative feedback, they process it in different ways based on their perception of the motivations behind the feedback.

Implications

The results of this study have theoretical, empirical, and practical implications. The views of the three groups diverged in many ways. Overall, the student's perceptions were positive, particularly in regard to social acceptance.

Theoretical Implications

The study was based on the attribution theory (Yayie, 2015) as well as the social cognitive theory (Bandura, 1986). Attribution theory explained how these students viewed themselves as they attach meaning to the behavior of others toward them (Yayie, 2015), while the social cognitive theory was helpful in understanding how students socialized their actions by learning from the school environment. Combining these theories helped with understanding how twice-exceptional students experience the education system. This study may inform the development of training strategies for students who are academically gifted with ASD. Further, this study could potentially influence future policy, giving officials the ability to make decisions from an informed point of view (Denning & Moody, 2013). This research may lead to an understanding of the needs of gifted children with ASD, and the development of the best practices for teaching these students in a holistic manner. The study may also improve the social perceptions that impact the experience of the learner.

In 1986, Bandura published his seminal work on social cognitive theory, which he developed after conducting a series of experiments in which he observed and described human behavior. He defined the social cognitive theory in the context of three modes: individual agency, proxy agency, and collective agency (Bandura, 1986). Individual agency is how

individuals can influence their own environment. In the case of twice-exceptional students, individual agency speaks to how much control students feel that they have within their own environment. As far as control of their environment is concerned, it was evident that twice-exceptional students in this study did not feel as though they had much control. From examining the responses to questions from twice-exceptional students it was clear that they were trying to survive in an environment in which things just happen to them. Social interactions between twice-exceptional students and their peers were routinely imbalanced in regard to social capital. Twice-exceptional students, however, developed coping mechanisms that may have led to their viewing these interactions as routine and nothing to call to the attention of authority.

Proxy agency has to do with how other social actors advocate for a person. It was noted that twice-exceptional students had a group of friends in this study. However, it was not clear if these peers advocated directly for the students. Parents advocated for their students with limited success in their opinion. It was not noted if teachers advocated in any way for these students. Twice-exceptional students' perception of how others view them may be examined through proxy agency.

Collective agency is how a team can have shared values and beliefs and work together to achieve a common goal (Bandura, 1986). This is one area of social cognitive theory that was totally absent from the responses from participants in this study. This portion of social cognitive theory may be part of the solution to twice-exceptional students having a fuller and more positive experience while in public schools.

Empirical Implications

The feeling of acceptance was a common need for all student participants in this study. This may point to them being more social than research suggests. All students in this study

looked inward to justify what was happening to them in their environment. In this way they took responsibility for their own actions. This could be a reflection of how they were raised. Each of the students is from a similar background and they were all considered middle class. Further, education was valued in the home. The students all seemed to have one or more favorite teachers. This could be because the teachers treated them like they were any other student and they felt challenged by these teachers.

Practical Implications

The practical implications of this study are informed by the student and teacher responses to the interview questions. Twice-exceptional students seemed to want what any other teenage student wants: to be accepted. More importantly, they wanted to feel accepted. The results of this study may inform the practices of teachers, parents, administrators, and policymakers regarding the lived experiences of students who are AIG and have ASD in the public education system in this school district and beyond. It is recommended that school districts expend more resources on professional development for teachers who service students who are twice exceptional. It is also recommended, based on the results of this study, that parents take time out to talk to their twice-exceptional children about their school experiences daily without acting on any negative peer interactions that they might share with them. Parents should create a safe space for their children to discuss their daily social interactions without fear of being seen or exposed as a problem student.

Delimitations and Limitations

During the development of this study certain decisions were made in regard to the scope of the study. Despite the delimitations of the study it was designed in a way to answer the

proposed research questions. However, certain limitations existed because of the chosen method of research.

Delimitations

This study was delimited to secondary students only. The participants in this study must have been diagnosed with an ASD as well as being academically gifted. This study was only concerned with the school environment and did not look into the student's home environment. The study was further delimited to interviewing parents, teachers, and students only. These individuals were interviewed because they are considered to be key stakeholders.

