A SURVEY OF NEW JERSEY SCHOOL PSYCHOLOGISTS’ KNOWLEDGE OF TWICE EXCEPTIONAL STUDENTS

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Abstract

Twice exceptional (2e) students are those who are “gifted” and have a disability as defined by the 13 disability categories under IDEIA. To date, there is no concrete, universal operational definition for giftedness and thus none for 2e. There is currently a lack of empirical articles discussing the role of school psychologists and 2e. School psychologists have many skills that can assist 2e students in the school setting and may play a valuable role in assessment, counseling, consultation, and evaluating programs. An electronic survey was emailed to all individuals on the New Jersey Association for School Psychologists (NJASP) listserv in order to receive a representative sample of the state. The entire database of 1,910 email addresses were invited to participate in the study. 98 surveys were initiated; 59 were completed to its entirety. Response rate was unable to be calculated as there was not enough information provided about the listserv to determine who met the criteria to participate. In this study, a survey was conducted targeting school psychologists employed in New Jersey public schools to assess their knowledge and experience in working with 2e students. Participants assessed a variety of areas relevant to the field including knowledge on giftedness and 2e, training, attitudes and beliefs. School psychologists also evaluated whether their school provided the necessary services to support 2e students sufficiently. They also ranked the importance of different stakeholders in identifying and meeting the needs of 2e learners as well as who would benefit from more education and training. Survey questions had varying numbers of useable responses requiring individual item analysis. Responses to open-ended questions were reviewed by the PI and a colleague using a qualitative method to determine common themes. The various categorical findings indicated that participants were familiar with the concept of twice exceptionality, however, most have not received training regarding working with this population and believed they needed more training.
in order to work effectively with them. A professional development resource for school psychologists in the form of an information packet was provided. The study’s practical implications, limitations, and future directions for research were discussed.
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INTRODUCTION

Over the past 40 years or so, a sample from the population of school students who have been characterized by significantly above average scores on measures of scholastic aptitude as well as by their difficulty with acquiring the basic skills of reading, math, and/or writing has been studied by researchers and practitioners (Reis, Baum, Burke, 2014; Foley Nicpon et al., 2013). Within the fields of special and gifted education, students who are labeled as “gifted” and also diagnosed with a disability are sometimes referred to as twice exceptional or 2e (Foley Nicpon, Allmon, Sieck, & Stinson, 2011).

While the label “twice exceptional” caught on with some professionals, according to Vaughn (1989), “no two populations (gifted and learning disabilities) have suffered more from definitional problems” (as cited in Brody & Mills, 1997). Although 2e lacks a theoretical and construct validity basis, it is helpful for educators to have as a concept and a label. Reis, Baum & Burke (2015) suggested the need for a comprehensive, inclusive, operational definition of 2e that is broad enough to represent the diverse group of students encompassing the 2e population, but definitive enough to allow for more identification of 2e students and appropriate services to address their complex needs. If there is a label of 2e, educators and school psychologists are more likely to be aware of this population’s existence and needs. If not, 2e students are at risk for social/emotional difficulties and underachievement in school and consequently in life (Reis, Baum & Burke, 2015).

There are an estimated 180,000 (Davis & Rimm, 2003) to 360,000 (National Association for Gifted Children, 2011) 2e students across schools in the United States. However, since there are no federal agencies or groups collecting statistics on 2e students, much of this information is
out of date. As a result, there is a lack of updated, accurate empirical prevalence data. It is difficult to know exactly how many of these students exist largely due to misdiagnosis and misidentification (Pfeiffer, 2013) and fluid meanings of giftedness (McCallum et al., 2013).

Due to American special education identification processes that focus on below grade-level achievement as well as the inherent challenges in accurately evaluating a student’s learning strengths and weaknesses, many 2e students are unidentified (NAGC, 2013). Critics within the field suggest that the notion of the masking effect consists of theoretical and practical issues (Wilson et al., 2014). Gordon, Lewandowski & Keiser question whether or not students who are performing at an “average” level should qualify for services as learning disabled (1999). Although “high functioning/ learning disabled” students may demonstrate discrepancies between their performance and their potential, they do not exhibit performance deficits when compared to their same age peers (Wilson et al., 2014). Thus, some educators in the field of learning disabilities display concerns that identifying “average” or “nearly average” achieving students as learning disabled will decrease the resources available to serve more severely disabled students and will discriminate against “average” students with “flatter” aptitude/achievement profiles, weakening special education and related services support for the “truly” learning disabled (Gordon et al., 1999).

Sternberg and Grigorenko (2014) argued that all individuals present with strengths and weaknesses as well as abilities and disabilities, however, only some individuals are labeled as being gifted or learning disabled as a result of an interaction between the individual and the dominant culture. Simply put, society labels some individuals and not others based on what society values as important skills for school and employment. Thus, only a student who has societally recognized gifts and who also has recognized deficits will receive the label of 2e
SCHOOL PSYCHOLOGISTS’ KNOWLEDGE OF TWICE EXCEPTIONAL STUDENTS (Sternberg & Grigorenko, 2014). Since 2e students represent a heterogenous group, it is difficult to make gross generalizations regarding this unique population (Reis et al., 2000) simply based on societal expectations. Brody & Mills discussed that one characteristic of 2e is that it is heterogenous and may appear drastically different from one individual to the next (1997).

Throughout this dissertation, both of the terms “giftedness” and “twice exceptional” are referred to as it is important to understand the conceptualization of giftedness in order to best serve twice exceptional students. For the purposes of this dissertation, giftedness is defined as, “asynchronous development in which advanced cognitive abilities and heightened intensities combine to create inner experiences and awareness that are qualitatively different from the norm. This asynchrony increases with higher intellectual capacity. The uniqueness of the gifted renders them vulnerable and requires modifications in parenting, teaching, and counseling in order for them to develop optimally” (Columbus Group). Furthermore, the definition used for 2e incorporates the current federal definitions of giftedness (based on the Marland Report of 1972) as well as the view of disability offered in the Rehabilitation Act of 1973 (i.e., physical, mental/emotional, cognitive, and sensory disabilities). The definition is as follows: 2e students are those who possess the competence of high achievement in one or multiple areas and also possess an identifiable disability as defined by the Individuals with Disabilities Education Act (IDEA).

Assouline & Whiteman (2011) expressed the desire for a greater understanding of twice exceptionality by a growing number of general K-12 educators and practitioners who previously worked exclusively in the field of special education including school psychologists. In order to properly educate the twice exceptional, school personnel may benefit from receiving training in recognizing the characteristics of these unique learners because the current lack of knowledge
about 2e is a great barrier to nurturing these students’ talents (Morrison & Rizza, 2007). For example, failing to recognize the potential of students with disabilities may prevent them from attaining advanced learning opportunities (Nielsen, 2002). However, many school psychologists are not satisfied with their level of knowledge about giftedness and/or twice exceptionality (Assouline & Foley Nicpon, 2007; Robertson et al., 2011).

**Rationale for the Study**

Due to the lack of empirical articles solely discussing the role of school psychologists in the topic of twice exceptionality, there is a lack of reliable evidence of school psychologists’ current practices, involvement, and knowledge on the matter. A minimal number of previous studies have focused on the role of school psychologists in serving gifted students and marginally explored their knowledge and/or training regarding working with 2e students. Particularly, studies have found that school psychologists’ knowledge on the existence of the twice exceptional population is lacking as most school psychologists reported not having received any training in gifted education or in 2e specifically (Brown, 1982; Robertson et al., 2011; Pires, 2013). However, there has not been any publications within approximately the past ten years exploring the topic further. Thus, this study surveyed a sample of New Jersey public school psychologists to determine their knowledge and awareness of twice exceptional students in order to explore the need for additional education and training on the topic in collaboration with New Jersey Association for School Psychologists (NJASP).
A Brief History of Twice Exceptionality

Prior to the birth of the concept of twice exceptionality, several pieces of literature laid the foundation for both gifted students and students with disabilities. In the 1920s, Leta Hollingworth published *Special Talents and Defects: Their Significance for Education* which coined the term “gifted” and established that there are some highly gifted students who displayed learning difficulties (Hollingworth, 1923). Reis, Baum, and Burke (2014) wrote that the idea of dual diagnosis was first exhibited in the 1940s when Hans Asperger published *Autistic Psychopathy in Childhood* and defined a new disorder which would later be termed “Asperger’s Syndrome.” Asperger speculated that characteristics such as restricted interests, difficulty with social interactions, remarkable logical abstract thinking, repetitive and stereotyped behavior, bizarre speech content, and unawareness of environmental demands were more likely to appear in children of high intelligence and superior abilities (Asperger, 1944; Baldwin, et al., 2015).

Although the term twice exceptional was not established until much after Asperger’s discoveries, the concept reemerged in the 1960s through studies on gifted adults and their childhood experiences, providing evidence that a dual diagnosis of gifted with learning disabilities could exist (Firmender et al., 2013). In 1966, Gallagher discussed the “peaks and valleys” that illustrate patterns of strengths and weaknesses for children with learning disabilities, suggesting gifted with learning disabilities in his writing, *Children with Developmental Imbalances: A Psychoeducational Definition* (Gallagher, 1966). In 1977, Maker coined the term “gifted handicapped” and began to research this population, truly establishing
the belief that students with “gifts and talents” could also have learning disabilities (Maker, 1977; Baldwin, et al., 2015).

Following the passing of the Gifted and Talented Children’s Education Act in 1978, Meisgeier, et al. published *Factors Compounding the Handicapping of Some Gifted Children* which highlighted that students with learning disabilities and superior abilities needed remediation, enrichment, and special counseling to address unique emotional difficulties. Specifically, the severity of their emotional issues developed from the discrepancy between their strengths and weaknesses (Meisgeier, et al., 1978). Beginning in the 1980s, literature was published which explored the combination of gifts with areas of disabilities highlighting the unique characteristics and needs of individuals who have both (Whitmore, 1980; Whitmore and Maker, 1985; Fox, Brody, and Tobin, 1983; Daniels, 1983; Dixon, 1983; Gallagher 1986; Baum, 1991; Coleman, 1994). In 1997, Brody and Mills published a nuanced literature review on 2e students and provided a summary of best practices and challenges in identification and programming (Brody and Mills, 1997). Specifically, the authors concluded that:

“Students with LD who are gifted have needs that differ considerably from those of gifted students without disabilities, students without exceptional abilities who have learning disabilities, and average students whose abilities are more even. Individualized instruction is optimal for all students so that pace, level, and general classroom bears on the issue of meeting the needs of gifted students with learning disabilities. To truly individualize instruction, a broad range of options is needed (e.g., a variety of levels of content and pace, opportunities for remediation and accommodation, etc.) Ultimately, providing a selection of settings (e.g., general classroom, gifted class, LD resource room, special class for gifted students with learning disabilities) and a multitude of service options (e.g., accelerated course work, enrichment, individualized instruction, homogeneous grouping) seems to be a better way to meet the needs of academically talented students with learning disabilities.” (Brody and Mills, 1997)

In 1972, the concept of 2e was introduced through the topic of giftedness in the federal government’s Marland Report (Foley-Nicpon et al., 2013). In 1975, PL-94-142 the Education
for All Handicapped Children Act was passed which mandated a free, appropriate public education (FAPE) for all children with disabilities, ensured due process rights, mandated Individualized Education Programs (IEPs), introduced the concept of the Least Restrictive Environment (LRE) and defined “learning disabled” (U.S. Department of Education). In 2004, The Individuals with Disabilities Educational Improvement Act (IDEIA) was reauthorized and acknowledged that students with learning disabilities can also be gifted. Prior to this, there were no existing laws that addressed two or more exceptionalities (Leggett et al., 2010). The authors noted that federal legislation has failed to provide a definition of 2e as well as an outline for identification and services (Leggett et al., 2010). They attributed this as a “loop-hole” allowing states and school districts to navigate the field of 2e without regulations and guidance on public education policies (Assouline et al., 2010; Foley-Nicpon et al., 2013; Reis et al., 2014; Baldwin, et al., 2015). From 2000 to 2015, several states published policy guides to identify and serve twice exceptional students (i.e., Colorado, Idaho, Maryland, Montana, Ohio, and Virginia). However, New Jersey has yet to provide published materials on the matter.

Throughout the years, authors have criticized the field for not providing empirical evidence that 2e individuals exist, specifically that there is no research foundation for the concept as well as a precise, unified definition (Cohen & Vaughn, 1994; McCoach, Kehle, Bray, & Siegle, 2001; Vaughn, 1989). Lovett & Lewandowski (2006) has claimed that literature in the field is not always in agreement in terms of identification issues and best practices. In response, Foley-Nicpon, Allmo, Sieck, and Stinson (2011) published a comprehensive review outlining empirical studies on identification, characteristics, and program strategies regarding three distinct 2e populations (gifted students with Learning Disabilities [LD], Attention Deficit Hyperactivity Disorder [ADHD], and Autism Spectrum Disorder [ASD]). Although they concluded that there
is no question “that gifted students can have a coexisting disability,” they emphasized the need for better research and clarity regarding the issues in twice exceptionality as well as a universally agreed upon definition (Baldwin, Baum, Pereles, Hughes, 2015; Baldwin, et al., 2015).