Limitations

This study was limited to one school district, North Carolina City Schools in North Carolina. There were only 14 participants in this study, four of which were primary participants. All the participants were male students. All the parents were female. The study was limited to case study which is a qualitative methodology.

Recommendations for Future Research

In light of the results of this study the following recommendations are being made for future research:

The first recommendation for future research is to conduct a mixed-methods study using both quantitative and qualitative methodologies. This would enable a more thorough understanding of the experiences of twice-exceptional students. This could be accomplished by sending a survey to a broader number of participants regarding their experiences in school. Then, based on survey responses, students who have overall positive experiences could be interviewed as well as students who have an overall negative experience in school. The resulting data could then be analyzed and compared.

Future research should be expanded to include more school districts in different states. This would better enable more varied responses and perceptions. This could be accomplished by simply including participants from different school districts. The same number of participants could be selected from each district and the data could be analyzed qualitatively.

Further, the selection of participants should be a randomized sample instead of purposeful sampling. This could be accomplished by identifying a larger number of twice-exceptional students from different areas of the country and then randomly choosing students to take part in the study. The sample should be as large as possible.

In future research female participants should be interviewed and observed in order to get a fuller view of the experiences of twice-exceptional students. This could be accomplished by simply finding female students who are twice exceptional. This would have to be a purposeful sample.

A broader sampling of stakeholders should be interviewed in future studies. The friends of students should be included as secondary participants in future studies. This could be accomplished by including the friends and other relatives of the twice-exceptional student. The broader the number of participants in each case, the better the view of the students' social ecosystem.

Teaching methods in regard to the twice exceptional should also be examined in future research in light of the fact that all participant teachers requested professional development. This could be accomplished by simply focusing on the teachers of twice-exceptional students. Teachers could be studied and recommendations for the types of professional development could be developed.

Summary

The voices of the twice-exceptional students in this study reveal that they enjoy the social aspects of school overall, and they have specific areas of interest in which they excel. They have specific teachers that they like because they feel comfortable in their classes. Despite the parents' reporting that their students are being bullied, the students themselves did not believe it was a problem. Sam stated, "So what like I haven't been shoved in the lockers, I haven't been like push down stairs or anything you know. . . . I'll get like a like a smart aleck remark every now and then but it's nothing horrible." Stew stated, "Somebody calls me gay or something that doesn't bother me." One participant, Sam, was punched in the face by a smaller student but refrained from retaliation: "What was I going to do, beat up a smaller kid?" Sam asked. Patricia, Simon's guardian, stated, "I think that sometimes he is easily influenced by the people around him and when he gets around a bunch of kids who play around and maybe don't take it serious." While dealing with the social aspects of school, participants recounted academic obstacles that they have to overcome. Pam, Stan's mother, recounted, "Teacher requested an IQ test and we were just kind of mind blown that it did not show that he was a genius." Pam went on to say, "Kind of wish we could do away with standardized tests because I don't think that kids are standardized." Simon was the only student of the four twice-exceptional students who did well on standardized testing.

The social aspects of school tend to inform student behavior. Sam enforces that social part of behavior by stating, "I'm standing up on the table about to punch the ceiling fan and one kid might think wow this guy he's a real character you know he's hilarious but somebody else might think wow that kid is an idiot." In this statement Sam also points out that some students may not approve of his behavior. Many times the behavior can lead to negative peer

interactions. But instead of blaming other students the student participants looked inwardly and almost tended to have an empathy for students with whom they had negative interactions. Sam stated, “You could be like me where you're just a little quirky and awkward but you know otherwise fine.” Students and parents both lamented that students may need diversity training to learn how to accept differences. Stan’s mother Pam expressed that students want to know why her son was “like that.” Stew stated that his friends asked him questions about the way he acted.

Despite their differences these students just wanted to be treated like everyone else. Stan recounted, “If somebody gives me a compliment like I did really good on that test, I feel like they're just trying to be nice to me like out of pity. . . . They're not being sincere they just want to make me feel better.” These students all shunned attention that they viewed as insincere. One of the major finding in this study can best be summed up by Stan, “I guess I'm pretty self-conscious about autism I feel like everybody sees me.”

It is important that students with ASD, who are also AIG, be nurtured so that they can reach a higher level of accomplishment. These twice-exceptional students are as important as any other student and must be encouraged and motivated in order for them to reach their highest potential. No one knows for sure what great accomplishments these students might achieve. It is possible that one of them may develop a cure for cancer or find a solution to battle future pandemics. The talents and abilities of these students are being masked by their perceived disabilities. This masking is not serving the student, the parents, or mankind as a whole. It is holding back our society by possibly denying us these talents and untapped abilities. It is my hope that the voices of these students, their parents, and their teachers will start a conversation that will reverse this troubling situation. In the voice of the participants, “I guess I'm pretty self-conscious about autism I feel like everybody sees me” (Stan). “They view me as weird because

of the spectrum you know” (Stew). “They see me as a weirdo. They don’t talk to me but it’s my fault because I don’t talk to them. I assume if I talked to them, they would talk back” (Sam). They view him “like an alien from outer space” (Pam). “To be honest they view me as the odd one out” (Simon). Their voice can best be summed up with this verse, “...The Lord doesn’t see things the way you see them. People judge by outward appearance, but the Lord looks at the heart” (1 Samuel 16:7 NLV).

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APPENDICES

Appendix A: IRB Approval Letter

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

November 4, 2019

Callie Everett

IRB Approval 3893.110419: The Experiences of Sixth- through Twelfth-Grade Students Identified as Having Autism Spectrum Disorder and Classified as Academically and Intellectually Gifted: A Multiple-Case Study

Dear Callie Everett,

We are pleased to inform you that your study has been approved by the Liberty University IRB. This approval is extended to you for one year from the date provided above with your protocol number. If data collection proceeds past one year or if you make changes in the methodology as it pertains to human subjects, you must submit an appropriate update form to the IRB. The forms for these cases were attached to your approval email.


Your study falls under the expedited review category (45 CFR 46.110), which is applicable to specific, minimal risk studies and minor changes to approved studies for the following reason(s):

7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies. (NOTE: Some research in this category may be exempt from the HHS regulations for the protection of human subjects. [45 CFR 46.101\(b\)\(2\)](#) and (b)(3). This listing refers only to research that is not exempt.)

Your study involves surveying or interviewing minors, or it involves observing the public behavior of minors, and you will participate in the activities being observed.

Thank you for your cooperation with the IRB, and we wish you well with your research project.

Sincerely,



G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
Research Ethics Office

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Appendix B: Recruitment Letters

Recruitment Letter (parent)

Hello, my name is Callie Everett. I am a graduate student at Liberty University in the area of High Education Administration. I am conducting research on twice-exceptional students, and I am inviting you to participate because you have been identified as a parent of a twice-exceptional child.

If you agree to be in this study, I would ask you to do the following things:

1. Fill out a screening survey that should take approximately 15 minutes to complete.
2. All participants will participate an individual interview that will be audio recorded and take no longer than 1 hour.
3. Allow me to observe your child in his/her classroom for no longer than 45 minutes and take field notes.
4. Each participant group (the students, the parents, and the teachers) will be asked to participate in a focus group interview with their fellow students, parents, or teachers respectively, that will take no longer than 1 hour.
5. Review all interview transcripts in which you took part for accuracy. This process should take no longer than 15 minutes.
6. Provide documents for evaluation related to your child.

The goal of this study is to better understand how twice-exceptional students experience the educational system. If you have any questions or would like to participate in the research, I can be reached via email at ceverett@liberty.edu.

Recruitment Letter (teacher)

Hello, my name is Callie Everett. I am a graduate student at Liberty University in the area of Educational Leadership. I am conducting research on twice-exceptional students, and I am inviting you to participate because you have been identified as a teacher of a twice-exceptional child.