**Characteristics of Twice Exceptionality**

While research on this population has increased, a lack of consensus of the characteristics and needs of these students still exists for some educators (Newman & Sternberg, 2014). Although the concept of twice exceptionality may seem contradictory, individuals can be identified with two or more exceptionalities concurrently (Dole, 2001). The presentation of both giftedness and disability in an individual presents as a “rare human experience” in which the individual experiences a range of personal, social, and educational challenges as they do not fit the traditional definitions of either exceptionality (Szymanski & Corn, 1989). 2e students present as a paradox with characteristics of both giftedness and disability as well as a variety of their own unique characteristics (Silverman, 2018) which has made them a population that is not well served by existing nosologies and models of special education (Eide & Eide, 2006; McCoach et al., 2004; Newman, 2004). For example, teachers may often be confused by a 2e student’s conflicting abilities and parents are typically unable to get services for their child since the 2e student does not fit any clear diagnostic or qualification criteria (Eide & Eide, 2006; McCoach et al., 2004; Newman, 2004).

The characteristics described in the literature are based on 2e students who have already been identified and labeled. Renzulli and Reis (1991) stated that making generalizations and generating typical characteristics of 2e students is not informative and may be harmful if these lists of characteristics result in the acceptable and recognized traits rather than an understanding
of the multiple ways that gifts may develop. However, while making these generalizations and noting common characteristics may provide educators and others relevant to the 2e individual’s world some insight into such a complex phenomenon, it should be highlighted that between-group generalizations should not disguise the fruitfulness of the individual variation within groups (Reis & Rubin, 2014). Though, Mills and Brody (1999) noted three characteristics as indicators of a 2e student: evidence of an outstanding talent or ability, evidence of a discrepancy between expected and actual achievement, and evidence of a processing deficit. Furthermore, for 2e students, the characteristics of giftedness prevail, but also cloud the picture because it is those characteristics that also lead to the conclusion that they do not require additional services due to their giftedness.

According to Assouline et al. (2010), twice exceptional students tend to experience heightened sensitivity and often present as fragile, intense, self-effacing, and may be perceived as underachievers as assessed by psychosocial rating scales as part of a comprehensive psychological evaluation. Additionally, Baldwin, Omdal and Pereles (2015) and Trail (2012) noted that 2e students typically struggle with executive functioning skills and may need strategies to retain information; have strong observation skills but present with memory deficits; need frequent support with deficits but highly independent in other areas; are interested in many topics but learning barriers impede further exploration; possess superior language with deficits in written language; may appear to be argumentative; are highly creative, divergent, and resourceful; have a good sense of humor but are easily defensive; are big-picture minded but tend to ignore details; are curious but easily frustrated; tend to become off-task easily in school related activities; and have difficulty maintaining relationships. Cohen & Vaughn (1994) noted that 2e students commonly find reading, written expression, spelling, rote memorization and
organization skills to be areas of difficulty. Assouline et al. (2010) explained that gifted students with learning disabilities, for instance, are generally highly articulate and can clarify complex concepts on a variety of subjects, but they have trouble writing or completing assignments.

Consequently, 2e students may fail to complete assignments and become frustrated with classroom demands (Robinson, 1999) leading to unpredictable classroom performance (Assouline et al., 2010) classroom disruption (Ferri, Gregg & Heggy, 1997) and ultimately poor self-efficacy due to their experiences with failure and frustration in the classroom (Dole, 2001).

**Defining Giftedness**

The concept of giftedness has been the subject of academic writings, professional discussions, educational discourse, and political actions in the last century and consensus has yet to be reached on how to define the term (Newman & Sternberg, 2004). The National Association for Gifted Children (NAGC) estimated that approximately three million students (K-12th grade) in the United States are considered “academically gifted.” The term gifted was coined early in the 20th century by Terman in his study of genius (McCoach et al., 2001). In 1978, Joseph Renzulli defined giftedness as “above-average ability, creativity, and task commitment.” The NAGC defined giftedness as those who show, or are capable of, an exceptional level of performance in one or more areas of expression (The Twice Exceptional Dilemma, NEA, 2006). Specifically, NAGC delineated giftedness as the top 10% of the population in one or more domains (2010).

Historically, approximately all of the research on gifted individuals has focused on intellectual facets especially in an academic realm (Webb, 1993). Although the term *gifted* has
been a popular part of many educator’s vocabularies, the true definition remains unclear. This is mainly due to the diversity among gifted students, as giftedness can manifest in a variety of ways, specifically with the domains of giftedness and levels of their abilities as well as problems with the identification process (Pfeiffer, 2001). However, various authors, organizations and legislature have provided different ideas of their conceptualizations of giftedness. The fact that the term “gifted” has continued to be used is recognition that educators somehow believe in the idea of “gift” as opposed to a descriptive term that is impersonal, data based, and non-judgmental. Federal definition as well as current literature have supported the conceptualization that gifted learners may consist of various outstanding abilities that include intellect, creativity, artistic ability, leadership, and academic excellence (Reis & Renzulli, 2004). In addition, there has been general consensus that giftedness cannot be defined solely by an intelligence quotient (IQ) score on a standardized test as those scores do not take practical intelligence and creativity into account (Landsman, 1985). The lack of absolutes for the definition of “gifted” has left the definition open to multiple interpretations, leading to educational and psychological implications as a result of the misinterpretation of the term.

The U.S. federal government has defined gifted students as those “who give evidence of high achievement capability in areas such as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who need services or activities not ordinarily provided by the school in order to fully develop those capabilities” (NCLB, 2004). A federal law titled The Jacob Javits Gifted and Talented Students Education Act was created in order to support the development of giftedness in schools throughout the United States. This law allowed each individual state to define the concept of giftedness in their own way. According to New Jersey, a state where gifted programming is mandated, gifted children “possess or demonstrate high levels
of ability, in one or more content areas, when compared to their chronological peers in the local
district and who require modification of their educational program if they are to achieve in
accordance with their capabilities (New Jersey Department of Education). However, since there
has been a lack of a universal definition of giftedness, it is the specific school district’s implicit
or explicit definition that determines eligibility for specialized services (Davis & Rimm, 1994).
Thus, different districts within New Jersey may conceptualize giftedness differently; a student
who is considered gifted in one school may not in another.

**Defining Twice Exceptionality**

Within the category of “gifted” students are a unique subgroup of students who are
known as “twice exceptional.” Twice exceptional (2e) students refer to those who are gifted and
have some form of disability. More specifically, 2e students tend to demonstrate superior ability
in a certain academic area and also possess disabilities in other areas (Coleman et al., 2005). In
other words, 2e individuals tend to demonstrate strengths in one domain and weaknesses in
another and exhibit discrepancies between performance and potential (Brody & Mills, 1997).
Yewchuk and Lupart (1988) offered the following definition of a 2e individual: "when he or she
is identified as gifted/talented in one or more areas while also possessing a learning, emotional,
physical, sensory and/or developmental disability" (as cited in Assouline et al., 2006).

Although 2e can refer to any disability or comorbid disabilities, the term is typically used
to refer to students with learning disabilities or any other disability interfering with the student’s
ability to learn effectively in a traditional school environment (National Education Association,
2006). Although much of the literature on twice exceptionality addresses students who are gifted
and have learning disabilities, the term can be applied to other disabilities. However, individuals
are identified for educational services by meeting criteria for special education when they are students, thus the focus of research in this area has typically been conducted with gifted individuals with learning difficulties (i.e., LD, ADHD, ASD, dyslexia, or emotional and behavioral concerns) (Reis & Colbert, 2004; Leroux & Levitt-Perlman, 2000; Neihart, 2000; Hishinuma, 1993; Rizza & Morrison, 2002). Specific learning disabilities (SLDs), ADHD, and high functioning ASD (formally known as Asperger’s disorder), have been most prevalent among 2e students enrolled in public school settings (Assouline & Whiteman, 2011). Due to the heavy emphasis on educational implications, there has not been much attention given to other areas of disability that are gifted, and thus, there is currently no formal definition of twice exceptionality that encompasses all possible areas of giftedness and disabilities (Wood, Estrada-Hernandez, 2009).

The concept of 2e has continued to stir criticism and resistance from educators regarding the efforts to appropriately meet students’ needs in the classroom as well as a lack of an operational definition (Cohen & Vaughn, 1994; Lovett & Lewandowski, 2006). Reis, Baum & Burke (2015) suggested the need for a comprehensive, inclusive, operational definition of 2e that is broad enough to represent the diverse group of students that encompass the 2e population, but definitive enough to allow for more identification of 2e students and appropriate services to address their complex needs. According to Vaughn (1989), “no two populations (gifted and learning disabilities) have suffered more from definitional problems” (as cited in Brody & Mills, 1997).

Social-Emotional Considerations

Literature in the field of giftedness as well as in the field of disability have stated that both gifted and 2e children are at a higher risk for socio-emotional issues (i.e., poor self-concept,
frustration, anxiety) (Baldwin, 1999). Therefore, students who possess both exceptionalities are in a position of further vulnerability for these difficulties (Newman, 2014).

Missed or misdiagnosis may be associated with adverse academic results (Bees, 2009), social isolation and low self-esteem (Assouline & Whiteman, 2011), as well as depression, anxiety, or withdrawal (Bees, 2009). Some researchers have indicated that students may be underachieving (Foley-Nicpon & Assouline, 2015; Reis & McCoach, 2002) and have low self-awareness and self-concept (Assouline & Whiteman, 2011; Foley-Nicpon et al., 2011; Reis et al., 1997).

In their research, Moon, Zentall, Grskovie, Hall, and Stormont (2001) found higher levels of emotional issues in the ADHD/High IQ group compared with the ADHD only and high IQ only groups. Although any child with a disability can develop these problems, gifted children seem to be more prone due to their increased sensitivity, confusion caused by their ability to perform many tasks in a simple manner while struggling with other tasks, as well as the assignment of negative labels during their schooling (i.e., “lazy”) (Levine, 2002). Specifically, they have shown to be at a greater risk of experiencing a wide range of emotional and behavioral concerns including low self-esteem, feelings of failure, low self-efficacy, worthlessness, depression, anxiety, poor motivation, aggression, hyperactivity, and discipline problems (Levine, 2002; Nicpon et al., 2010) especially due to the fact that they are often faced with negative school experiences (Nicpon et al., 2010).

Over the course of three years, a longitudinal study examined students’ perceptions about how identification and labels affected self-esteem and self-concept (Foley-Nicpon, Rickels, Assouline, and Richards, 2012). The researchers gathered data from surveys of 112 school-aged children to determine the differences among groups of students identified with a
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dual diagnosis of ADHD/giftedness and those only identified as gifted (Foley-Nicpon et al., 2012). Despite having similar IQs, 2e students had lower overall self-esteem and self-concept scores than gifted students without a 2e diagnosis, which led to the recommendation that professionals working with 2e students should be aware of possible psychosocial issues for the 2e child and, if necessary, to address problems in the appropriate educational and clinical settings (Foley-Nicpon et al., 2012).

Furthermore, this population often struggles with peer relations (Webb, Meckstroth and Tolan, 1982; Winner, 2000), especially due to the asynchronous development exhibited by many of these students in which their development is uneven across various academic, social, and developmental areas resulting in a scatter of abilities which is often significant (Silverman, 1993).

**Issues with Identification**

According to Brody and Mills (1997), 2e students “could be considered the most misunderstood of all exceptionalities.” 2e students are at-risk due to the under-identification of their educational and social/emotional needs in both special and gifted education programs. Due to the combination of high cognitive functioning and learning problems, 2e students are reported to be some of the most underserved students (Baum & Owen, 2004). Although there has been an accumulation of research and knowledge on the existence of twice exceptional students, identification has remained an issue. This is believed to be due to communication of school policy intent, concern over number of students, availability of resources, and building bridges for special populations (Rizza & Morrison, 2007).
A significant number of 2e students with learning problems are misdiagnosed or go unnoticed due to their gifts masking, disguising, or complicating identification of their disability (Pfeiffer, 2009). The literature described three groups of twice exceptional students (King, 2005). The first group of students have been identified as gifted but have an unnoticed disability due to their high verbal ability and at-grade level or below performance in written language (King, 2005). These students have often displayed difficulties in school and are frequently considered underachievers, and their underachievement may be attributed to poor self-concept, lack of motivation, or laziness. Their disabilities typically have remained unrecognized for most of their schooling. As school became more challenging, their academic difficulties increased to the point where fell sufficiently behind peers until someone finally suspected a disability (Baum, 1994; Baum, Owen & Dixon, 1991; Fox, Brody, Tobin, 1983; Landrum, 1989).