If you agree to be in this study, I would ask you to do the following things:

1. Fill out a screening survey that should take approximately 15 minutes to complete.
2. All participants will participate an individual interview that will be audio recorded and take no longer than 1 hour.
3. Allow me to observe your child in his/her classroom for no longer than 45 minutes and take field notes.
4. Each participant group (the students, the parents, and the teachers) will be asked to participate in a focus group interview with their fellow students, parents, or teachers respectively, that will take no longer than 1 hour.
5. Review all interview transcripts in which you took part for accuracy. This process should take no longer than 15 minutes.
6. Provide documents for evaluation related to your child.

The goal of this study is to better understand how twice-exceptional students experience the educational system. If you have any questions or would like to participate in the research, I can be reached via email at ceverett@liberty.edu.

Appendix C: Screening Survey

SCREENING SURVEY FOR PARENTS

1. What is your name?
2. What is your email address?
3. What is your phone number?
4. How do you identify ethnically?
5. What grade is your child in school?
6. Does your child have any medical conditions that has been identified on an IEP?
7. Are you willing to provide the researcher with copies of documentation regarding your child's educational placement in school in order to determine if he/she is an appropriate candidate for this study? After reviewing this documentation, I can either return these copies to you or shred them.
8. Are you available to participate in a research study?

SCREENING SURVEY FOR TEACHERS

1. What is your name?
2. What is your email address?
3. What is your phone number?
4. What grade do you teach?
5. Mr/Mrs. _____ has provided information letting me know that her son (or daughter), _____ has been identified as ASD and AIG. Does this student have any other medical conditions that you know about that may interfere with his/her ability to participate in this study? If so, do you recommend that I find a different student?

6. Assuming that you believe that the student identified above is a suitable candidate for this study, are you available to participate in a research study?

Appendix D: Consent Form For Teachers

The Experiences of Sixth Through Twelfth Grade Students Who Are Identified with Autism Spectrum Disorders and Academically and Intellectually Gifted: A Multiple-Case Study

By Callie Everett
Liberty University
School of Education

You are invited to be in a research study that will be conducted at North Carolina City Schools during the Spring 2019 Semester. You were selected as a possible participant because you have experience with students who are twice-exceptional. Please read this form and ask any questions you may have before agreeing to be in the study.

Callie Everett a Doctoral student in the School of Education at Liberty University, is conducting this study.

Background Information: The purpose of this multiple-case study is to analyze the experiences of secondary students with an ASD who are classified as AIG in a region of North Carolina. The research will focus on the phenomenon of twice-exceptionality, which for the purpose of this study is defined as having been classified with ASD and gifted in a core subject. The central research question guiding this study is: How do students in grades six to twelve who have ASD and AIG view their educational experiences?

Procedures: If you agree to be in this study, I would ask you to do the following things:

1. Participate in an individual interview that will be audio recorded and take no longer than 1 hour.
2. Allow me to observe the student in your classroom for no longer than 45 minutes and take field notes.
3. Participate in a Focus Group interview with other teachers that will take no longer than 1 hour.
4. Review all interview transcripts in which you took part in for accuracy. This process should take no longer than 15 minutes.

Risks: The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

Benefits: Participants should not expect to receive a direct benefit from taking part in this study. However, you may benefit from taking part in a collaborative conversation with other teachers regarding the education of students who are twice-exceptional.

Benefits to society: This study may provide an overall benefit to society by contributing to the body of knowledge regarding twice-exceptional students.

Compensation: Participants will not be compensated for participating in this study.

Confidentiality: The records of this study will be kept private. In any sort of report I might publish, I will not include any information that will make it possible to identify a subject. Research records will be stored securely, and only Ms. Everett will have access to the records. I may share the data I collect from you for use in future research studies or with other researchers; if I share the data that I collect about you, I will remove any information that could identify you, if applicable, before I share the data. The school and participants in this study will be assigned a pseudonym. I will conduct the interviews in a location where others will not easily overhear the conversation. Interviews will be recorded and transcribed. Recordings will be stored on a password locked computer for three years and then erased. Only Ms. Everett will have access to these recordings. I cannot assure participants that other members of the focus group will not share what was discussed with persons outside of the group. All data will be imported into a qualitative software package. The software has the capability of requiring a password to open a particular project. The password function will be utilized for this study. The project will be backed up on a cloud drive, Ms. Everett's home computer, and Ms. Everett's personal laptop; all of which are password protected. The raw data files, all field notes, and questionnaire results will be kept in a locked cabinet located in Ms. Everett's home, which is also locked. The data imported into the qualitative software package will be stored on Ms. Everett's computer for 3 years after the studies completion and then destroyed.

Voluntary Nature of the Study: Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University or with the North Carolina City Schools. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

How to Withdraw from the Study: You may withdraw from participation in this study at any time by emailing Ms. Everett at ceverett@liberty.edu. Any written or audio recorded data will be deleted immediately upon your withdrawal. Your responses to any questions or observations will not be included in the study.

Contacts and Questions: The researcher conducting this study is Ms. Callie Everett. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at ceverett@liberty.edu. You may also contact Ms. Everett's faculty chair, Dr. Gail Collins at glcollins2@liberty.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than Ms. Everett, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at irb@liberty.edu.

Please notify Ms. Everett if you would like a copy of this information for your records.

Statement of Consent: I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

Ms. Everett has my permission to audio-record/video-record/photograph me as part of my participation in this study.

Signature of Participant

Date

Signature of Investigator

Date

Appendix E: Consent Form for Parents

The Experiences of Sixth Through Twelfth Grade Students Who Are Identified with Autism Spectrum Disorders and Academically and Intellectually Gifted: A Multiple-Case Study

By Callie Everett
Liberty University
School of Education

You are invited to be in a research study that will be conducted on this campus during the Spring 2019 Semester. You were selected as a possible participant because you have experience with students who are twice-exceptional. Please read this form and ask any questions you may have before agreeing to be in the study.

Callie Everett a Doctoral student in the area High Education Administration at Liberty University, is conducting this study.

Background Information: The purpose of this case-study is to analyze the experiences of secondary students with an ASD who are classified as AIG in a region of North Carolina. The research will focus on the phenomenon of twice-exceptionality, which for the purpose of this study is defined as having been classified with ASD and gifted in a core subject. The central research question guiding this study is: How do students in grades six to twelve who have ASD and AIG view their educational experiences?

Procedures: If you agree to be in this study, I would ask you to do the following things:

1. Participate in an individual interview that will be audio recorded and take no longer than 1 hour.
2. Allow me to observe your child in his/her classroom for no longer than 45 minutes and take field notes.
3. Participate in a Focus Group interview with other parents that will take no longer than 1 hour.
4. Review all interview transcripts in which you took part in for accuracy. This process should take no longer than 15 minutes.

Risks: The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

Benefits: Participants should not expect to receive a direct benefit from taking part in this study. However, you may benefit from taking part in a collaborative conversation with other parents regarding the education of students who are twice-exceptional.

Compensation: Participants will not be compensated for participating in this study.

Confidentiality: The records of this study will be kept private. Research records will be stored securely, and only Ms. Everett will have access to the records. All data will be imported into a

qualitative software package. The software has the capability of requiring a password to open a particular project. The password function will be utilized for this study. The project will be backed up on a cloud drive, Ms. Everett's home computer, and Ms. Everett's personal laptop; all of which are password protected. The raw data files, all field notes, and questionnaire results will be kept in a locked cabinet located in Ms. Everett's home, which is also locked. The raw data will be destroyed upon the completion of the research study. The data imported into the qualitative software package will be stored on Ms. Everett's computer for 3 years after the studies completion and then destroyed.

Voluntary Nature of the Study: Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University or with the school. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

How to Withdraw from the Study: You may withdraw from participation in this study at any time by emailing Ms. Everett at ceverett@liberty.edu. Any written or audio recorded data will be deleted immediately upon your withdrawal. Your responses to any questions or observations will not be included in the study.