The second 2e grouping typically has included students whose disabilities were identified due to predominant disability referral and mandated services, but whose gifted abilities were never recognized or addressed (King, 2005). According to Baum (1985), 33% of students identified with learning disabilities had superior intellectual ability. Insufficient assessments (i.e., cognitive) often lead to an underestimation of these students’ intellectual abilities. If their potential remains unrecognized, it never becomes a reason for concern or the emphasis of their instructional program. Due to this underestimation or inflexible identification protocols in gifted programming, they are rarely referred for gifted services (Baum, 1994; Baum, Owen & Dixon, 1991; Fox, Brody, Tobin, 1983; Landrum, 1989; Starnes, Ginevan, Strokes & Barton, 1988).

The third and largest 2e subgroup has consisted of students whose abilities and disabilities mask each other; their high intelligence hides or overcompensates for learning difficulties (King, 2005). Typically, these students are in general education settings and are ineligible for services
provided for students who are gifted or having learning disabilities due to their seeming “average” abilities. Since these students typically function at grade level and are not seen as having “problems,” they are not a priority for schools with constricted resources. Although these students may appear to be functioning “normally” or “average,” they are performing below their potential. As their level of schooling progresses and becomes more challenging, these students are left without the assistance needed to accommodate their limitations. Thus, their academic difficulties increase to the point where a learning disability may be suspected, however, their true potential still tends to go unrecognized (Baum, 1994; Baum, Owen & Dixon, 1991; Fox, Brody, Tobin, 1983; Landrum, 1989; Starnes, Ginevan, Strokes & Barton, 1988).

Owing to the masking effect, 2e students’ abilities and/or disabilities may not be recognized which can be confusing and frustrating for students (Foley-Nicpon & Kim, 2018). Identification is also problematic due to a common misunderstanding by professionals which may lead to diagnosis (Webb, et al. 2005). For example, disorganization is not only a symptom of ADHD and SLD, but of giftedness as well (Riza & Morrison, 2007). Thus, the need for knowledge on the gifted/2e population is crucial among professionals in order to ensure proper diagnosis and identification.

For all of the 2e subcategories previously mentioned, early identification is key, however, appropriate diagnosis and programming either never takes place or are delayed until adolescence (Whitmore, 1979). The interaction of a 2e student’s strengths and weaknesses results in inconsistent academic performance. Specifically, 2e students may present as bright but not trying hard enough, learning disabled with no exceptional abilities, or simply average (Baum, 2004). Unfortunately, missed or misdiagnosis can be associated with adverse outcomes in academia, social isolation, low self-esteem, depression, anxiety, or withdrawal (Assouline & Whiteman,
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2011). In addition, these students are at risk for severe underachievement, as well as for being misunderstood (Silverman, 2018).
Chapter III

METHODS

Participants

Participants of this study consisted of a sample of school psychologists who were listed in an e-mail database owned by the New Jersey Association for School Psychologists (NJASP). Currently, there are 367 members of NJASP and a database of 1,910 which includes paying members and non-paying exhibitors who subscribe to the listserv. Invitations to participate in this study were sent to 1910 e-mail addresses. Over the course of two months, 98 respondents agreed to participate in the study; however, not all of the surveys were completed. Of the 98 participants, 59 completed 100% of the survey. Each item on the survey was analyzed individually since each item had a different number of useable responses.

The first section of the survey included characteristics of the sample. Participants were asked to report their highest degree obtained (Table 1). Participants indicated the attainment of the following highest degrees: Educational Specialist (41.56%), Doctorate (35.06%), and Masters (23.38%).

Table 1

<table>
<thead>
<tr>
<th>Highest Degree Obtained</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctorate</td>
<td>27</td>
<td>35.06</td>
</tr>
<tr>
<td>Educational Specialist</td>
<td>32</td>
<td>41.56</td>
</tr>
<tr>
<td>Masters</td>
<td>18</td>
<td>23.38</td>
</tr>
</tbody>
</table>
For the second survey item, years of experience in the field, the distribution is displayed in Table 2. Participants reported a minimum of less than a year to over twenty years of experience as a school psychologist, with 20+ years as the most commonly reported response.

Table 2

<table>
<thead>
<tr>
<th>Number of Years Practicing</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-3 years</td>
<td>15</td>
<td>19.48</td>
</tr>
<tr>
<td>4-6 years</td>
<td>13</td>
<td>16.88</td>
</tr>
<tr>
<td>7-10 years</td>
<td>7</td>
<td>9.09</td>
</tr>
<tr>
<td>11-15 years</td>
<td>16</td>
<td>20.78</td>
</tr>
<tr>
<td>16-20 years</td>
<td>7</td>
<td>9.09</td>
</tr>
<tr>
<td>20+ years</td>
<td>19</td>
<td>24.68</td>
</tr>
</tbody>
</table>

Participants were asked to select from one of three possible types of districts depending on their district’s location: suburban, urban, or rural. The majority of the responses were from suburban districts (64.94%) following with urban (24.68%) and rural (10.39%). The number of each district type in the sample is displayed in Table 3.

Table 3

<table>
<thead>
<tr>
<th>District Type</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suburban</td>
<td>50</td>
<td>64.94</td>
</tr>
<tr>
<td>Urban</td>
<td>19</td>
<td>24.68</td>
</tr>
<tr>
<td>Rural</td>
<td>8</td>
<td>10.39</td>
</tr>
</tbody>
</table>

Participants were asked if the district in which they were employed had a gifted program. Of the 77 responses, 44.16% of participants indicated that their school did have a gifted program.
while 38.96% did not and 16.88% were unsure (Table 4). Furthermore, participants who responded “yes” were subsequently asked about the age range for their district’s gifted program. Of these responses, 29 reported the ages that their programs covered. Of the 29 reports, 69% of them (n = 20) had programs that covered only primary school grades. The remaining nine covered all available grades the school provided. Furthermore, participants were then asked to report approximately how many students in their school’s gifted program had a documented disability (Table 5). The majority of respondents reported that they were unsure of this information.

Table 4

<table>
<thead>
<tr>
<th>School Has Gifted Program</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>34</td>
<td>44.16</td>
</tr>
<tr>
<td>No</td>
<td>30</td>
<td>38.96</td>
</tr>
<tr>
<td>Don't know</td>
<td>13</td>
<td>16.88</td>
</tr>
</tbody>
</table>

Table 5

<table>
<thead>
<tr>
<th>Number of Gifted Students with Disability</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>7</td>
<td>18.91</td>
</tr>
<tr>
<td>1 - 5</td>
<td>13</td>
<td>35.14</td>
</tr>
<tr>
<td>&gt;5</td>
<td>2</td>
<td>5.41</td>
</tr>
<tr>
<td>Unknown or N/A</td>
<td>15</td>
<td>40.54</td>
</tr>
</tbody>
</table>

Participants were then asked if a student could be classified with a disability and be eligible for higher level courses in their school. Approximately 98% of participants reported that
their schools did not ban students with disabilities from being eligible for higher-level courses (Table 6).

Table 6

<table>
<thead>
<tr>
<th>Eligible for Higher Level Courses</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>64</td>
<td>98.46</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>1.54</td>
</tr>
</tbody>
</table>

At this time, there is no comparative New Jersey database for any of the information described above.

**Procedures**

In order to conduct this study, a web-based survey was developed by the principal investigator. A recruitment email was first disseminated to participants through the NJASP listserv on April 25th, 2021 (Appendix B). The email included a brief description of the purpose of the survey, a unique URL link to the survey, and contact information for the principal investigator and dissertation chair. If the individual chose to participate in the study, he/she/they proceeded by clicking on the specific link to complete the survey.

The consent form was included on the first window screen of the online survey (Appendix A). This form provided detailed information about the purpose and procedures of the study. Contact information about principal investigator, the dissertation chair/faculty advisor, and the Rutgers University Institutional Review Board (IRB) for the Protection of Human Subjects was also provided on this form. Participants could print the consent form for their records if they desired. Participants then agreed to participate in the study by checking off the consent boxes.
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The participants then clicked on the arrow to begin taking the survey.

A reward for participating in the survey was offered in the form of five $10 Amazon gift cards who were randomly selected. Participants who wanted to enter the raffle drawing needed to complete the survey in order to input their email address to be entered, if desired, on the last window screen of the survey. Each card was distributed electronically to the winners.

The survey for this study was created on the Rutgers account of Qualtrics by the principal investigator. Participants had the option of leaving questions blank or were permitted to stop completing the survey at any point. Additionally, participants were able to use the “back button” and “save and continue” features, allowing them to return to a question or finish the survey at a later time. Participants were also able to monitor their progress as a tool bar appeared on the screen tracking the percentages of completion. Any information that was partially completed by participants was included in the results. Participants were given two months to complete the survey if desired. The participant’s responses were sent to the investigator through Qualtrics. IP addresses were disregarded, and the identity of the participants remained anonymous.

Reminder emails were sent out to the NJASP listserv for those who did not complete the survey on May 2\textsuperscript{nd}, 2021, May 10\textsuperscript{th}, 2021, May 16\textsuperscript{th}, 2021, May 23\textsuperscript{rd}, 2021, and June 2\textsuperscript{nd}, 2021. However, due to a low response rate, the dissertation committee member, who is also the School-Based Practicum Coordinator for the Rutgers Graduate School of Applied and Professional Psychology sent out the survey to current practicum supervisors working in New Jersey public schools in order to receive more responses. The survey then closed two months after the opening date on June 25\textsuperscript{th}, 2021.
Measure

The survey was created by the principal investigator and the dissertation committee for this study as there was no proprietary survey created for this population on this topic. The items were selected to assess knowledge of the topic, with the possibility of generating a program that would inform participants about the 2e topic and population. The principal investigator developed the survey with the knowledge from past clinical experiences both working on a Child Study Team (CST) and with the 2e population as well as from completing extensive research in conducting the literature review. The survey included 20 closed and open-ended questions (Appendix C). Some questions included several components. The content of the survey was based on school psychologists’ experience with twice exceptional students as well as on their knowledge, training, attitudes, and beliefs. The survey was comprised of multiple choice, numerical, true or false, and open-ended questions as well as questions requiring respondents to express how much they agreed or disagreed with a particular statement on a five-point scale. The survey was not designed to be a test and thus the scoring system was item by item and not a total score on the items.

Participants were first asked to provide background information including their highest degree attained and the number of years of experience as a school psychologist. Then they were asked a series of questions specific to gifted programming at their respective school districts. As part of the survey’s second category, participants were asked their familiarity with the concept of twice exceptionality as well as open-ended questions expanding on their understanding and conceptualization of giftedness.

Regarding training, the participants were asked if they have previously received training in order to work with both gifted and twice exceptional students and if they believe that they
need further training, and if so, in what areas. In the last section of the survey, items were related to the participant’s attitudes and beliefs regarding twice exceptional students. Specifically, the participants were asked their opinions regarding their beliefs about twice exceptional students receiving special education services and their reasoning. They were then asked to rank the importance of different stakeholders in identifying and meeting the needs of twice exceptional students as well as who would benefit from more education and training on the topic. They were then asked to rate on a scale from 1(poor) to 5 (excellent) how they felt the needs of twice exceptional students were being met in their district and their opinions on which placement they believed is optimal for this population. Lastly, the participants were asked a series of true or false questions assessing their beliefs and knowledge on this population.

Data Analysis

Questions were analyzed item by item. The number of responses were recorded for each survey item excluding any empty or unreported responses. The frequency of responses for each response was the prime target for analysis. Averages and standard deviations were considered for ranked, closed-ended responses. Closed-ended responses were analyzed using Python Software (Perez & Granger, 2007) to perform descriptive statistical analysis such as response frequencies or averages.

Open-ended responses were reviewed individually by the principal investigator and a colleague, the second coder, by searching for either a word or set of words to be categorized using the open coding and axial coding segments of grounded theory (Strauss & Corbin 1990). Coding included several phases. The principal investigator read the de-identified responses several times. The second step included the reduction of data and the development of patterns.
The third step included re-grouping of the data and the development of categories. The categories differed across questions (Appendix D). Responses for each question were coded with numbers for the categories and letters for subcategories, if relevant. For example, when participants were asked to define “giftedness,” all of the responses either used the word “IQ” or “ability” which determined the two different categorizations for the data. For the small percentage of responses that did not properly fit into the two main categories, an “other” category was developed.

To reduce bias, assumptions of categories were restricted to specific key phrases to avoid ambiguity. To minimize the researcher’s judgment, consultation with a colleague assisted with confirmability of the coding and analyses, in order to help ensure accuracy and to ensure that all responses were included. The second coder repeated the same process as the principal investigator. The principal investigator and second coder then came together to identify which codes were similar, different, and how to come to agreement when there were differences in responses. For example, when there was a differentiation in thought process, both parties explained their reasoning. After clarification, they came to agreement on which made the most sense and fit the best. The principal investigator and second code participated in this same routine to come up with a consensus of categories and which codes fit into what categories.