Contacts and Questions: The researcher conducting this study is Ms. Callie Everett. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at ceverett@liberty.edu. You may also contact Ms. Everett's faculty chair, Dr. Gail Collins at glcollins2@liberty.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than Ms. Everett, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at irb@liberty.edu.

Please notify Ms. Everett if you would like a copy of this information for your records.

Statement of Consent: I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

Ms. Everett has my permission to audio-record/video-record/photograph me as part of my participation in this study.

Signature of Participant

Date

Signature of Investigator

Date

Appendix F: Assent of Child to Participate in a Research Study

Liberty University
School of Education and Educational Leadership

What is the name of the study and who is doing the study?

The Experiences of Sixth Through Twelfth Grade Students Who Are Identified with Autism Spectrum Disorders and Academically and Intellectually Gifted: A Case-study
By Callie Everett

Why are we doing this study?

We are interested in studying the experiences of secondary students with an ASD who are classified as AIG in a region of North Carolina.

Why are we asking you to be in this study?

You are being asked to be in this research study because you have been identified as a twice-exceptional student.

If you agree, what will happen?

1. In an individual interview that will be audio recorded and take no longer than 1 hour.
2. Allow me to observe you in your classroom for no longer than 45 minutes and take field notes.
3. Participate in a Focus Group interview with other students who you have a lot in common with that will take no longer than 1 hour.
4. Review all interview transcripts in which you took part in for accuracy. This process should take no longer than 15 minutes.

Do you have to be in this study?

No, you do not have to be in this study. If you want to be in this study, then tell Ms. Everett. If you don't want to, it's OK to say no. Ms. Everett will not be angry. You can say yes now and change your mind later. It's up to you.

Do you have any questions?

You can ask questions any time. You can ask now. You can ask later. You can talk to Ms. Everett. If you do not understand something, please ask Ms. Everett to explain it to you again.

Signing your name below means that you want to be in the study.

Signature of Child

Date

Liberty University Institutional Review Board,
1971 University Blvd, Green Hall 1887, Lynchburg, VA 24515
or email at irb@liberty.edu.

Appendix G: Interview Questions for Students

1. Please introduce yourself.
2. Please talk to me about how you feel when you are at school and the things that may happen to you each day.
3. Which educational experiences would you say are most significant to your experiences?
4. What made them significant?
5. How do you think other people view you in the school?
6. What is your view of other people in the school?
7. What does your teacher do or say that makes you feel smart?
8. What does your teacher do or say that makes you feel like you may have difficulty learning?
9. How do you believe your parents view the school?
10. How does your parents' view of school compare to yours?
11. What experiences do you think have played a role in your feelings about the school either being good or bad?
12. Tell me about the struggles you've experienced in school or any particular class.
13. What questions do you ask in class when you don't understand something?
14. If you were a teacher how would you treat a student like yourself?
15. We've covered a lot of ground in our conversation, and I so appreciate the time you've given to this. Is there anything else you would like to add?

Appendix H: Interview Questions for Parents

1. Please introduce yourself.
2. Talk to me about your feelings about your child's experiences at the school and how they are being educated.
3. As you think about your experiences with the school, which of your child's experiences seem to be the most significant for him or her?
4. What made them significant?
5. How do you think other people view you in the school?
6. What is your view of other people in the school?
7. What does the teacher do or say that makes your child feel smart?
8. What does your child's teacher do or say that makes your child feel like they may have difficulty learning?
9. What do you believe is your child's view of the school?
10. How does your child's view of school compare to yours?
11. What experiences do you think have played a role in your view of the school either being a positive or negative experience for your child?
12. Tell me about the struggles you've experienced in school advocating for your child.
13. What questions do you ask school officials when you don't understand something?
14. If you were a teacher how would you treat a child like yours?
15. We've covered a lot of ground in our conversation, and I so appreciate the time you've given to this. One final question. . . What else do you think would be important for me to know about the development of your view of society at school?