The coding categories and percentages of the responses are presented in tables integrated throughout the results section of this paper. They are also reviewed further in the discussion section of this study.
Chapter IV

RESULTS

Knowledge and Training

The second section of the survey assessed participants’ knowledge on giftedness and twice exceptionality. Approximately 73% of the school psychologists surveyed were familiar with the concept of 2e (Table 7). Participants who were familiar with 2e were asked how they defined the term. Forty-eight out of the 50 respondents defined the term as being gifted while being classified with a disability, matching the definition assumed in this paper. Participants were then asked how they learned about 2e. About half of those reportedly have learned about 2e from an academic environment such as graduate school. The remaining 28 reported learning about 2e from various sources, such as personal research, professional work or literature. Participants who were familiar with 2e were asked which author influenced their understanding of the term. Of the responses, only five had specific authors who influenced the understanding. One spoke of Kaufman, Grandin, and Trail; one mentioned Seligman and Csikszentmihalyi; two mentioned Howard Gardner; and one mentioned Torgersen. The remaining 24 responses claimed there were no specific authors, or it was not applicable to them, therefore there were not enough samples to make any conclusions about influential authors.

Participants were asked how they conceptualized the term “giftedness” in order to better understand the concept of 2e. Of the responses (n=57), 31 stated that it is a quantitative description, based on the results of an intelligence quotient (IQ) test. Twenty-one of those reported that it is a qualitative description, defining it as a strong “ability or skill” in a particular field. The distribution of how “gifted” was defined can be found in Table 8.
Despite many of the surveyed school psychologists having been familiar with twice exceptionality, only 12 (~18%) of those reported having any training regarding working with 2e students. Moreover, of those 12, 5 (38% of those with training), reportedly received their training in an academic environment, such as graduate school, while the remaining learned about it in field experience or professional development classes. The number of participants who have received training is displayed in Table 9.

The majority of respondents reported that they required further training to effectively work with 2e students (Table 10). When those participants were then asked to specify what areas they needed more training in, 10 of the responses requested further training in supporting 2e students, while 6 stated that they needed help in simply identifying 2e students. Additionally, 11 responses claimed that they need further training in the specific needs of 2e students and 4 stated
that they needed to further understand appropriate programming recommendations for 2e students. The remaining 16 responses reported that they needed general training in the concept.

Table 9

*Number of surveyors who have received specific training on handling 2e students*

<table>
<thead>
<tr>
<th>Has Had Training on 2e Students</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>54</td>
<td>81.82</td>
</tr>
<tr>
<td>Yes</td>
<td>12</td>
<td>18.18</td>
</tr>
</tbody>
</table>

Table 10

*Number of surveyors who believe they would require further training to effectively work with 2e students*

<table>
<thead>
<tr>
<th>Believes Further Training on 2e Students is Required</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>54</td>
<td>81.82</td>
</tr>
<tr>
<td>No</td>
<td>12</td>
<td>18.18</td>
</tr>
</tbody>
</table>

Despite believing further training was required to work effectively with 2e students, when participants were asked how qualified they felt to service students who are gifted and have a disability for question 13, the majority reported that they were somewhat qualified (Table 11).
Table 11

*Frequency of responses of how qualified surveyors believed they were at working with 2e students*

<table>
<thead>
<tr>
<th>Personal Qualification</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Somewhat qualified</td>
<td>25</td>
<td>37.88</td>
</tr>
<tr>
<td>Fairly qualified</td>
<td>22</td>
<td>33.33</td>
</tr>
<tr>
<td>Not well qualified</td>
<td>6</td>
<td>9.09</td>
</tr>
<tr>
<td>Somewhat unqualified</td>
<td>6</td>
<td>9.09</td>
</tr>
<tr>
<td>Very well qualified</td>
<td>5</td>
<td>7.58</td>
</tr>
<tr>
<td>Not at all qualified</td>
<td>2</td>
<td>3.03</td>
</tr>
</tbody>
</table>

**Attitudes & Beliefs**

For the last section of the survey, participants’ attitudes and beliefs regarding the topic were assessed. Surveyors were asked if they believed that gifted children with learning differences should receive special-education services. Most respondents believed this should be the case, as displayed in Table 12. Of the 56 responses that reported “yes,” 38 (68%) reported that this was to ensure that the maximum potential of each student is achieved. Namely, simply having an advantage in one area does not necessarily exclude them from requiring assistance in other areas.

Table 12

*Frequency of responses on whether gifted students with learning differences should receive special-education services*

<table>
<thead>
<tr>
<th>Should Receive Special Education Services</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>56</td>
<td>94.92</td>
</tr>
<tr>
<td>No</td>
<td>3</td>
<td>5.08</td>
</tr>
</tbody>
</table>
The next phase of the survey (questions 15-18) involved asking the surveyors to rank the importance of various positions in identifying 2e students with 1 being the most important and 6 being the least important, starting with the role of a regular-education classroom teacher. The average ranking of importance for the regular-education classroom teacher was 3.02 ± 1.56. The 95% confidence interval of the average was [2.61, 3.42]. This distribution is displayed in Table 13.

Table 13

<table>
<thead>
<tr>
<th>Ranking of Importance (6=least, 1=most)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>13</td>
<td>22.81</td>
</tr>
<tr>
<td>4</td>
<td>15</td>
<td>26.32</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>8.77</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>14.04</td>
</tr>
<tr>
<td>1</td>
<td>16</td>
<td>28.07</td>
</tr>
</tbody>
</table>

The importance of a gifted-education specialist in identifying 2e students was ranked by the surveyors. The average ranking was 3.11 ± 1.40. The 95% confidence interval of the average was [2.74, 3.47]. This distribution is displayed in Table 14.
Table 14

*Ranking of importance of gifted-education specialists identifying 2e students*

<table>
<thead>
<tr>
<th>Ranking of Importance (6=least, 1=most)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4</td>
<td>7.02</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>7.02</td>
</tr>
<tr>
<td>4</td>
<td>14</td>
<td>24.56</td>
</tr>
<tr>
<td>3</td>
<td>16</td>
<td>28.07</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>17.54</td>
</tr>
<tr>
<td>1</td>
<td>9</td>
<td>15.79</td>
</tr>
</tbody>
</table>

The importance of a learning-disabilities teacher consultant (LDTC) in identifying 2e students was ranked by the surveyors. The average ranking was 3.19 ± 1.43. The 95% confidence interval of the average was [2.82, 3.56]. This distribution is displayed in Table 15.

Table 15

*Ranking of importance of LDTC identifying 2e students*

<table>
<thead>
<tr>
<th>Ranking of Importance (6=least, 1=most)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>5</td>
<td>8.77</td>
</tr>
<tr>
<td>5</td>
<td>7</td>
<td>12.28</td>
</tr>
<tr>
<td>4</td>
<td>8</td>
<td>14.04</td>
</tr>
<tr>
<td>3</td>
<td>17</td>
<td>29.82</td>
</tr>
<tr>
<td>2</td>
<td>14</td>
<td>24.56</td>
</tr>
<tr>
<td>1</td>
<td>6</td>
<td>10.53</td>
</tr>
</tbody>
</table>

The importance of a school counselor in identifying 2e students was ranked by the surveyors. The average ranking was 5.11 ± 1.13. The 95% confidence interval of the average was [4.81, 5.40]. This distribution is displayed in Table 16.
Table 16

*Ranking of importance of school counselors identifying 2e students*

<table>
<thead>
<tr>
<th>Ranking of Importance (6=least, 1=most)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>29</td>
<td>50.88</td>
</tr>
<tr>
<td>5</td>
<td>14</td>
<td>24.56</td>
</tr>
<tr>
<td>4</td>
<td>7</td>
<td>12.28</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>8.77</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>3.51</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

The importance of a school psychologist in identifying 2e students was ranked by the surveyors. The average ranking was 2.33 ± 1.34. The 95% confidence interval of the average was [1.98, 2.68]. This distribution is displayed in Table 17.

Table 17

*Ranking of importance of school psychologists identifying 2e students*

<table>
<thead>
<tr>
<th>Ranking of Importance (6=least, 1=most)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>1</td>
<td>1.75</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>7.02</td>
</tr>
<tr>
<td>4</td>
<td>7</td>
<td>12.28</td>
</tr>
<tr>
<td>3</td>
<td>9</td>
<td>15.79</td>
</tr>
<tr>
<td>2</td>
<td>16</td>
<td>28.07</td>
</tr>
<tr>
<td>1</td>
<td>20</td>
<td>35.09</td>
</tr>
</tbody>
</table>

The importance of parents identifying their child as a 2e student was ranked by the surveyors. The average ranking was 4.25 ± 1.73. The 95% confidence interval of the average was [3.80, 4.69]. This distribution is displayed in Table 18.
Table 18

**Ranking of importance of parents identifying their child as a 2e student**

<table>
<thead>
<tr>
<th>Ranking of Importance (6=least, 1=most)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>18</td>
<td>31.58</td>
</tr>
<tr>
<td>5</td>
<td>15</td>
<td>26.32</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
<td>10.53</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>8.77</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
<td>12.28</td>
</tr>
<tr>
<td>1</td>
<td>6</td>
<td>10.53</td>
</tr>
</tbody>
</table>

For the next rankings, the surveyors were asked to rank the importance of various positions in meeting the educational needs of 2e students, starting again with regular-education classroom teachers. The average ranking was 2.20 ± 1.33. The 95% confidence interval of the average was [1.85, 2.54]. This distribution is displayed in Table 19.

Table 19

**Ranking of importance of regular-education classroom teachers meeting the educational needs of 2e students**

<table>
<thead>
<tr>
<th>Ranking of Importance (6=least, 1=most)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>1</td>
<td>1.79</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>7.14</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>8.93</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>12.50</td>
</tr>
<tr>
<td>2</td>
<td>17</td>
<td>30.36</td>
</tr>
<tr>
<td>1</td>
<td>22</td>
<td>39.29</td>
</tr>
</tbody>
</table>
The importance of a gifted-education specialist in meeting the educational needs of 2e students was ranked by surveyors. The average ranking was $1.96 \pm 1.12$. The 95% confidence interval of the average was $[1.67, 2.26]$. This distribution is displayed in Table 20.

Table 20

*Ranking of importance of gifted-education specialists meeting the educational needs of 2e students*

<table>
<thead>
<tr>
<th>Ranking of Importance (6=least, 1=most)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>1</td>
<td>1.79</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
<td>5.36</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>10.71</td>
</tr>
<tr>
<td>2</td>
<td>25</td>
<td>44.64</td>
</tr>
<tr>
<td>1</td>
<td>21</td>
<td>37.50</td>
</tr>
</tbody>
</table>

The importance of a learning-disabilities teacher consultant in meeting the educational needs of 2e students was ranked by surveyors. The average ranking was $3.50 \pm 1.36$. The 95% confidence interval of the average was $[3.14, 3.86]$. This distribution is displayed in Table 21.

Table 21

*Ranking of importance of LDTC meeting the educational needs of 2e students*

<table>
<thead>
<tr>
<th>Ranking of Importance (6=least, 1=most)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>7</td>
<td>12.50</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>8.93</td>
</tr>
<tr>
<td>4</td>
<td>13</td>
<td>23.21</td>
</tr>
<tr>
<td>3</td>
<td>19</td>
<td>33.93</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>14.29</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
<td>7.14</td>
</tr>
</tbody>
</table>
The importance of a school counselor in meeting the educational needs of 2e students was ranked by surveyors. The average ranking was 4.96 ± 1.03. The 95% confidence interval of the average was [4.69, 5.24]. This distribution is displayed in Table 22.

Table 22

<table>
<thead>
<tr>
<th>Ranking of Importance (6=least, 1=most)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>19</td>
<td>33.93</td>
</tr>
<tr>
<td>5</td>
<td>22</td>
<td>39.29</td>
</tr>
<tr>
<td>4</td>
<td>12</td>
<td>21.43</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>1.79</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>1.79</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1.79</td>
</tr>
</tbody>
</table>

The importance of a school psychologist in meeting the educational needs of 2e students was ranked by surveyors. The average ranking was 3.73 ± 1.26. The 95% confidence interval of the average was [3.40, 4.06]. This distribution is displayed in Table 23.

Table 23

<table>
<thead>
<tr>
<th>Ranking of Importance (6=least, 1=most)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4</td>
<td>7.14</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>17.86</td>
</tr>
<tr>
<td>4</td>
<td>21</td>
<td>37.50</td>
</tr>
<tr>
<td>3</td>
<td>14</td>
<td>25.00</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>3.57</td>
</tr>
<tr>
<td>1</td>
<td>5</td>
<td>8.93</td>
</tr>
</tbody>
</table>
The importance of a parent meeting the educational needs of their 2e child was ranked by surveyors. The average ranking was 4.64 ± 1.54. The 95% confidence interval of the average was [4.24, 5.05]. This distribution is displayed in Table 24.

Table 24

<table>
<thead>
<tr>
<th>Ranking of Importance (6=least, 1=most)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>24</td>
<td>42.86</td>
</tr>
<tr>
<td>5</td>
<td>12</td>
<td>21.43</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>8.93</td>
</tr>
<tr>
<td>3</td>
<td>9</td>
<td>16.07</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>5.36</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
<td>5.36</td>
</tr>
</tbody>
</table>

The final ranking of importance asked of surveyors was a ranking of importance for various positions to receive more information about 2e students, starting with regular-education classroom teachers. The average ranking was 1.84 ± 1.18. The 95% confidence interval of the average was [1.53, 2.14]. This distribution is displayed in Table 25.
Table 25

*Ranking of importance of regular-education classroom teachers receiving more information about 2e students*

<table>
<thead>
<tr>
<th>Ranking of Importance (6=least, 1=most)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>1</td>
<td>1.79</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>3.57</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>3.57</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>12.50</td>
</tr>
<tr>
<td>2</td>
<td>14</td>
<td>25.00</td>
</tr>
<tr>
<td>1</td>
<td>30</td>
<td>53.57</td>
</tr>
</tbody>
</table>

The importance of a gifted-education specialist receiving more information about 2e students was ranked by surveyors. The average ranking was 3.66 ± 1.83. The 95% confidence interval of the average was [3.18, 4.14]. This distribution is displayed in Table 26.

Table 26

*Ranking of importance of gifted-education specialists receiving more information about 2e students*

<table>
<thead>
<tr>
<th>Ranking of Importance (6=least, 1=most)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>16</td>
<td>28.57</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>8.93</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>8.93</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
<td>21.43</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>17.86</td>
</tr>
<tr>
<td>1</td>
<td>8</td>
<td>14.29</td>
</tr>
</tbody>
</table>
The importance of a learning-disabilities teacher consultant receiving more information about 2e students was ranked by surveyors. The average ranking was 3.73 ± 1.16. The 95% confidence interval of the average was [3.43, 4.04]. This distribution is displayed in Table 27.

Table 27

*Ranking of importance of LDTC receiving more information about 2e students*

<table>
<thead>
<tr>
<th>Ranking of Importance (6=least, 1=most)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>3</td>
<td>5.36</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>17.86</td>
</tr>
<tr>
<td>4</td>
<td>23</td>
<td>41.07</td>
</tr>
<tr>
<td>3</td>
<td>11</td>
<td>19.64</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
<td>12.50</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3.57</td>
</tr>
</tbody>
</table>

The importance of a school counselor receiving more information about 2e students was ranked by surveyors. The average ranking was 4.07 ± 1.44. The 95% confidence interval of the average was [3.69, 4.45]. This distribution is displayed in Table 28.
Table 28

**Ranking of importance of school counselors receiving more information about 2e students**

<table>
<thead>
<tr>
<th>Ranking of Importance (6=least, 1=most)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>11</td>
<td>19.64</td>
</tr>
<tr>
<td>5</td>
<td>14</td>
<td>25.00</td>
</tr>
<tr>
<td>4</td>
<td>11</td>
<td>19.64</td>
</tr>
<tr>
<td>3</td>
<td>9</td>
<td>16.07</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>17.86</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1.79</td>
</tr>
</tbody>
</table>

The importance of a school psychologist receiving more information about 2e students was ranked by surveyors. The average ranking was 3.84 ± 1.60. The 95% confidence interval of the average was [3.42, 4.26]. This distribution is displayed in Table 29.

Table 29

**Ranking of importance of school psychologists receiving more information about 2e students**

<table>
<thead>
<tr>
<th>Ranking of Importance (6=least, 1=most)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>11</td>
<td>19.64</td>
</tr>
<tr>
<td>5</td>
<td>11</td>
<td>19.64</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
<td>17.86</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
<td>21.43</td>
</tr>
<tr>
<td>2</td>
<td>6</td>
<td>10.71</td>
</tr>
<tr>
<td>1</td>
<td>6</td>
<td>10.71</td>
</tr>
</tbody>
</table>
The importance of a parent receiving more information about 2e students was ranked by surveyors. The average ranking was $3.86 \pm 1.85$. The 95% confidence interval of the average was $[3.73, 4.34]$. This distribution is displayed in Table 30.

Table 30

*Ranking of importance of parents receiving more information about 2e students*

<table>
<thead>
<tr>
<th>Ranking of Importance (6=least, 1=most)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>14</td>
<td>25.00</td>
</tr>
<tr>
<td>5</td>
<td>14</td>
<td>25.00</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>8.93</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>8.93</td>
</tr>
<tr>
<td>2</td>
<td>9</td>
<td>16.07</td>
</tr>
<tr>
<td>1</td>
<td>9</td>
<td>16.07</td>
</tr>
</tbody>
</table>

For question number 18, surveyors were asked to rank how well the needs of twice exceptional students were being met in their schools on a scale of 0 (not being met at all) to 5 (being perfectly met). The average ranking was $2.25 \pm 1.44$. The 95% confidence interval of the average was $[1.86, 2.64]$. This distribution is displayed in Table 31. Of the 47 responses, 49% (n=23) proposed that the best way to meet the needs of 2e students is to provide a hybrid approach, or by combining general and higher education with in-class or pull-out special education services to support the disability. Similarly, 32% (n=15) of the responses claimed that having the needs met depends heavily on the student(s) involved.
Table 31

Surveyor’s rating of how well the needs of 2e students are met in their schools

<table>
<thead>
<tr>
<th>Rating (5=most, 0=least)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>3</td>
<td>5.77</td>
</tr>
<tr>
<td>4</td>
<td>7</td>
<td>13.46</td>
</tr>
<tr>
<td>3</td>
<td>14</td>
<td>26.92</td>
</tr>
<tr>
<td>2</td>
<td>13</td>
<td>25.00</td>
</tr>
<tr>
<td>1</td>
<td>6</td>
<td>11.54</td>
</tr>
<tr>
<td>0</td>
<td>9</td>
<td>17.31</td>
</tr>
</tbody>
</table>

The final phase of the survey consisted of true-or-false questions to better understand participants’ beliefs about, attitudes towards, and knowledge of giftedness. Participants were asked whether being gifted makes up for having a learning difference. Approximately 98% of surveyors did not believe this was the case (Table 32).

Table 32

Survey responses for if being gifted makes up for having a learning difference

<table>
<thead>
<tr>
<th>Response</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>False</td>
<td>59</td>
<td>98.33</td>
</tr>
<tr>
<td>True</td>
<td>1</td>
<td>1.67</td>
</tr>
</tbody>
</table>

Surveyors were asked if they believed gifted students who struggle are not trying hard enough. All of the responses believed this was false (Table 33).
Table 33

Survey responses for if gifted students who struggle are not trying hard enough

<table>
<thead>
<tr>
<th>Response</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>False</td>
<td>60</td>
<td>100.00</td>
</tr>
<tr>
<td>True</td>
<td>0</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Surveyors were asked if they believed gifted students with a disability are eligible for IEPs or 504 plans. Approximately 98% of respondents stated that this was true (Table 34).

Table 34

Survey responses for if gifted students with a disability should be eligible for IEPs or 504 plans

<table>
<thead>
<tr>
<th>Response</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>True</td>
<td>59</td>
<td>98.33</td>
</tr>
<tr>
<td>False</td>
<td>1</td>
<td>1.67</td>
</tr>
</tbody>
</table>

Surveyors were asked if they believed giftedness and challenges could not be addressed at the same time. The majority surveyors (95%) claimed this was false (Table 35).

Table 35

Survey responses for if giftedness and challenges cannot be addressed simultaneously

<table>
<thead>
<tr>
<th>Response</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>False</td>
<td>57</td>
<td>95.00</td>
</tr>
<tr>
<td>True</td>
<td>3</td>
<td>5.00</td>
</tr>
</tbody>
</table>

Surveyors were asked if they believed a student cannot receive special-education services in advanced academic programs. About 97% of the surveyors claimed this was false (Table 36).
Table 36

_Survey responses for if a student cannot receive special-education services in advanced academic programs and courses_

<table>
<thead>
<tr>
<th>Response</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>False</td>
<td>58</td>
<td>96.67</td>
</tr>
<tr>
<td>True</td>
<td>2</td>
<td>3.33</td>
</tr>
</tbody>
</table>

Surveyors were asked if they believed a gifted student with a disability should be more mature than other students their age. All of the responses believed this was false (Table 37).

Table 37

_Survey responses for if a 2e student should be more mature than other students their age_

<table>
<thead>
<tr>
<th>Response</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>False</td>
<td>60</td>
<td>100.00</td>
</tr>
<tr>
<td>True</td>
<td>0</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Surveyors were asked if they believed IDEA funds should not be spent on 2e learners. About 92% of the responses believed this was false (Table 38).

Table 38

_Survey responses for if IDEA funds cannot be spent on 2e learners_

<table>
<thead>
<tr>
<th>Response</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>False</td>
<td>55</td>
<td>91.67</td>
</tr>
<tr>
<td>True</td>
<td>5</td>
<td>8.33</td>
</tr>
</tbody>
</table>

Surveyors were asked if they believed a student with good grades should not be eligible
for special-education services. Approximately 83% of respondents reported that this was false (Table 39).

Table 39

Survey responses for if a student with good grades should not be eligible for special-education services

<table>
<thead>
<tr>
<th>Response</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>False</td>
<td>50</td>
<td>83.33</td>
</tr>
<tr>
<td>True</td>
<td>10</td>
<td>16.67</td>
</tr>
</tbody>
</table>

Surveyors were asked if they believed a student cannot be both gifted and have a learning disability. About 98% of the responses believed this was false (Table 40).

Table 40

Survey responses for if a student cannot be both gifted and have a learning disability simultaneously

<table>
<thead>
<tr>
<th>Response</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>False</td>
<td>59</td>
<td>98.33</td>
</tr>
<tr>
<td>True</td>
<td>1</td>
<td>1.67</td>
</tr>
</tbody>
</table>

Surveyors were asked if they believed it would be unfair to reduce work or provide extra support to 2e students since they are gifted. About 98% of the responses reported this was false (Table 41).
Surveyors were asked if they believed a student’s area of weakness must be remediated before having access to advanced-learning opportunities. About 88% of the responses believed this was false (Table 42).

Surveyors were asked if they believed that 2e students develop cognitively and emotionally at the same level and pace. About 97% of the responses believed this to be false (Table 43).
Surveyors were asked if they believed gifted students are self-motivated and have high achievements come easily to them. About 92% of the responses believed this was false (Table 44).

Table 44

Survey responses for if a gifted students are self-motivated and if high achievements come easily to them

<table>
<thead>
<tr>
<th>Response</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>False</td>
<td>55</td>
<td>91.67</td>
</tr>
<tr>
<td>True</td>
<td>5</td>
<td>8.33</td>
</tr>
</tbody>
</table>

This concludes the results section of this paper. The next chapter discusses the results more in depth as well as the study’s limitations, implications, and future directions.
Chapter V

DISCUSSION

The current survey-based research focused on school psychologists’ knowledge and awareness of twice exceptional students. Since the role of school psychologists in gifted education is currently unclear as well as their knowledge on the existence of the twice exceptional population, a sample of school psychologists in New Jersey public schools was surveyed (98 surveys were initiated; 59 were completed to its entirety) in order to assess a range of topics relevant to the field of school psychology and 2e students.

Characteristics of the Sample

The sample consisted of predominately Educational Specialist and Doctoral level school psychologists which corresponds with a previous study surveying New Jersey school psychologists (Dworkin, 2014). Years of experience as a school psychologist ranged from less than 1 to 20+ years, with 20+ years as the most common response ($n = 19$). Participants were primarily employed in suburban school districts ($n = 50$). Survey results revealed a relatively equal distribution of school psychologists employed in a district with a gifted program versus without one. All but one school psychologist reported that a student can be classified with a disability and be eligible for higher level courses in their district. This implies that simply containing a separate gifted program does not affect how the school handles students classified with a learning disability.
Knowledge and Training

The majority of participants reported that they were familiar with the concept of 2e. This result is different from the data reported by Robertson et al. (2011) which conducted a national survey of school psychologists who worked with gifted students. To date, there has not been a survey conducted solely on school psychologists’ work serving 2e students on either a national or state level. It is possible that there has been more awareness of the 2e population over the last 10 years as the field continues to grow.

The concept of giftedness, and thus 2e, has been the subject of much debate (Newman & Sternberg, 2004) in the last century and consensus has yet to be reached on how to define the term. Ninety-six percent of participants who reported they were familiar with 2e conceptualized 2e children as those who are “gifted and also have a disability.” Many stated that 2e was defined as having a “high IQ” with an “educational disability.” Responses revealed that numerous school psychologists have learned about 2e through a graduate school course. Moreover, the majority of participants were unable to recall any authors who have influenced their understanding of 2e. Five respondents named the following authors: Gardner (1993), Torgersen (2006), Kaufman (2018), Grandin (2013), Trail (2010), Seligman & Csikszentmihalyi (2000).

Many school psychologists tended to conceptualize giftedness as “a superior IQ” or an “IQ 130+” while others believed it to be a strong “ability” or “skill” in a particular area. Ironically, many students who are 2e may present with depressed IQ scores due to drastic discrepancies among indices due to their significant strengths and weaknesses (National Association for Gifted Children, 2018). Thus, although they may score 130+ in a certain area of cognitive functioning, simply depending on a Full Scale IQ score of 130+ to define a student as “gifted” could lead to the 2e student likely remaining unidentified.
Although this study’s results showed the samples’ familiarity with the concept of 2e, results revealed the ongoing need for training. The majority of participants denied ever receiving training regarding working with 2e students. For the others, it was mostly reported that they acquired knowledge about the topic from graduate school coursework. Others also mentioned learning about 2e at work, personal learning, and professional development. These results indicate a need for school psychologists to receive more exposure to some of these resources throughout their training and career. Approximately 82% of participants reported that they require further training to effectively work with 2e students. Specifically, the majority of respondents indicated that they would benefit from general training on the topic. Previous studies (Park et al., 2018 & Ruberstein, et al. 2015) have acknowledged parents’ ongoing advocacy needs as a result of educators’ lack of comprehension on 2e or due to primarily focusing on the 2e child’s impairments. Therefore, it is suggested that education on serving 2e students becomes more accessible in professional development training.

Additionally, the same number of participants who have not received training on 2e also believed that they required further training in order to effectively support these learners. Specifically, many participants noted needing further training in identifying 2e students and supporting both the academic and social/emotional needs of this unique population. Furthermore, participants mostly reported that they felt “somewhat” and “fairly” qualified to service 2e students emphasizing the need to continue to provide ongoing education and training to school psychologists on the topic. In addition, participants ranked regular education teachers as the most important group of school staff in need of training in order to be able to identify and meet the educational needs of this unique group of students in the classroom.
Attitudes & Beliefs

New Jersey School psychologists are a part of a Child Study Team (CST) and are responsible for evaluating students to determine their eligibility for special education and related services. Since this is often a large role of the school psychologist position in New Jersey, it would make sense that participants ranked the position of the school psychologist as the most important position in the school setting responsible for identifying 2e students’ needs. Furthermore, most participants believed that gifted students with learning differences, or 2e students, students should be eligible for and receive special education services:

“Because any student with a learning difference should be given equal access to appropriate education - just because they are gifted doesn't mean they still won't be impacted by their disability in other ways in school.”

“In order to provide those students with equal access to the curriculum.”

“Yes, because students will not be able to fully develop their giftedness if they do not receive the supports that will help them to not be hindered by their areas of disability.”

“Special education services are designed to remove impediments that prevent a student from learning or performing to their abilities.”

“Gifted children with learning differences should receive special education services if their learning difference adversely impacts their educational performance in one or more academic areas. Being gifted and having an educational disability are not mutually exclusive.”

“I’ve seen advanced children with poor academic achievement due to boredom, lack of attentional skills, or poor social skills. Accommodations should be made to make an even playing field for exceptional learners.”

“Yes, because we currently use a wait-to-fail model in special education. A gifted child may never fail due to their ability to compensate in the area of their disability; however, they may be able to perform at a much greater level if provided with proper supports.”

Although most participants believed it is the school psychologist’s role to identify 2e students, the gifted-education specialist ranked highest in the responsibility of meeting 2e students’ educational needs. This would imply that 2e students should be receiving gifted
education services. However, the New Jersey Department of Education does not set requirements regarding identification of gifted students or programming and also does not dedicate funds for gifted programs. Thus, there is no guarantee that every child can receive access to a gifted education specialist as gifted programing is regulated by local districts. When participants were asked to rank how well the needs of 2e students were being met in their schools, with 0 being “not being met at all” and 5 “being perfectly met,” the average ranking was 2.25, indicating that there is a lot of room for improvement in supporting 2e students in schools, although many of their responses and beliefs aligned with best practices (Brody and Mills, 1997) in educating 2e students. Some participants proposed the following ways to best meet these students’ needs:

“Appropriate levels of modification for the area of disability and appropriate level of challenge for the area of giftedness.”

In-class resource with a special ed teacher to modify (both up and down, depending on the subject and needs) and a gen ed teacher/class to continue with the curriculum.”

“Honors and AP classes in the general education setting with supports.”

Beginning with regular education with modifications and then possibly a separate program for twice-exceptional.”

“Regular education not full time sped.”

“In the highest appropriate level. If they qualify for honors or gifted programs based on their pure academic and cognitive levels, then they should be placed there and provided supports to accommodate for their executive functioning or other areas of deficit.”

“In a broad sense, general education or coteaching classes should be able to accommodate 2e students. However, the optimal placement for each individual 2e student will be highly dependent on the context of that school system and the child’s social- emotional needs.”

“Both getting their IEP services and gifted services. In whatever placement is appropriate based on their profile.”
Results from the last section of the survey indicated belief in the concept of twice exceptionality. Specifically, all but one surveyor reportedly did not believe that giftedness makes up for having a learning difference. In addition, all but one surveyor reported that they believed a student could be gifted and also have a learning disability. Furthermore, all of the respondents indicated that they did not believe that gifted students who struggle are not trying hard enough. Lastly, the majority of participants denied that 2e students should be more mature than other students their age as well as the statement that 2e student develop cognitively and emotionally at the same level and pace. This implied that participants are likely aware of the concept of asynchronous development in 2e students.

Respondents also indicated that they were aware of the best practices of supporting and educating a 2e student. Specifically, the majority of participants reported that they believed a student can receive special-education services in advanced academic programs, that giftedness and challenges can be addressed simultaneously, that a student’s area of weakness does not need to be remediated before having access to advanced-learning opportunities, and that gifted students with a disability are eligible for an IEP or 504 plans. In addition, all but one surveyor indicated that they did not believe it would be unfair to reduce work or provide extra support to 2e students even though they are gifted, showing that participants likely believe that 2e students should receive classroom accommodations just as students who have a disability but are not gifted.

When participants in this study were asked if they believed IDEA funds should not be spent on 2e students, about 92% of the responses believed this to be false. However, when participants were previously asked if they believed gifted students with a disability are eligible for IEPs or 504 plans, which is funded by IDEA funds, approximately 98% of surveyors
indicated that it was “true.” This indicates that although the majority of participants believed that 2e students were eligible for IEPs and 504 plans, not all of those participants also believed that the funds should be spent on these students although they are eligible. Furthermore, 50 out of 60 respondents reported that good grades do not determine special-education eligibility. IDEA states that a child does not have to fail or be retained to be considered for special education and related services. 2e students may sometimes receive “good” grades, however, they may not be working to their fullest potential.

**Implications for School Psychologists**

The field of school psychology has evolved over the years to support the learning and success of all students (Pires, 2013). In both psychology and education, school psychologists are highly trained practitioners who have proven expertise to support students in general and special education (Merrell, Buchanan, 2006). The functions of school psychologists have advanced from a conventional refer-test-place model, in which deficiencies are recognized, to a position that involves assessment, consultation, and intervention with general education students (Merrell, Ervin, & Gimpel, 2006). Today, school psychologists are asked to work with all students and assist their parents and teachers in understanding how they learn and provide recommendations for appropriate instruction (Ysseldyke et al., 2006). School psychologists have become comprehensive service providers that not only address concerns, but also promote school success.

Findings from this study have several implications for the field of school psychology. Previous research suggests that school psychologist’s knowledge on the existence of the twice exceptional population is lacking as most school psychologists report not having received any
training in gifted education or in 2e specifically (Robertson et al., 2011; Pires, 2013). However, the literature in the field of school psychology lacks a comprehensive discussion of the role of school psychologists in serving twice exceptional students. As presented in the current study, most of the participants were familiar with the concept of twice exceptionality, however, most have not received training regarding working with this population and believed they needed more training in order to work effectively with them. Specifically, many participants noted needing further training in identifying 2e students and supporting both the academic and social/emotional needs of this unique population. Training has a major impact on the role of school psychologists (Fagan & Wise, 2000) and may help increase services for 2e students.

School psychologists have many skills that can assist in the development of comprehensive services for 2e students. Gifted students need access to school psychologists as much as any other type of student (Renzulli & Reis, 2002). Therefore, school psychologists should strive to increase their involvement with gifted/2e education. School psychologists can assist twice exceptional students who experience a variety of challenges in the school setting and can play a valuable role in identification, counseling, consultation, evaluating programs, etc. (Robinson, 2002). Specifically, school psychologist should assist in creating identification models in schools that align with current definition views on giftedness/2e and in supporting schools with developing individualized educational plans for 2e students, including program design and evaluation. School psychologists can also help school districts expand Response to Intervention (RTI) models to students who are gifted and have a learning difference in providing more challenging curriculum while receiving extra support for their deficits (Nichols, 2015).

School psychologists can also help 2e students develop social-emotional competencies and assist
families understanding this population’s unique needs. In addition, school psychologists should play an advocacy role for 2e students and assist their families as needed.

Based on the results from this study, there is a need to provide school psychologists with additional knowledge and skills in order to effectively support 2e students. Nearly 40% of participants suggested that it is the school psychologist’s responsibility to identify a 2e student. Currently, most of the participants in this study rated their school/districts either a 2 or 3 on a 5-point scale (1 being poor; 5 being excellent) regarding how 2e students’ needs are being met.

Several methods may be used to provide school psychologists with more knowledge and skills to assess, consult and counsel 2e students. Firstly, an information packet (See Chapter VI) has been formulated at the end of this dissertation in order to provide school psychologists with more knowledge on 2e students. The information packet provides an overview on 2e as well as the importance of awareness of this population, complications of 2e identification, common presentations of 2e, impact of 2e on educational and social-emotional functioning, service recommendations, and the school psychologists’ role (i.e., assessment, consultation, counseling). Resources for further information about the topic are provided as well. Further, additional training in graduate schools, resources including research and current studies, and on the job through trainings, workshops, conferences, books, websites, and consultation with colleagues would be advantageous in order to be effective service providers for 2e children in the future.

**Limitations of the Study**

Although the study revealed applicable findings, there were several factors that limited the generalization of the data obtained. Firstly, the survey was sent through the NJASP listserv which consisted of 1,910 individuals: 367 NJASP members and 1,543 exhibitors. NJASP is a
non-profit professional association for school psychologists working or living in New Jersey and is the largest professional group in the state. Therefore, the sample obtained from the survey should encompass school psychologists from all 21 counties and should be generalizable to the state of New Jersey. NJASP did not have detailed information regarding the listserv. Thus, it is impossible to know the exact sample size as well as how many individuals on the listserv met the criteria as a current New Jersey public school psychologist to participate in the study. Therefore, the response rate of this survey cannot be dissected.

The small sample size may be due to several factors. First, the COVID-19 pandemic likely affected the response rates and possibly change how participants responded. It is possible that school psychologists were too distracted and overwhelmed during this time to complete an online survey. Furthermore, the small sample size may have also been due to the time of the year that the study was conducted. The survey was available between April and June, a time where school psychologists are often busy with IEP annual reviews and other meetings according to the NJASP research chair (R. Marino, personal communication, May 30, 2021). It is possible if the survey were available for a longer period, more school psychologists would have taken the survey.

Since participants were not required to reply to all questions, there may be a response bias. Differences in training and experiences of the participants may have possibly contributed to this response bias. Participants who have had some experience with 2e students may have been more likely to complete the survey because they felt confident in their abilities to assess their knowledge on the needs of 2e students. It is possible that participants who were unfamiliar with 2e were less likely to finish the survey or were unclear how to reply to certain questions. School
psychologists with insufficient knowledge and experience, on the other hand, may have taken the survey to learn more about the topic.

Individuals on the NJASP listserv who were not actively employed as a school psychologist in a New Jersey public school were unable to participate in the survey. Furthermore, there is no valid way to confirm that the person who received the email was the respondent. Some school psychologists may refuse to participate in any form of online survey or may not have had enough time to complete the survey to the best of their abilities. Non-respondents could have knowledge of or experience with 2e students. Caution should be exercised when generalizing these study’s findings to all school psychologists in New Jersey public schools. Furthermore, because this survey was designed specifically for New Jersey school psychologists and was only sent to school psychologists in New Jersey public schools, caution should be exercised when generalizing results to other states as the role of a school psychologist, state laws, and resources vary by state.

There are several drawbacks to using web-based surveys. Differences in software and Internet connections, as well as challenges in controlling for other variables, may have influenced the reliability of the results (Evan & Mathur, 2005). Furthermore, the participants were self-selected rather than being randomly selected from the broader population which could have potentially led to a selection bias. Unacceptable data, concerns with anonymity due to hacking, and emails viewed as spam or junk mail are among the other drawbacks. Some individuals may not check their emails on routine basis. School psychologists' computers may have settings that filter or prohibit emails from unknown senders, or they may delete emails from unknown senders. As a result, some school psychologists may have missed the survey invitation and reminders. Some individuals may possibly have completely forgotten about the email
overall. Procedures were also implemented in an attempt to mitigate the negative effects of this limitation by sending several reminder emails on a weekly basis in addition to the initial email that was sent to participants to complete the survey. The survey was available for a total of eight weeks, providing enough time for completion. While some individuals prefer to fill out electronic surveys since they are more comfortable with computers, others may not have been and therefore did not participate. It is unclear whether a paper-and-pencil version would have gotten more or fewer participants, especially since there were several open-ended questions that required writing as well as extra steps that would have been needed by participants when sending the survey back.

Additionally, school psychologists were able to skip any questions, which lead to many participants failing to complete the entire survey. It is probable that some respondents skipped questions or answered quickly to get to the end of the survey and enter the raffle. Participants may have completed the survey due to the raffle, in order to assist in research and help a graduate student with their dissertation, or possibly due to interest in the topic.

Furthermore, some districts have more resources than others for gifted and 2e students, such as specialized programming. The fact that the majority of respondents were employed in a suburban district could have had an impact on participants’ knowledge and capacity to identify these students’ needs, as well as their views on their district’s services. Also, districts that have more funding may have more resources to provide services for special populations including 2e students. They also may have the funding to hire additional staff such as gifted education specialists.

Correlations could have supplied useful information but were not calculated for this study. For example, future studies could examine the relationship between type of district (i.e.,
urban, suburban, rural) and how well the needs of 2e students are being met as well as highest
degree attained and knowledge on optimal placements and programming for 2e students.
Furthermore, a possible bias may have existed for the qualitative items as well as for the
attitudes/beliefs section of the survey. It is possible that some participants avoided questions that
took more time and thought, while others did not. Participants who did not feel informed, skilled,
or aware of 2e may not have responded to the open-ended questions or gave shorter answers.
Participants who felt more knowledgeable on the topic may have been more likely to respond
and/or provide truthful answers. The distributions among the categories may have been
influenced by these possible response biases. Findings and recommendations should be
considered in conjunction with other types of data as well as existing and future research
investigations.

Future Directions

This study establishes the foundation for further study. Continued research concentrating
on the various topics will be useful in identifying some of the best practices for working with 2e
students. Although correlations were not calculated in this study, the data could be studied
further in the future to provide more information.

Studies can also be further conducted within New Jersey, as well as on a national level,
potentially through the National Association for School Psychologists (NASP) in order to yield
more generalizable results. Furthermore, data from private and specialized schools for the gifted
and/or 2e can be acquired and compared to information from public schools. It could be helpful
to form a framework regarding some of the best practices for serving 2e students in public
schools by learning from specialists in the field. Further, evaluating graduate school training
programs will aid in gaining a better understanding of the current training in identifying 2e students as well as in the direct service delivery necessary for 2e students to succeed in school.

Lastly, examining the success of 2e students may yield some useful information. Specifically, longitudinal studies of supports that impact how 2e students progress and function in public schools over time can be useful information. These findings can also be used to better identify the resources and services that these students require.

**Summary**

In summary, findings of this study indicate that participants were familiar with and believed in the concept of twice exceptionality, however, most have not received training regarding working with this population and believed they needed more training in order to work effectively with them. School psychologists would likely benefit from continued training, research, workshops, information, references, and other resources during their graduate school training and beyond.

Furthermore, there is still a need for a unified and concrete operational definition for giftedness and 2e. Most participants conceptualized 2e children as those who are “gifted and also have a disability.” Many stated that 2e is defined as having a “high IQ” with an “educational disability.” Furthermore, many school psychologists tended to conceptualize giftedness as “a superior IQ” or an “IQ 130+” while others believe it to be a strong “ability” or “skill” in a particular area.

Currently, not only is the reported number of 2e learners in New Jersey public schools low, findings from this study indicated that most of the participants in this study rated their school/districts either a 2 or 3 on a 5-point scale (1 being poor; 5 being excellent) regarding how
SCHOOL PSYCHOLOGISTS’ KNOWLEDGE OF TWICE EXCEPTIONAL STUDENTS

2e students’ needs are being met, indicating much room for improvement in supporting this population. Results from this study and recommendations include the continued use of an individualized approach for children with 2e, in regard to educational programming.

It is important that school psychologist gain a background knowledge and awareness of the needs of this population and feel proficient and confident in their skills and abilities in order to successfully work with 2e students in the public school setting.
What is twice exceptionality (2e)?

Twice exceptional students are those who are gifted and have a disability as defined by the 13 disability categories under IDEA. To date, there is no concrete, universal operational definition for giftedness and thus for twice exceptionality. This is mainly due to the diversity among gifted students, as giftedness can manifest in a variety of ways, specifically with the domains of giftedness and levels of their abilities as well as problems with the identification process.

According to the New Jersey Department of Education, gifted children “possess or demonstrate high levels of ability, in one or more content areas, when compared to their chronological peers in the local district and who require modification of their educational program if they are to achieve in accordance with their capabilities.” However, since there is a lack of a universal definition of giftedness, it is the specific school district’s implicit or explicit definition that determines eligibility for specialized services. Thus, different districts within New Jersey may conceptualize giftedness differently; a student who is considered gifted in one school may not in another.

Most commonly, twice exceptional students present with enhanced cognitive abilities and are capable of high performance academically, while also having disability that negatively impacts their learning.
Why is it important to be aware of the 2e population?

2e individuals are an exemplification of a population of students whose future contributions to society are primarily dependent on the educational experiences they receive. 2e students are at-risk because they often do not have access to an appropriate education and supports leading to their educational and social/emotional needs often going undetected. Unfortunately, limited awareness of this population leads to schools being unaware of their 2e students as well as not providing these students with the proper services needed to succeed.

A collaborative effort between educators, child study teams, and parents is needed to identify twice exceptional students and implement plans to meet their diverse needs. It is essential that the disabilities are identified early so that appropriate interventions can be delivered at optimal times. Unfortunately, the struggles of many 2e students go unnoticed for many years, resulting in learning gaps and undeveloped potentials.

What makes 2e identification so complicated?

Identification of twice exceptional students is complex as this population of students is highly diverse. It necessitates both an understanding of the unique link between the two types of exceptionalities, as well as the knowledge and skill to use evaluation and identification processes that provide alternative perspectives on both giftedness and disability. A significant number of 2e students are misdiagnosed or go unnoticed due to their gifts masking identification of their disability or of their gifts. King (2005) suggests that there are three categorizations of 2e students:

1) Those students whose giftedness masks their disability: They are formally identified as gifted but not as having an identified disability.
a. These students may be considered an underachiever, often attributed to perceived laziness, poor motivation, or a low self-concept. They likely maintain grade-level expectations until school becomes more academically rigorous (i.e., high school). This group often goes unnoticed for possible special education evaluations.

2) Those whose disability masks their giftedness: They are formally identified as having a disability but not as gifted.
   a. These students often have significantly underestimated cognitive abilities due to insufficient assessment yielding deflated IQ scores. Thus, they are often receiving services and instruction that are solely based on remediation and/or compensation for the disability which frequently leads to them becoming bored in special education programming that does not match their necessary level of challenge leading to possible behavioral/emotional issues in school.

3) Those who are not formally identified as gifted or as having a disability: Their giftedness and disability mask one another and are not readily apparent.
   a. These students usually are on grade-level and appear to have “average” ability. Thus, they are viewed as performing within expectations and, therefore, never referred for a special education evaluation. However, they will typically present with challenges as the curriculum becomes more rigorous. In addition, they often will possess depressed achievement and standardized test scores due to the disability and may not qualify for gifted education services.
Experts (Webb et al., 1993) suggest that when an educator sees a child who performs “average” in some areas, but in one or two areas is a prodigy — or does extraordinarily well in all areas except one, where they are lagging — the child should be referred for testing.

What does a 2e student “look” like?

There is currently a need for a comprehensive, inclusive, operational definition of 2e that represents the diversity of students’ unique and individual experiences in order to fully grasp the characteristics of these students. Since 2e students represent a very heterogenous group of students, it is difficult to make gross generalizations regarding this unique population as each 2e student looks drastically dissimilar. However, it is agreed upon throughout the literature that 2e students tend to demonstrate strengths in one domain and weaknesses in another and exhibit discrepancies between performance and potential. For example, a 2e student may excel in one area, such as math, but struggle with processing speed, following directions, or social skills. Furthermore, asynchronous development is often exhibited by many of these students in which their development is uneven across various academic, social, and developmental areas resulting in a scatter of abilities which is often significant. Typically, 2e students are far ahead intellectually, but behind socially and emotionally. Often, the terminology “peaks and valleys” is used to illustrate their patterns of strengths and weaknesses.

What are the most common presentations of 2e?

Autism Spectrum Disorder (ASD), Specific Learning Disability (SLD), and Attention Deficit Hyperactivity Disorder (ADHD) under the IDEA classification of Other Health Impaired (OHI) are most prevalent among 2e students enrolled in public schools (Foley-Nicpon et al., 2011).
How does 2e impact educational functioning?

The interaction of a 2e student’s strengths and weaknesses results in variable academic performance. Specifically, 2e students may present as bright but not trying hard enough, learning disabled with no exceptional abilities, or “average.” For example, academically, a 2e student may be three grade levels ahead in math or but also requires extra support in reading. Or, a 2e student may be highly articulate and can clarify complex concepts on a variety of subjects, but have trouble writing or completing assignments. Consequently, often 2e students may fail to complete assignments and become frustrated with classroom demands leading to unpredictable classroom performance and disruption.

How does 2e impact social-emotional functioning?

Not having both gifts and disability identified can result in social/emotional/behavioral issues for this population. 2e students’ inconsistent academic performance can lead to the belief that they are not exhibiting adequate effort. Hidden disabilities may prevent students with superior cognitive abilities from achieving their potential. A 2e student may feel that they are capable of more while also feeling held back but unsure why, leading to feelings of frustration and anxiety.

Furthermore, once 2e students are identified, it can still be difficult to get the proper supports required in school. For example, if they are in a gifted program, they may be struggling in a certain area. If they are placed in a special education program, it may not challenge them, and they may feel frustrated and agitated. In both scenarios, 2e students often struggle with anxiety, depression, self-esteem issues, emotional dysregulation, and behavioral problems. In addition, 2e students often have a more difficult time with peer relations due to asynchronous
development.

Often, behavioral plans become the focus of the interventions at school. The behaviors are managed, but the underlying disabilities are never addressed. School can become a very frustrating experience for struggling 2e students, educators, and parents.

What services are recommended for 2e students?

Just as students with special education needs require services along a continuum, 2e students require a similar combination of gifted and special education in order to succeed. They need to be challenged in areas in which they are gifted and supported in areas where they struggle, just like any other student with a learning difference. Rather than satisfaction with at or near grade-level performance, schools should provide special services, programs, and instruction to address both giftedness and disability, ensuring that their educational is individualized and the “whole child” is being taught.

The U.S. Department of Education has stated that 2e students are protected by the Individuals with Disabilities Education Act (IDEA). Schools must evaluate a child if a disability is suspected. 2e students are eligible for an Individualized Education Plan (IEP) or a 504 plan. A student’s area of weakness does not have to be remediated before having access to advanced learning opportunities. They can receive special education services and supports in advanced academic programs and courses.

What is the school psychologist’s role?

2e students need access to school psychologists as much as any other type of student. It is crucial that school psychologists are aware of this population in order to help identify 2e students
and ensure that both the 2e students’ giftedness and disabilities are evenly accounted for through appropriate education and services needed for them to succeed in school.

School psychologists can assist 2e students who experience a variety of challenges in the school setting and can play a valuable role in assessment, counseling, consultation, evaluating programs, etc. More specifically, school psychologists can support educators in implementing strategies to develop 2e students’ potentials, to identify learning gaps and provide explicit instruction, and to support the development of compensatory strategies. School psychologists can also support 2e students directly by helping to foster their social/emotional development and to enhance their capacity to cope with mixed abilities.

Assessment: School psychologists are well-equipped to comprehend the unique profiles of strengths and areas of difficulty present in assessments of 2e students so that recommendations for special education accommodations and gifted programming can be made. Please see the National Association for Gifted Children’s position statements on best practice for comprehensive assessments and the use of the WISC-V in 2e identification:

- Ensuring Gifted Children with Disabilities Receive Appropriate Services: Call for Comprehensive Assessment

- Use of the WISC-V for Gifted and Twice Exceptional Identification

Counseling: 2e students are at a higher risk for of experiencing a wide range of social/emotional/behavioral concerns including low self-esteem, feelings of failure, low self-efficacy, low frustration tolerance, worthlessness, depression, anxiety, poor motivation, aggression, hyperactivity, and discipline problems, especially since they are often faced with
negative school experiences. School psychologists can support the social-emotional needs of 2e students through individual and/or group counseling in order to help with the aforementioned concerns. Furthermore, school psychologists can provide 2e students with social skills and/or executive functioning skills training based on their specific needs. For more information:


Consultation: School psychologists can assist teachers in understanding how to best support 2e students in the classroom. Specifically, school psychologists can help teachers implement 504 plans and IEP accommodations and modifications most effectively. In addition, school psychologists can consult with teachers on differentiating the curriculum in order to ensure 2e students are appropriately challenged. Having an expertise in assessment can help educators and families better understand 2e students. For example, school psychologists administer and evaluate cognitive assessments and know that the results are much more than just an IQ score. They can help interpret and explain a 2e student’s testing results as indicators of the student's strengths and areas of difficulty, allowing for comprehensive educational planning.

Resources about 2e:

https://www.hoagiesgifted.org/twice_exceptional.htm
https://www.hoagiesgifted.org/2e_books.htm
https://www.2enewsletter.com/index.html
https://www.davidsongifted.org/gifted-blog/2e-guidebook-resources-and-bibliography/
https://www.bridges.edu/resources.html
Suggested readings:


Resources for professional development trainings:

https://2ecenter.org/2e-center-consulting-and-professional-development/
https://www.cde.state.co.us/gt/2epd
https://www.withunderstandingcomescalm.com/services-for-educators-of-2e-students/
https://2eresource.com/home-2/professional-development/

References:


SCHOOL PSYCHOLOGISTS’ KNOWLEDGE OF TWICE EXCEPTIONAL STUDENTS

References


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https://www.nagc.org/sites/default/files/key%20reports/twiceexceptional.pdf


SCHOOL PSYCHOLOGISTS’ KNOWLEDGE OF TWICE EXCEPTIONAL STUDENTS


SCHOOL PSYCHOLOGISTS’ KNOWLEDGE OF TWICE EXCEPTIONAL STUDENTS


Robinson, S. M. (1999). Meeting the needs of students who are gifted and have learning disabilities. *Intervention in school and clinic, 34*(4), 195-204.


SCHOOL PSYCHOLOGISTS’ KNOWLEDGE OF TWICE EXCEPTIONAL STUDENTS
APPENDIX A

CONSENT FORM

TITLE OF STUDY: A Survey of New Jersey School Psychologists' Knowledge of Twice Exceptional Students  
Principal Investigator: Rachel Shafrir, Psy.M.

This online consent form is part of an informed consent process for a research study and it will provide information that will help you decide whether you want to take part in the study. It is your choice to take part or not. Ask questions if there is anything in the form that is not clear to you. If you decide to take part, instructions at the end of document will tell you what to do next. Your alternative to taking part in the research is not to take part in it.

Who is conducting this research study and what is it about?
You are being asked to take part in research conducted by Rachel Shafrir who is a doctoral student in the Dept. of School Psychology. The purpose of this study is to gather information from a sample of school psychologists employed in New Jersey public schools regarding their knowledge on twice exceptional students through an online survey and then to provide professional development resources through New Jersey Association for School Psychologists (NJASP). We anticipate 350 subjects will take part in the research.

What will I be asked to do if I take part?
The survey will take about 15 minutes to complete it.

What are the risks and/or discomforts I might experience if I take part in the study?
Breach of confidentiality is a risk of harm but a data security plan is in place to minimize such a risk. Also, some questions may make you feel uncomfortable. If that happens, you can skip those questions or withdraw from the study altogether. If you decide to quit at any time before you have finished the survey your answers will NOT be recorded.

Are there any benefits to me if I choose to take part in this study?
There are no direct benefits to you for taking part in this research. You will be contributing to knowledge about school psychologists' knowledge on the existence of the twice exceptional population.

Will I be paid to take part in this study?
You will not be paid to take part in this study. You will have the option at the end of the survey to provide their email address if they want to be entered into a raffle for a chance to win one of 5 $10 Amazon gift cards for participation in the study.

How will information about me be kept private or confidential?
All efforts will be made to keep your responses confidential, but total confidentiality cannot be guaranteed. We will use Qualtrics to collect and forward your anonymous responses to us. We will not receive any information that can identify you or other subjects. We will download your responses to a secure file that requires a password to access. Only study staff will have access to the password. Responses will be deleted from the file one month after analysis is complete and study findings are professionally presented or published. No information that can identify you will appear in any professional presentation or publication.

What will happen to information I provide in the research after the study is over?
The information collected about you for this research will not be used by or distributed to investigators for other research.

What will happen if I do not want to take part or decide later not to stay in the study?
Your participation is voluntary. If you choose to take part now, you may change your mind and withdraw
later. In addition, you can choose to skip questions that you do not wish to answer. If you do not click on the 'submit' button after completing the form, your responses will not be recorded. However, once you click the 'submit' button at the end of the form, your responses cannot be withdrawn as we will not know which ones yours are.

**Who can I call if I have questions?**
If you have questions about taking part in this study, you can contact the Principal Investigator: Rachel Shafrir, School Psychology Department, rbs120@gsapp.rutgers.edu. You can also contact my faculty advisor, Dr. Ken Schneider, schneid@gsapp.rutgers.edu.

If you have questions about your rights as a research subject, you can contact the IRB Director at: Arts and Sciences IRB (732) 235-2866 or the Rutgers Human Subjects Protection Program at (973) 972-1149 or email us at humansubjects@ored.rutgers.edu.

Please print out this consent form if you would like a copy of it for your files.

If you do not wish to take part in the research, close this website address. If you wish take part in the research, follow the directions below:

By beginning this research, I acknowledge that I am 18 years of age or older and have read and understand the information. I agree to take part in the research, with the knowledge that I am free to withdraw my participation in the research without penalty. Click on the link that will take you to the survey. https://rutgers.ca1.qualtrics.com/jfe/form/SV_79RDf5rZIluvO7A

Click on the "I Agree" button to confirm your agreement to take part in the research.
Dear School Psychologist,

I am inviting you to participate in a research study that I am conducting for my dissertation that involves surveying school psychologists in New Jersey public schools.

I am interested in learning about school psychologists’ knowledge and experience of working with twice-exceptional students. Not much is currently known about the role that school psychologists play in serving gifted students with disabilities, thus, findings of this study will be used as professional development material for New Jersey Association for School Psychologists (NJASP) and may result in implications for training and practice of school psychologists in New Jersey, so that they can best serve this population of students.

If you are interested in participating in this survey, please take the online survey available at: https://rutgers.ca1.qualtrics.com/jfe/form/SV_79RDf5rZiluvO7A. It should take approximately 15 minutes to complete. Your participation is voluntary. You may choose to withdraw at any point without any penalty to you. In addition, you may skip any questions you choose. Your answers will remain anonymous. There are no foreseeable risks to participation in this study.

If you choose, you may be entered into a raffle drawing to win one of five $10 Amazon gift cards. Additionally, you will be given the opportunity to request a summary of the results, which will be provided upon the completion of the study. If you do not complete the survey, you will not be able to enter the raffle drawing or request a summary of the result.

I appreciate your participation and feedback in order to provide meaningful and useful data for my dissertation and for future knowledge in the field.

If you have any questions, please email me at rbs120@gsapp.rutgers.edu

Thank you,

Rachel Shafrir, Psy.M.(Principal Investigator)
School Psychology Doctoral Student
Graduate School of Applied & Professional Psychology Rutgers, The State University of New Jersey
152 Frelinghuysen Road
Piscataway, NJ 08854

Kenneth Schneider (Dissertation Chair/Faculty Advisor)
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Tel: (732) 445-2000 X106
Email: schneid@rci.rutgers.edu
APPENDIX C

SURVEY ON TWICE EXCEPTIONAL STUDENTS

Section I: Background

1. Highest degree attained:
   a. Masters
   b. Educational Specialist
   c. Doctorate

2. Number of years of experience as a school psychologist:
   a. 0-3 years
   b. 4-6 years
   c. 7-10 years
   d. 11-15 years
   e. 16-20 years
   f. 20+ years

3. Type of district:
   a. Urban
   b. Suburban
   c. Rural

4. Does your school have a gifted program? (Y/N/DK)
   a. If so, for what ages?

5. Approximately how many students in your gifted programs have a documented disability? (Type DK if don’t know)
6. Can a student be classified with a disability and be eligible for higher level courses in your district? (Y/N)

Section II: Knowledge

7. Are you familiar with the concept of twice-exceptionality (2e)? (Y/N)

8. If yes, how do you define 2e?
   a. If yes, how did you learn about 2e?
   b. If yes, what author has influenced your understanding?

9. We want to learn how you conceptualize the term giftedness. Please provide your definition here:

Section III: Training

10. Have you ever received training regarding working with twice-exceptional students? (Y/N)

   a. If yes, please describe the training you have received:

11. Do you believe you need further training in order to work effectively with twice-exceptional students? (Y/N)

12. In what areas do you need further training?

13. How qualified do you feel to service students who are gifted and have a disability?

   a. Very well qualified
   b. Fairly qualified
   c. Somewhat qualified
   d. Somewhat unqualified
   e. Not well qualified
   f. Not at all qualified
Section III: Attitudes and Beliefs

14. Do you believe that gifted children with learning differences should receive special education services?
   a. Why or why not?

15. Please rank the importance of the following positions in identifying a student who is both gifted and learning disabled. (1 = most important, 6 = least important)
   a. ___ Regular education classroom teacher
   b. ___ Gifted education specialist
   c. ___ LDTC
   d. ___ School Counselor
   e. ___ School Psychologist
   f. ___ Parent

16. Please rank the importance of the following positions in meeting the educational needs of a student who is both gifted and learning disabled. (1 = most important, 6 = least important)
   a. ___ Regular education classroom teacher
   b. ___ Gifted education specialist
   c. ___ LDTC
   d. ___ School Counselor
   e. ___ School Psychologist
   f. ___ Parent

17. Please rank the importance of the following positions in benefiting from more education about students who are both gifted and learning disabled. (1 = most important, 6 = least important)
   a. ___ Regular education classroom teacher
18. In your opinion, please rate how well the needs of twice-exceptional students are being met in your school/district.

1 (Poor) 2 3 4 5 (Excellent) Does not apply

19. What placement do you think is optimal for twice-exceptional students?

20. **This next section assesses your beliefs about, and knowledge of giftedness.** Please indicate whether you believe these statements are true or false. Please respond to each and every item to the best of your ability and knowledge.

a. Being gifted makes up for having a learning difference. (T/F)

b. Gifted students who struggle are not trying hard enough. (T/F)

c. Gifted students with a disability are eligible for IEPs or 504 plans. (T/F)

d. Giftedness and challenges cannot be addressed at the same time. (T/F)

e. A student cannot receive special education services in advanced academic programs and courses. (T/F)

f. Gifted students with a disability should be more mature than other kids their age. (T/F)

g. IDEA funds cannot be spent on 2e learners. (T/F)

h. A student with good grades is not eligible for special education services. (T/F)

i. A student cannot be gifted and have a learning disability. (T/F)

j. It is not fair to reduce work or provide extra support to 2e students since they are gifted. (T/F)
k. A student’s areas of weakness must be remediated before having access to advanced learning opportunities. (T/F)

l. 2e students develop cognitively and emotionally at the same level and pace. (T/F)

m. Gifted students are self-motivated and high achievement comes easily to them. (T/F)
Appendix D

Coding System for Open-Ended Questions

Question #8- Defining 2e

1) Gifted (i.e, talent, area of strength) with a disability (i.e., IEP, classified, area of challenge)
2) Other

Question #8a- Learned About 2e

1) Graduate school training
2) Other
   a. Personal experience
   b. Personal research
   c. Professional work
   d. Literature

Question #8b- 2e authors

1) Names of authors
2) N/A, DK

Question #9- Defining Giftedness

1) Quantitative (i.e, IQ score)
   a. IQ score
2) Qualitative (i.e., strong ability or skill in a particular field)

Question #10a- Training Received

1) Graduate school training
2) Other
   a. Field experience
   b. Professional development
Question #12- Further Training

1) General overall training on 2e
2) How to Support
3) Identification
4) Specific needs
5) Programming

Question #14a- On 2e Students Receiving Special Ed Services

1) Ensure maximum potential is achieved
2) Depends on the specific case

Question #19- Optimal Placement for 2e Students

1) Hybrid approach (i.e., combining general and higher education classes with in-class or pull-out special education services)
2) Depends on the specific case