Appendix I: Interview Questions for Teachers

1. Please introduce yourself.
2. What are your experiences working with twice-exceptional students in your career to this point?
3. Which experiences would you say are most significant?
4. What made them significant?
5. How do you think other people a school view twice-exceptional students in the school?
6. How do you view of twice-exceptional students?
7. What do you say to twice-exceptional students that might make them feel smart or encouraged?
8. What are some things that you may have said that might make a twice-exceptional student feel inadequate?
9. How does the students' view of school compare to yours?
10. What formative experiences do you think have played a role in your school experience with twice-exceptional students?
11. Tell me about the struggles you've experienced with twice-exceptional students.
12. What questions do twice-exceptional students ask in class when they don't understand something?
13. If you were a parent of a twice-exceptional student how would you like your child to be treated?
14. We've covered a lot of ground in our conversation, and I so appreciate the time you've given to this. One final question. . . What else do you think would be important for me to know about the development of your view of society at school?

Appendix J: Focus Group Questions for Students

1. Describe your everyday routine when you get to school.
2. What is the best part of the day at school and why?
3. What is the most challenging part of your day at school and why?
4. What makes you feel good about learning in your classroom?
5. Describe a situation in which you felt bullied in school.
6. Who is your favorite teacher and why?
7. Why do you believe that you make the grades that you do in school?
8. If you could change anything about your school or classes what would it be?

Appendix K: Focus Group Questions for Parents

1. Describe your child's everyday routine when they get to school as you understand it.
2. What do you think is the best part of the day at school for your child and why?
3. What is the most challenging part of your child's day at school and why?
4. What do you believe makes your child feel good about learning in their classroom?
5. Describe a situation in which your child was bullied in school.
6. Who is your child's favorite teacher and why do you believe they are your child's favorite?
7. Why do you believe that your child makes the grades that they do in school?
8. If you could change anything about your child's school or classes what would it be?

Appendix L: Focus Group Questions for Teachers

1. Describe your student's everyday routine when they get to school as you understand it.
2. What do you think is the best part of the day at school for your student and why?
3. What is the most challenging part of your student's day at school and why?
4. What do you believe makes your student feel good about learning in your classroom?
5. Describe a situation in which your student was bullied in school.
6. Who is your student's favorite teacher and why do you believe they are your student's favorite?
7. Why do you believe that your student makes the grades that they do in school?
8. If you could change anything about your school or class what would it be?

Appendix M: Observation Protocol

Student Observation Form

Student: _____ Grade: _____ Date: _____
 Teacher: _____ Time Observed: _____
 Subject: _____

Describe _____

Student's Level of Activity

- Hyperactive
 Appropriate
 Lethargic/Tired
 Other _____

Attention

- Listens to instructions
 Understands directions
 Able to stay on task
 Easily distracted
 Able to work independently
 Understands concept presented
 Staring blankly/daydreaming
 Fiddles with objects
 Doodling
 Distracts other children

Effort/Motivation

- Tries hard
 Gives up easily
 Careless in work
 Eager to please
 Hesitant to begin working
 Apathetic/Indifferent
 Works at reasonable pace
 Works slowly

Relationship with peers

- Works/plays alone
 Participates in group activities

Relationship with teacher

- Cooperative
 Withdrawn
 Seeks attention
 Needs individual attention
 Refuses to follow instructions

Behavioral concerns

Inappropriate vocalizations
Describe _____

Repetitive motor movements
Describe _____

Aggression
Describe _____

Self-injurious behaviors
Describe _____

Avoids peer interaction
Describe _____

Temperament

- Happy
 Depressed/withdrawn
 Angry/hostile
 Anxious
 Confused
 Easily upset

Transitions/Movement

Moves around room appropriately

Interacts well with others
 Hitting, poking, distracting peers
 Initiates social interaction
 Waits for others to initiate

Starts new tasks
 Prepares materials for beginning/end of lesson
 Unable to transition appropriately
Describe _____

Classroom Noise Level: much some little none

Movement in Classroom: much some little none

Detailed sequence of events that occurred during the observation:

