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The Social-Emotional Needs of Twice-Exceptional Learners in Primary Schools: Perspectives of Children and Parents.

A thesis presented in partial fulfilment of the requirements for the degree of

Masters
In
Educational Psychology

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Trudy Bailey

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Abstract

Twice-exceptional children typically have unique and complex social-emotional needs that accompany their gifted abilities and disabilities/disorders. A review of the twice-exceptional research reveals that very few studies have explored the social-emotional needs of these unique learners, particularly in the context of New Zealand. This study aimed to bridge this gap in the research, generating some valuable insights into the social-emotional needs of twice-exceptional learners and how they are being met in primary schools across New Zealand. The study explored the social-emotional needs of six twice-exceptional children (ages 6 to 11 years) from their perspectives and lived experiences, giving twice-exceptional children and their parents a much-needed voice. A qualitative case study design was employed, and purposive sampling techniques used. Semi-structured interviews with the twice-exceptional children and their parents, as well as a document review, formed the data for this research. The interview narratives were used to create individual case stories for the twice-exceptional children, and broad thematic analysis was conducted across the cases. The findings revealed commonalities across the case stories, as well as unique experiences. Although some positive school experiences were highlighted, the participants mostly shared negative school experiences and teacher interactions, and minimal support or accommodations for the academic or social-emotional needs of the twice-exceptional children in this study. Additionally, the findings show the pivotal role that parents play in identifying and advocating for their children's needs, and the continued lack of awareness about twice-exceptionality among educators in New Zealand primary schools.

Keywords: twice-exceptional, gifted learning disabled, multi-exceptional, social-emotional, exceptionalities, gifted, high-ability, disability, needs, asynchronous.

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Your firm belief in me made me believe in myself.

This thesis is dedicated to the loving memory of my beautiful mother,

Sylvia Wright (1948-2018).

You were so proud that I was finally achieving my ambition to complete this Masters.
Wish so much you were still here to see me get to the finish line.

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CHAPTER ONE

Introduction

He kapura iti i te ngahere, mura katoa te pae rae.

A small flickering flame in the forest burns to the furthest horizon.

- Māori proverb (Mahaki & Mahaki, 2007)

1.1. Introduction

Gifted education has been a focus for researchers for the last two decades, increasing teacher awareness and bringing significant advancements in the provision for gifted students in schools across New Zealand (Dai, 2018; Klingner, 2015; Kronberg, 2018; Ministry of Education [MOE], 2004, 2012; Moltzen, 2011; Riley & Bicknell, 2013). However, a sub-group of gifted learners with co-existing conditions/disabilities that impede their learning, known as *twice-exceptional,* continue to be among the most underserved, overlooked, and misunderstood students in our classrooms (Dare & Nowicki, 2015; Gilman et al., 2013; Leggett, Shea, & Wilson, 2010; Sturgess, 2011). An understanding of twice-exceptional learners is still in a nascent stage, with very little empirical research that focuses on the needs of these unique learners (Dare & Nowicki, 2015; Foley-Nicpon, 2015; Munn, 2016). Moreover, many schools in New Zealand do not have identification or teaching strategies in place for twice-exceptional students as most educators are still largely unaware of the existence of this population of learners (Maddocks, 2018; Riley & Bicknell, 2013; Sturgess; 2011).

1.2. Definitions and Terminology

The term twice-exceptional was conceived in 1975 by James Gallagher to describe learners who display both gifted abilities and disabilities simultaneously, making them exceptional in two regards (Baum, Schader, & Hébert, 2014; Coleman, Harradine, & King, 2005). Gifted abilities and learning deficits are ordinarily perceived

to be mutually exclusive and opposites on a continuum of capabilities (Baum, Schader, & Owen, 2017; Fetzer, 2005; Sturgess, 1999b). Therefore, children being doubly challenged with these opposing special educational needs seems paradoxical and incongruent (Assouline & Whiteman, 2011; Baum et al., 2017; Besnoy, 2006; Ronksley-Pavia, 2015). There is inconsistency regarding the label for these complex learners, with the terms *gifted learning disabled (GLD), 2e, dually exceptional*, and *multi-exceptional* also commonly used within the literature (MOE, n.d.-c; Prior, 2013). However, the term twice-exceptional is all-embracing and allows for any combination from a multitude of gifted abilities and challenging disabilities (Assouline & Whiteman, 2011; Neumann & Bade, 2009). For this reason, twice-exceptional is the preferred terminology for this study.

An overarching definition of twice-exceptionality is still to be universally agreed upon by educators and theorists in the field (Baldwin, Odmal, & Pereles, 2015; Kalbfleisch, 2011). However, this study adopts the definition put forward by the MOE in New Zealand which views twice-exceptional learners as “gifted learners whose performance is impaired, or their high potential is masked, by one or more specific learning disabilities, physical impairments, disorders or conditions. They may experience extreme difficulty in developing their giftedness into talent” (MOE, n.d.-c, para. 2). Throughout this thesis, the term *gifted* will be used to describe learners who display exceptionality compared to peers of the same age, culture, or circumstances in a diverse range of actualised and gifted abilities, including academic excellence, creative talents, and cultural giftedness (Bevan-Brown, 2009, 2011; Macfarlane & Moltzen, 2005; MOE, 2012). The term *disability* will be used to describe a broad spectrum of co-occurring conditions, including learning, sensory, physical, and emotional/behavioural difficulties that hinder learning potential, as well as specific disorders, such as attention-

deficit/hyperactivity (ADHD), autism spectrum disorders (ASD), generalised anxiety disorders (GAD), and oppositional defiant disorders (Dare & Nowicki, 2015; Foley-Nicpon, 2015; Willard-Holt, Weber, Morrison, & Horgan, 2013). Finally, the term *parents* is used for ease and consistency. However, any reference to parents also acknowledges that it could be a parent in the singular sense, legal guardian(s), [i]whānau, or another form of primary caregiver.

1.3. The Rationale for this Research

All children have the right to receive an education that meets their individual learning needs and provides them with every opportunity to maximise their potential (MOE, 2010, 2014; O'Brien, 2014; Sturgess, 2011). Nonetheless, contemporary literature exposes the scarcity of early identification for twice-exceptional learners, with few identified in primary classrooms (Baum & Owen, 2004; Foley-Nicpon, Allmon, Sieck, & Stinson, 2011; Lovett & Sparks, 2013; Willis, 2011). Many teachers are still unaware of twice-exceptionality, so these children often remain unnoticed (Bracamonte, 2010; Dix & Schafer, 2005). Even for informed educators, masking effects make the identification of twice-exceptional learners problematic (Baldwin et al., 2015; Foley-Nicpon et al., 2011; Maddocks, 2018).

During early schooling, the twice-exceptional child's gifted abilities can mask their disabilities; alternatively, their overt disability can conceal their gifted strengths (Baum, 1994; MOE, n.d.-c; Weinfeld, Barnes-Robinson, Jeweler, & Roffman Shevitz, 2013). Consequently, some twice-exceptional children will initially be identified as gifted and some labelled as having a disability. Most, however, will be overlooked as the masking effects of their divergent exceptionalities make them appear to be performing averagely in the classroom (Baldwin et al., 2015; Brody & Mills, 1997; King, 2005; Ng, Hill, & Rawlinson, 2016; Sturgess, 2011; Trail, 2011). This failure to

identify twice-exceptionality can result in harm, as the necessary differentiation, supports and accommodations to meet the child's specific learning and social-emotional needs often remain unmet in the classroom (Montgomery, 2009; Munn, 2016; Webb et al., 2005; Zentall, 2014).

Twice-exceptional learners are habitually challenged by an array of social-emotional problems associated with their exceptionalities (King, 2005; Macfarlane, 2000; Montgomery, 2003). They frequently struggle with intensity and over-sensitivity, which are hallmark characteristics of learners with gifted abilities (Baum et al., 2017; Dabrowski, 1964). The continuous battle between the conflicting strengths and weaknesses of twice-exceptional learners can exacerbate these traits and lead to emotional frustration, making them seem argumentative, stubborn, and over-critical (Baum et al., 2017; King, 2005; Weinfeld et al., 2013). Many twice-exceptional learners also struggle with low self-esteem and poor interpersonal skills, making it hard for them to form friendships. This social awkwardness can lead to depression and feelings of isolation from their peers (Barber & Mueller, 2011; Leggett et al., 2010; Nielsen, 2002; Reis, McGuire, & Neu, 2000; Vespi & Yewchuk, 1992).

While the social-emotional issues of twice-exceptional children are well-reported in the literature, there is little empirical research to support this discussion (Foley-Nicpon & Assouline, 2015). Moreover, there is a dearth of research looking at the social-emotional needs of twice-exceptional learners in any capacity (Barber & Mueller, 2011; Foley-Nicpon & Assouline, 2015). Studies that give a voice to twice-exceptional children or their parents are scarce (Ronksley-Pavia, Grootenboer, & Pendergast, 2019b), and there is a dire need for more research to attain a more comprehensive understanding of twice-exceptionality in a New Zealand context (Ng et al., 2016).

1.4. Purpose of the Study

The primary objective of this research is to explore the social-emotional needs of twice-exceptional learners in New Zealand, from their personal perspectives and lived experiences, giving twice-exceptional children and their parents a much-needed voice. The study also helps to bridge a gap in the research on twice-exceptionality. The study explores the different types of social-emotional needs identified in the narratives of twice-exceptional children and parents; their perspectives on how these unique needs are met in the primary school setting; and their suggestions for positive change in the future to improve the school experiences of twice-exceptional learners. Primary school children (6-11 years) are the focus of this study, as research shows that early identification of the child's exceptionalities is fundamental for their academic success (Fetzer, 2005; Sturgess, 2011).

1.5. Research Questions

The following research questions are purposefully open-ended and non-directional, enabling in-depth exploration of the social-emotional experiences of twice-exceptional children (Onwuegbuzie & Leech, 2007; Yin, 2018).

1. What are the social-emotional needs of twice-exceptional learners in primary classrooms from the perspective of twice-exceptional children and their parents?
2. How are the social-emotional needs of twice-exceptional learners being met in primary schools from the perspective of twice-exceptional children and their parents?
3. What do twice-exceptional children/their parents perceive could be done better in primary schools to meet the social-emotional needs of twice-exceptional learners?

1.6. Thesis Outline

This thesis consists of seven chapters. The first chapter is an introduction to twice-exceptionality, the challenges twice-exceptional learners face, and an outline of the research purpose. Chapter Two overviews the literature pertaining to twice-exceptionality, beginning with an overview of the conceptualisations and definitions of giftedness, disability, and twice-exceptionality. The characteristics commonly linked with twice-exceptionality and the problems with identification are summarised, followed by a comprehensive review of the literature relating to the social-emotional needs of these learners. In Chapter Three, the research methodology is discussed, outlining the qualitative and constructivist world-view that underpins the research design and the case study methodology employed for this research. Chapter Four concentrates on the research methods in action, offering a more detailed look at the sampling techniques, data collection procedures, data analysis, ethical issues, and the trustworthiness of this study.

The latter chapters are dedicated to the analysis and discussion of the research data and make conclusions about the outcomes of this study. Chapter Five - the research findings - introduces the individual narrative case stories for each of the twice-exceptional participants and is the very essence of this thesis. Chapter Six is a discussion of the key themes, similarities and differences, and valuable insights that have emerged from the research findings. The study limitations and recommendations for future research are also outlined. Finally, Chapter Seven presents the main conclusions and reflects on the key learning points from the research.

CHAPTER TWO

Literature Review

> 2e children are both gifted and have a disability – and that often creates a child with unusual needs and strengths, often in paradoxical ways. Much as an optical illusion might be seen differently from different vantage points, the 2e child remains uniquely themselves.
>
> (Hughes, 2017, p. 305).

2.1. Introduction.

Twice-exceptional learners are a heterogeneous group of students who have gifted abilities but also meet the diagnostic criteria of having one or more disabilities (Brody & Mills, 1997; Buică-Belciu, & Popovici, 2014; Hughes, 2017). To understand what is meant by the term 'twice-exceptionality', it is necessary to understand the two underlying constructs that establish twice-exceptionality - giftedness and disability (Kalbfleisch, 2011). Hence, this chapter begins by delineating the definitions of giftedness and the recent history of gifted education in New Zealand, followed by an outline of the main conceptualisations underpinning gifted education provisions in New Zealand. Next, a definition of disability that suits the parameters of this study is presented, and the relevant disabilities summarised. Subsequently, the chapter focuses on twice-exceptionality; the definitions and conceptualisations of twice-exceptionality are presented, followed by a historical overview of the critical developments in twice-exceptional provision. Twice-exceptional characteristics, identification issues, and the repercussions associated with the hidden nature of twice-exceptionality are also detailed. The chapter finishes with a review of the research relating to the social-emotional needs of twice-exceptional learners, highlighting the gaps in the existing twice-exceptional research.

2.2. Definitions of Giftedness

A review of the literature reveals the construct of giftedness has many definitions (Renzulli, 2005; Townend, Pendergast, & Garvis, 2014). Although there is a lack of consensus across theorists and educators regarding a clear definition, it is now widely recognised that the term 'gifted' is not restricted to those learners with above-average intelligence (Dai, 2010; Reis, Baum, & Burke, 2014; Tapper, 2012). Instead, gifted refers to a broad mix of learners with a rich diversity of abilities and qualities. Hence, gifted students are now generally described as having multiple intelligences (Gardner, 1983, 1999; Sternberg, 1996). In this study, 'gifted' will be used to describe learners that exhibit significantly advanced levels of performance or potential in one or more realms, compared with peers of a similar age, situation, and culture (Riley & Bicknell, 2013). Furthermore, 'gifted' is used as an umbrella term that embraces a multitude of gifted talents, including academic; visual/performing arts; critical/creative thinking; social skills; physical/sporting; and cultural traditions, values, or spirituality (MOE, 2018; Riley, Bevan-Brown, Bicknell, Carroll-Lind & Kearney, 2004; Webber, 2011).

2.3. Giftedness in New Zealand

There is no universal definition of giftedness adopted across all schools in New Zealand (Page, 2006; Tapper, 2012). Instead, each school must develop their own definition of giftedness and determine the gifted provision the school will offer, ensuring it reflects the social and cultural environment surrounding the school (Knudson, 2006; Page, 2006; Riley & Bicknell, 2013; Tapper, 2012). This autonomous, socio-cultural approach to giftedness is validated by Reis (2009) who affirms it is the responsibility of the society, and educators within it, to determine their unique perception of giftedness that reflects the diversity and needs of their community. Similarly, researchers of Māori and Pasifika conceptions of giftedness support this socio-cultural approach (Bevan-

Brown, 2009; Macfarlane, Christensen, & Mataiti, 2010; Miller, 2005). While Moltzen (1999) could see the positives in this socio-cultural approach, he also warned that allowing schools the freedom to define their gifted provision might be more dangerous than the MOE taking a narrow, elusive stance on gifted education (Tapper, 2012).

Although some schools have been innovative and inclusive in their interpretations of giftedness, overall, the lack of national direction has proved to be problematic. In their decade-long review of gifted education in New Zealand, Riley and Bicknell (2013) found many schools failed to offer a precise definition of giftedness, and some completely failed to develop any gifted policies (Tapper, 2012). Similarly, an Education Review Office (ERO) Report (2008) revealed only 5% of schools had "highly inclusive and appropriate" (p. 17) conceptualisations of giftedness that included Māori perspectives and values.

Cultivating the gifts and talents of young learners is a critical and pivotal obligation of a nation's education system (Renzulli, 2011). However, many New Zealand schools continue to lack clarity and depth in their gifted definitions and provision. This viewpoint is supported by Tapper (2012), who claims that schools in Aotearoa[ii] are "swimming in a sea of uncertainty when it comes to an understanding about concepts of giftedness and talent" (p. 9). Conversely, Bicknell and Riley (2012) found significant improvements in gifted awareness and provision since their 2004 review, claiming there are still "snapshots of promise" (p. 16) for world-class gifted education in New Zealand.

2.4. Conceptualisations of Giftedness.

Throughout the years, there have been numerous paradigm shifts in the popular conceptions of giftedness which have guided the pedagogical decisions made about the provisions for gifted students in New Zealand (Olszewski-Kubilius, Subotnik, &

Worrell, 2015). The early conception that giftedness is directly related to a high IQ (intelligence quotient) level is attributed to the renowned educational psychologist, Terman (1925), who hypothesised that individuals of higher intelligence are genetically endowed with gifted traits that increase the likelihood of a successful life and distinguish them from their peers (Tapper, 2012). Terman's traditional *essentialist* viewpoint regarding giftedness has been contested by many prominent *developmentalist* theorists, including Gagné (1991), Gardner (1983), Renzulli (1977), Sternberg (1986), and Tannenbaum (1983). These theorists all promote multi-dimensional conceptions of giftedness, maintaining that giftedness is borne out of an ever-changing relationship between the individual and their environment, making giftedness both malleable and dynamic (Tapper, 2012).

2.4.1. Renzulli's Three-Ring Definition of Giftedness. One of the most influential and widely-used theoretical models of giftedness is the *Three-Ring Definition of Giftedness* (see Figure 2.1) which was put forward by Renzulli in 1977, and updated several times since its' inception (MOE, 2012; Moltzen, 2011; Olszewski et al., 2015). The rings signify three clusters of traits—namely above-average ability, task commitment, and creativity—that are crucial in the development of gifted behaviour; it is interaction and overlapping of these traits that lead to high achievement and gifted behaviour (Coster, 2013; Renzulli, n.d.; Renzulli & Reis, 2018). In more recent years, Renzulli extended the model to incorporate the houndstooth background, signifying the influence of environment and personality on gifted behaviour (Coster, 2013; Renzulli, Koehler, & Fogarty, 2006). This multi-dimensional conception of giftedness has been used extensively in schools internationally and has been endorsed by the MOE for use in New Zealand schools (MOE, 2012; Page, 2006; Renzulli & Reis, 2018).

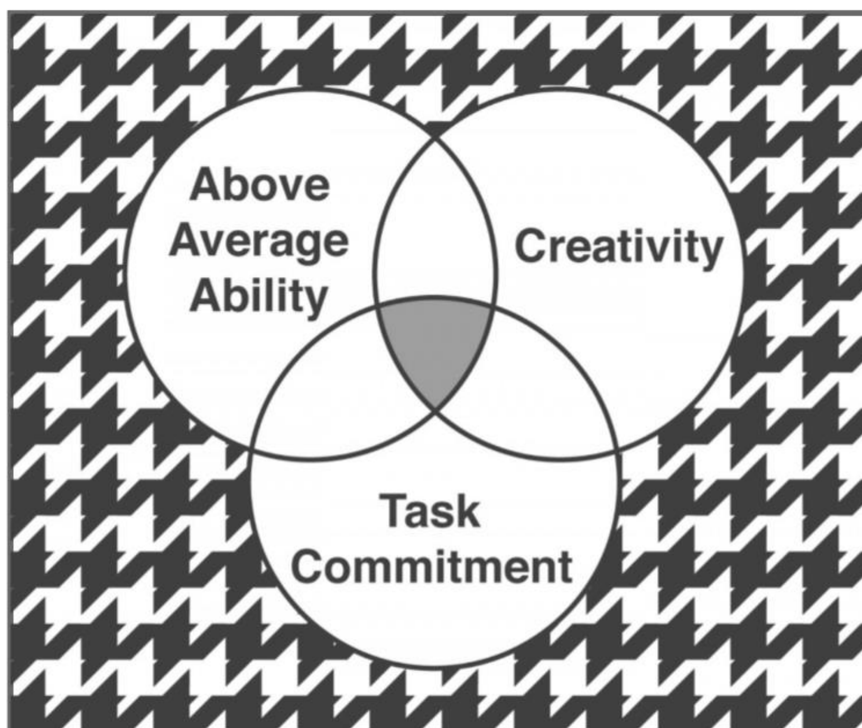

Figure 2.1. **Renzulli's Concept of Giftedness. From Renzulli, J. S. (n.d.).** ***A practical system for identifying gifted and talented students.*** **Retrieved from https://gifted.uconn.edu/schoolwide-enrichment-model/identifygt/ Copyright: 2019 by Joseph Renzulli.**

2.4.2. Differentiated Model of Giftedness and Talent (DMGT). The DMGT is a well-validated model internationally and is endorsed by the MOE (2012). The DMGT was put forward by Gagné in 1991 and is based on the assumption that the terms 'gifted' and 'talented' are distinct from each other (Gagné, 2018; Page, 2006). According to Gagné, giftedness relates to natural aptitude/abilities. In contrast, talent is exceptional achievement and success through working hard in a range of fields. The theory behind the DMGT (see Figure 2.2) is that talent is progressively developed through the transformation of natural abilities (Gagné, 2018; Mansfield, 2009). Achieving the status of *talented* is reliant on mastering one's *competencies* (gifts) through a systematic *developmental process,* aided by *intrapersonal catalysts* and *environmental catalysts,* which catapult the individual to success (Gagné, 1991, 2009).

Consequently, real talent is only attained by a minority of people (the top 10%) from a much more extensive pool of capable individuals (Gagné, 2009, 2018; Moltzen, 2011).

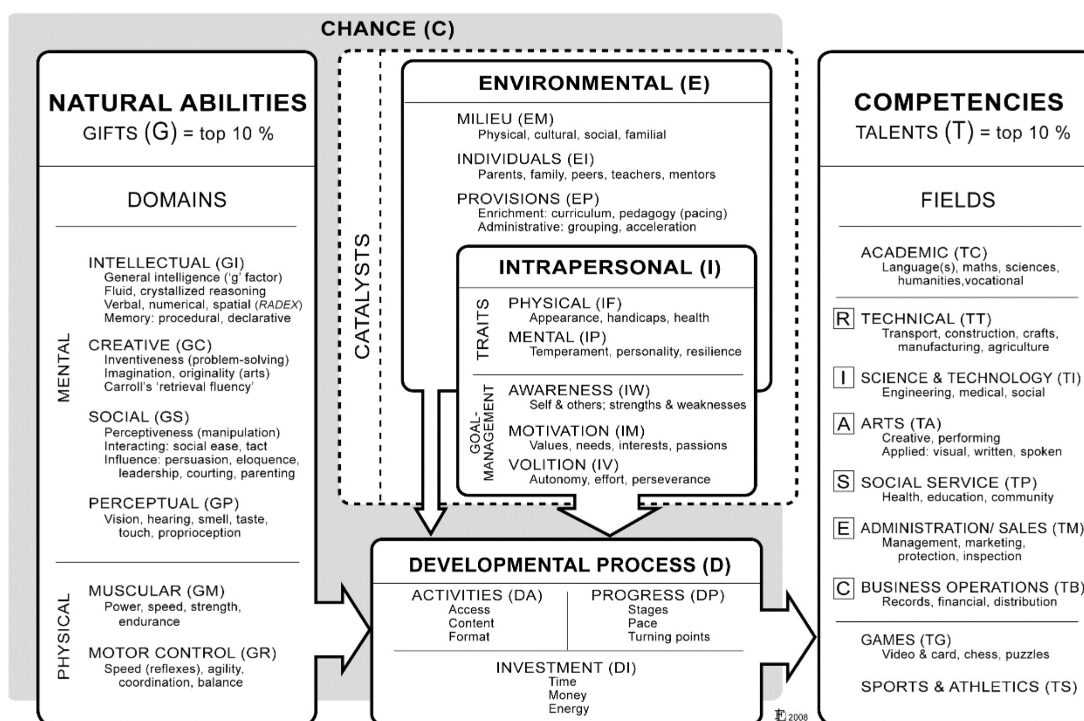

Figure 2.2. **Gagné's Differentiated Model of Giftedness and Talent (DMGT). From "Building gifts into talents: Detailed overview of the DMGT 2.0." by F. Gagné, 2009. In B. MacFarlane, & T. Stambaugh, (Eds.),** ***Leading change in gifted education: The Festschrift of Dr. Joyce VanTassel Baska*** **(pp. 61-81). Waco, TX: Prufrock Press. Copyright: 2019 by Françoys Gagné.**

2.4.3. Profiles of the Gifted and Talented. Traditionally, gifted children are differentiated according to their intellect, talents, or interests. Instead, in their theoretical model to profile six types of gifted learners, Betts and Neihart (1988) adopted a more holistic approach and differentiated high-ability students based on behaviours, feelings, and needs. Betts and Neihart (1988) argue that gifted learners are all affected differently by their gifted strengths, so it is vital that educators understand the unique cognitive, emotional, and social needs of their gifted students. The MOE (2012) promotes Betts and Neihart's profiles in their current literature as a useful tool to raise awareness about the differences among gifted students.

Given the holistic approach to differentiating gifted learners and the inclusion of social-emotional factors and twice-exceptional learners, Betts and Neihart's (1988) profiles are the preferred model and conceptualisation of giftedness for this study. The six types are:- *Type I: The Successful* account for 90% of gifted children; they are eager for approval and display appropriate behaviours, making them well-liked. *Type II: The Challenging* lack conformity to the school system, so they receive little recognition for their talents, resulting in frustration, low self-esteem, and peer rejection. *Type III: The Underground* group of learners are anxious and insecure; they hide their gifted traits to increase acceptance from non-gifted peers, so often remain unidentified. *Type IV: The Dropouts* are resentful, angry, and disengaged from being persistently overlooked/failed by the school system. *Type V: The Double-Labelled (Twice/Multi-Exceptional)* are of primary interest for this study. These learners are mostly overlooked for gifted programmes as they typically do not display the behaviours that schools look for as gifted indicators. They may be disruptive, have poor handwriting, or other deficits that make it difficult to complete school tasks. Their inability to live up to expectations can lead to frustration and low self-esteem. Finally, *Type VI: The Autonomous Learner* is a status achieved by a minority of gifted students—they are confident, highly-motivated, well-respected and positive self-concepts (Betts & Neihart, 1988).

2.4.4. Māori and Pasifika Conceptions of Giftedness. Gifted learners come from a diverse mix of backgrounds and can be evidenced in all cultural, ethnic, gender, and socio-economic groups (Gindy, n.d.; MOE, 2012; White, 2014). Studies examining Māori and Pasifika concepts of giftedness have increased our understanding of how to identify and work with Māori and Pasifika students (Bevan-Brown, 2009; Kronborg, 2018; Macfarlane et al., 2010; Miller, 2005; Webber, 2011; White, 2014). Furthermore, these works have clarified the need for socio-cultural definitions of giftedness in New

Zealand (Kronborg, 2018). Traits such as perfectionism, excellent memory, rapid learner, reasons well, perseverance, and sensitivity are regarded as characteristics of giftedness across many different cultures (MOE, n.d.-a; Silverman, 1993; White, 2014). Māori concepts of giftedness that differ from these cross-cultural characteristics are often non-academic; rooted in Māori traditions/values; and centred around humanistic traits, interpersonal relationships, and spiritualism (Kronborg, 2018; Mahaki & Mahaki, 2007; Webber, n.d.).

Māori are a diverse people, and the cultural indicators for giftedness vary across different communities, so there is no single comprehensive Māori concept of giftedness (Bevan-Brown, 2011; Blackett, 2012; Webber, n.d., 2011). Nevertheless, some prominent characteristics or strengths associated with giftedness in Māori culture include Māori knowledge (*whaikōrero*[iii], *whakapapa*[iv], and *waiata*[v]); traditional arts (weaving or carving); *manaakitanga*[vi] (generous, hospitable, or altruistic); mana[vii] (prestige); communication skills; and high moral values (Bevan-Brown, 2004; Macfarlane & Moltzen, 2005; Mahuika, 2007; Webber, 2011; White, 2014).

Research into the cultural indicators for giftedness in Pasifika students in New Zealand is still relatively new territory (Faaea-Semeatu, 2011). In 2009, Faaea-Semeatu explored the concept of giftedness across the diverse Pasifika groups, identifying the commonalities and cultural identifiers of giftedness that reflect the "multiple identities and varying essences of Pasifika students" (p. 117). Pasifika identifiers of giftedness are analogous to those recognised by Māori, with a focus on relationships, leadership, and commitment to excellence. However, Pasifika perceptions of giftedness are mainly embedded in the family, rather than school, and place high regard on church affiliation, and an ability to adapt to New Zealand or Pasifika thinking and move confidently between these two worlds (Faaea-Semeatu, 2011; Miller 2005).

2.5. Conceptualisations and Definitions of Disability.

The term 'disability' encompasses a myriad of syndromes, disorders or impairments that can all impede a child's ability to learn. The gifted child can have one or more co-occurring physical, sensory, learning, or communication disabilities; likewise, they can have behavioural, social, and emotional disorders (Pfeiffer & Foley-Nicpon, 2018; Robinson, Shore & Enersen, 2007). The severity of these comorbid disabilities that accompany the child's giftedness is unique for each twice-exceptional learner, ranging from "quite mild and almost imperceptible to severe and debilitating" (Pfeiffer & Foley-Nicpon, 2018, p. 105).

A review of the literature reveals diverging opinions about which disabilities come under the banner of twice-exceptionality. Barber and Mueller (2011) argue that many twice-exceptional studies adopt a narrow focus as they concentrate solely on gifted learners with co-existing specific learning disabilities, thereby excluding gifted students with attention, social, or emotional conditions that impede their learning. This restricted focus can be seen in Baum and Owen's (1988) research, which identified distinct differences in the traits and characteristics of gifted learning-disabled students compared with high-ability students and learning-disabled students. Also, Coleman (2001) focused exclusively on gifted males with learning disabilities. Likewise, Krochak and Ryan's (2007) and Buică-Belciu and Popovici's (2014) academic papers on the identification of twice-exceptional learners both specifically focus their discussion on high-intellect students with learning deficits in reading, writing, or phonemic awareness. However, there has been a shift of opinion in recent years, and twice-exceptional learners are increasingly identified as a heterogeneously diverse group with a broad mix of gifted strengths and a variety of co-occurring disabilities (Foley-Nicpon, 2015; Josephson, Brawand, & Owiny, 2017; Ng et al., 2016; Prior,

2013). This study endorses the latter more progressive and inclusive interpretation of twice-exceptionality.

It is not feasible within the scope of this thesis to offer an overview of every disability and disorder that can affect twice-exceptional children. However, the disabilities most pertinent are briefly outlined.

2.5.1. Specific Learning Disabilities (SLD). Specific learning disabilities (SLD) are neurodevelopmental disorders that cause persistent problems in one (or more) of the three major academic areas of reading, writing, and maths, which are fundamental to the child's ability to learn (American Psychiatric Association [APA], 2018; Maki & Adams, 2019). Students with SLD demonstrate an unexpected and significant discrepancy between their general intellectual ability and their achievement in a specific academic domain (Fletcher et al., 2002; McCoach, Kehle, Bray, & Siegle, 2001; Scanlon, 2013). Before the release of the Diagnostic and Statistical Manual of Mental Disorders–Fifth Edition (DSM-5), SLD was divided into individual disorders, such as dyslexia, dysgraphia, dyscalculia, and processing disorders (McDowell, 2018). However, the DSM-5 changed the criterion, and SLD is now a single, overarching diagnosis of deficits that impact academic achievement (APA, 2013). The higher academic potential and achievement of gifted students with SLD (twice-exceptional) students means their specific learning disorder is often harder to identify than the learning deficits of non-gifted peers (Brody & Mills, 1997; McCoach et al., 2001). Failure to notice SLD can lead to serious, long-term problems that extend outside of academic performance; therefore, early identification of SLD is critical for the academic success and social-emotional well-being of the student (Brody & Mills, 1997; Buonomo, Fiorilli, Geraci, & Pepe, 2017).

2.5.2. Generalised Anxiety Disorder (GAD). Generalised anxiety disorder (GAD) is one of the most common mental health conditions among children and adolescents, and is commonly associated with other comorbid disorders/conditions, including obsessive-compulsive disorder, social anxiety disorders, high-sensitivity and depression (Aron, 2010; Hearn et al., 2017; Kim et al., 2019; Panganiban, Yeow, Zugibe, & Geisler, 2019; Schuler & Peters, 2008). GAD is characterised by worry or apprehension that is excessive and persistent, difficult to control, and interferes with daily life and activities (APA, 2017a; Wilkinson, Freeston, & Meares, 2011). The intense anxiety progressively increases over time, making GAD an insidious disorder (Panganiban et al., 2019). Initially, children with GAD may not exhibit outward signs of their anxiety, meaning their internal worry can often be overlooked (Rynn & Franklin, 2002). However, for most individuals with GAD, the constant anxiety tends to be supplemented by overt physical manifestations, including restlessness, irritability, headaches, trouble concentrating, fatigue, or sleep disturbance (APA, 2017a; Foa & Andrews, 2006).

Children with GAD are frequently described as “little adults” (Rynn & Franklin, 2002, p. 155) as the source of anxiety/worry tends to be on everyday concerns, such as health, school performance, and chores (see also Johnston & Iarocci, 2017). While these concerns may seem insignificant to others, for those debilitated by GAD these everyday matters can become a source of inordinate stress; minor setbacks can feel like real catastrophes, and the child gets locked into a spiral of worry (Baum et al., 2017; Wilkinson et al., 2011). This manifestation of worry that is unfounded or not in proportion to the situation has been described by Foa and Andrews (2006) as the hallmark of GAD. Early diagnosis and treatment of GAD are vital; left untreated, GAD

can lead to academic underachievement, social-emotional difficulties, substance abuse, and other mental health issues (Johnston & Iarocci, 2017; Panganiban et al., 2019).

2.5.3. Obsessive-Compulsive Disorder (OCD). The DSM–5 states the primary diagnostic criteria for OCD is the presence of obsessions and/or compulsions that consume over one hour per day and cause distress or serious impairment to everyday functioning (APA, 2013; Tobin, 2018). Prior to the DSM-5, OCD was classified as an anxiety disorder. However, in the DSM-5, an independent obsessive-compulsive related disorders classification was created for OCD, together with body dysmorphic disorder, hoarding disorder, excoriation disorder (skin-picking) trichotillomania (hair-pulling), and tic disorders (APA, 2013; Johnco & Storch, 2018). Obsessions are the recurrent and persistent thoughts, impulses, or images that are intrusive and cause severe distress, anxiety, or disgust, while compulsions are the repetitive behaviours that the individual feels impelled to perform to prevent/alleviate distress or feared situations (APA, 2013, 2017b). In extreme cases, this continual repetition of rituals can take over and prevent an individual with OCD from functioning in school, at work, or in day-to-day activities (APA, 2017a; Tobin 2018). OCD is often overlooked and undiagnosed in children due to the secretive nature of OCD symptoms and the high rates of comorbidity, making differential diagnosis problematic (Geller & March, 2012). Nonetheless, for children, OCD can be a chronic and disabling disorder, causing significant harm and distress to the child and their family members (Garcia-Delgar et al., 2018; Stewart et al., 2017).

2.5.4. Autism Spectrum Disorder (ASD). Autism spectrum disorder (ASD) is the overarching term for a cluster of complex and pervasive neurological disorders which impair social communication and interaction, and are typified by restricted or repetitive behaviour patterns, interests or activities (APA, 2013; Weiss, Baker & Butter, 2016). The term *spectrum* is used to represent the differences in symptom severity and

to signify the intra-individual variance as the presentation of ASD can change according to context, and over time (Ministries of Health & Education, 2016; Weiss et al., 2016). Children with ASD can have significant deficits that impact heavily on their social-emotional well-being and can cause stress to those responsible for their care and education (Ministries of Health & Education, 2016). Children with ASD find it much harder than their typically developing peers to navigate and interpret the social worlds in which they exist and find it difficult to make friendships with same-aged peers (Foley-Nicpon, Doobay, & Assouline, 2010). These challenges are further intensified in gifted learners with ASD (twice-exceptional) due to the asynchrony between their intellectual and developmental abilities (Assouline, Foley-Nicpon & Doobay, 2009). Of particular interest to this study is the subtype of Asperger's, which does not have the language impairment associated with high-functioning autism and is usually regarded as the highest functioning form of ASD (Asperger, 1991; Grollier, Leblanc, & Michel, 2016).

The DSM-5 reclassified ASD as a single spectrum disorder (Broadstock, 2014). In doing so, the four distinct subtypes of ASD—autistic disorder, Asperger's disorder/syndrome, childhood disintegrative disorder, and pervasive developmental disorder not otherwise specified—all became subsumed under the ASD banner (Broadstock, 2014). This reclassification has caused considerable debate; most notably, the inclusion of Asperger's under ASD has created a "furore among researchers, clinicians, autistic people and parents alike" (Kenny et al., 2016, p. 2; see also Kite, Gullifer, & Tyson, 2013). Additionally, in recent years, a section of the autistic community has pushed to remove the negative descriptor of *disorder* from ASD, instead, preferring to call it a *condition* which is thought to have fewer negative connotations (Kenny et al., 2016). These views are in line with the concept of *neurodiversity,* which regards autism as one form within a diversity of human minds, as

opposed to the deficit model that views individuals with autism as 'broken' and in need of fixing (Kennedy, Banks, & Grandin, 2011; Robertson, 2010). Nevertheless, the debate about the preferred descriptor of autism is one that continues so, for this study, the term autism spectrum disorder (ASD) will be utilised as this follows the most recent guidelines provided in the DSM-5 and is the current terminology endorsed by the New Zealand Ministries of Health and Education.

2.6. Definitions of Twice-Exceptionality.

The multifaceted nature of twice-exceptional learners makes them difficult to define (National Education Association, 2006; Weinfeld et al., 2013). Nonetheless, it is widely accepted that twice-exceptional refers to individuals who have gifted abilities while also being challenged by one or more co-occurring disabilities (Assouline, Foley-Nicpon, & Huber, 2006; Ronksley-Pavia, 2015). In recent years, some detailed definitions of twice-exceptionality have been put forward by theorists such as Reis et al. (2014). However, a conclusive definition of twice-exceptionality has still to be agreed on by both theorists and practitioners in the field (Baldwin et al., 2015; Ng et al., 2016; Ronksley-Pavia, 2015).

Regardless of the conflicting opinions in the literature, there is a need to offer an explicit definition of what is meant by the term twice-exceptional in this study to ensure a "shared understanding" with the reader about the population under investigation (Ronksley-Pavia, 2015, p. 319). Most of the existing definitions of twice-exceptionality derive from international sources, and the recent all-encompassing definition offered by Reis et al. (2014) incorporates legislation that is not applicable for use in New Zealand. Hence, this study uses Betts and Neihart's (1988) definition, endorsed by the MOE, which describes twice-exceptional as learners whose special abilities are masked by learning, behavioural, or physical disabilities.

2.7. Conceptualising Twice-Exceptionality Through a New Lens

Using the metaphor of *making green,* Baum et al. (2017) discuss twice-exceptional learners as having *complex challenges* (yellow) and *distinguishing strengths* (blue). When combined, these conflicting exceptionalities create green (twice-exceptionality) and "creates a paradoxical, often conflicting, yet sometimes symbiotic relationship within the individual" (Baum et al., 2017, p. 17). This description of the constant internal battle and conflicting dialogue that twice-exceptional learners experience stands out in a sea of literature on twice-exceptionality. The model (see Figure 2.3) also encompasses the dynamic and changeable nature of twice-exceptionality; the specific blend of green for each twice-exceptional learner is not static. Instead, the child is continuously moving along a continuum of yellow to blue, influenced by changes in time, environment, and conditions. Consequently, twice-exceptional learners come in a vast array of greens (Baum et al., 2017).

Figure 2.3. **Visual Representation of Twice-Exceptionality. Adapted from "Making greens", by S. M. Baum, R. M. Schader, & S. V. Owen, 2017, *To Be Gifted & Learning Disabled: Strength-Based Strategies for Helping Twice-Exceptional Students with LD, ADHD, ASD, and More.* Copyright 2018 by Susan Baum, Bridges Academy.**

Twice-exceptionality has also been described in terms of an equation (Baum et al., 2017). In their *2e equation,* Baum et al. (2017) offer clarity about the components that make up the yellows and blues of twice-exceptionality (see Figure 2.4) in a clear,

visual format that can be used by educators universally. The model identifies the broad mix of disabilities that can accompany giftedness to make up twice-exceptionality.

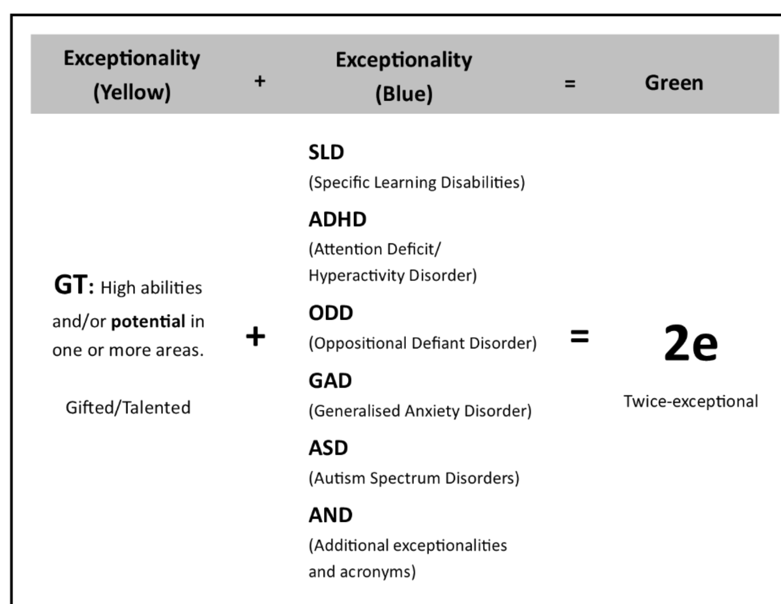

Figure 2.4. **The 2e equation. Reproduced with permission from Prufrock Press. From "The 2e equation", by S. M. Baum, R. M. Schader, & S. V. Owen, 2017, *To Be Gifted & Learning Disabled: Strength-Based Strategies for Helping Twice-Exceptional Students with LD, ADHD, ASD, and More* (p. 20). Copyright 2018 by Prufrock Press.**

2.8. History of Twice-Exceptionality

Twice-exceptional is a recent concept within the fields of education and psychology (Baldwin et al., 2015; Pfeiffer & Foley-Nicpon, 2018). The earliest reference to gifted children with deficiencies was made in 1923 by Leta Hollingworth, a widely-acknowledged pioneering psychologist (Hansen, 2009; Silverman, 1993, 2013). Hollingworth is celebrated in the literature for her genuine passion for helping and understanding children, and her in-depth studies of gifted children (Kaufman, 2018; Kaufman & Doutsiopoulos, 2013). During her work administering intelligence tests at the Clearing House for Mental Defectives, Hollingworth (1923) observed that some of the so-called *defective* children achieved average or high intelligence on the IQ scales (Kaufman, 2018).

During the 1940s, two prominent papers were put forward introducing the notion that some children with high-intellect could also have debilitating weaknesses in social ability, negatively impacting on their learning (Foley-Nicpon & Candler, 2018). In 1943, Kanner published a paper detailing eleven cases of children with "fascinating peculiarities" (1943, p. 217). The children in Kanner's study, whom he labelled *autistic,* each demonstrated very high intelligence and a mix of severe social inabilities (Kaufman, 2018; Pfeiffer & Foley-Nicpon, 2018). Similarly, in 1944, Hans Asperger conducted a case study of four socially-challenged young boys with remarkable logical thinking and fixations on a specific topic (Asperger, 1944, 1991; Baldwin et al., 2015; Pearce, 2005). Although the children in both Asperger's and Kanner's studies showed commonality in many characteristics, a major point of difference was communication abilities (Pearce, 2005). While Kanner (1943) observed mutism or minimal use of language in the children he studied, Asperger (1944, 1991) stated that his participants spoke fluently, much like mini-adults (Happé, 1995; Pearce, 2005).

The 1960s to 1970s saw a surge in interest in the field, with a variety of theorists writing about gifted students with learning disabilities. Gallagher (1966) undertook an in-depth review of all the gifted research on behalf of the Illinois State Office to inform the development of their gifted provision. Of great consequence to the field of twice-exceptionality, Gallagher's review included several studies on underachievement in gifted students and provided valuable information on the differing identification procedures, characteristics and interventions used for underachievers. Subsequently, Elkind's (1973) highly-acclaimed research paper was one of the first to recognise the identification and learning needs of twice-exceptional children, and began with the attention-grabbing statement "The topic of this paper seems like a contradiction, a dichotomy, but in reality individuals embodying this apparent paradox do exist and

perform outstandingly" (p.1). Similarly, Maker's (1977) book on providing programmes for *gifted handicapped* learners was one of the earliest texts to recognise that twice-exceptional children are not restricted to high-intellect students with specific learning disabilities.

According to Kalbfleisch (2011), it was not until the 1980s to 1990s that the concept of twice-exceptionality fully emerged, with several books authored about the learning needs of gifted children with disabilities (Whitmore, 1980; Whitmore & Maker, 1985). These texts inspired the work of Tannenbaum and Baldwin (1983), who used the expression, *paradoxical learner,* which has since become a hallmark of twice-exceptionality (Kalbfleisch, 2011). Moreover, renowned twice-exceptional research emerged during this period. In 1984, Baum published her well-cited paper on the importance of using enrichment programmes (strength-based learning) to meet the needs of learning-disabled gifted learners. Subsequently, Baum and Owen's (1988) empirical study investigated the differences between twice-exceptional, gifted, and learning-disabled students and found that twice-exceptional learners had a lower academic self-concept than other peer groups.

In the 1990s. three prominent twice-exceptional studies were published. Coleman (1992) studied how young twice-exceptional males dealt with frustration; Vespi and Yewchuk's (1992) phenomenological study looked at the social-emotional characteristics of twice-exceptional boys; and Reis, Neu, and McGuire's (1997) case study examined twice-exceptional college students, all of whom recalled negative school memories. These three studies will be discussed in detail in the social-emotional needs of twice-exceptional learners section.

2.9. Current Understanding of Twice-Exceptionality

Despite significant growth in the interest in twice-exceptionality in the last two decades, there is still very little empirical research exploring these learners and their needs (Foley-Nicpon, 2015; Lovett & Sparks, 2013; Pfeiffer & Foley-Nicpon, 2018). A quantitative synthesis of the empirical studies on twice-exceptionality by Lovett and Sparks (2013) highlighted an insufficiency of empirical research in the field; although their review generated 940 potential abstracts, only 49 of these studies (5.2%) were empirical. Furthermore, the empirical studies mostly had small sample sizes or were case studies, and more than one third were dissertations. Hence, the authors suggest there is minimal data to support the comparatively voluminous literature. Based on their findings, Lovett and Sparks question the existence of the construct of twice-exceptionality in their discussion; however, they conclude by verifying twice-exceptionality as a valid construct but assert the need for better identification procedures.

Likewise, in their recent text, Foley-Nicpon and Candler (2018) claim that a search for twice-exceptionality under *Google Scholar* will yield more than 2000 results; however, much of this existing knowledge comes from small-scale and unrepresentative clinical samples. The authors state, "There is not even one prospective, epidemiological study that has examined a large community sample of nonreferred cohorts of gifted children to explore the aetiology, pathogenesis, course, and prevalence for those who are twice-exceptional" (Pfeiffer & Foley-Nicpon, 2018, p. 105). Kalbfleisch (2011) confirms epidemiological information is difficult to collate as twice-exceptional learners exist across multiple classifications of disability. Nevertheless, he asserts there is enough evidence within the empirical studies, case studies, and educational practice "to advocate and serve these special gifted children, poised to contribute to the world in

extraordinary ways with their unique skills and talents” (p. 358). In Aotearoa New Zealand, an understanding of twice-exceptionality is still in its infancy with little research conducted within a New Zealand context (Ng et al., 2016).

2.9.1. Awareness of Twice-Exceptionality Among Education Professionals. Although researchers in the field have been aware of twice-exceptionality for some time, there is still limited awareness among teachers and other education professionals about twice-exceptional learners and their needs (Bracamonte, 2010; Lee & Ritchotte, 2018; Wormald & Vialle, 2011). Moreover, the concept of twice-exceptionality is mostly a nonentity beyond the realm of gifted education (Foley-Nicpon, Assouline, & Colangelo, 2013; Robertson, Pfeiffer, & Taylor, 2011). In New Zealand, the MOE has included sections on twice-exceptional learners in their current literature and website (MOE, n.d.-c, 2012) but has not undertaken any research to obtain an understanding of these unique learners in the New Zealand context. Hence, there is an over-reliance on international research to guide best practice for twice-exceptional learners (Ronksley-Pavia, 2015). As previously discussed, every school in New Zealand has the responsibility of developing their own definition, identification protocol, and strategies for working with gifted children, including twice-exceptional learners. However, it is evident from Riley and Bicknell’s (2013) review of gifted provision in New Zealand schools that twice-exceptional children are being overlooked. Of the 225 schools investigated, only eleven recognised that students could have multiple exceptionalities, and only one school used the term twice-exceptional in their definitions (Riley & Bicknell, 2013; Munn, 2016). Given these findings, it is not surprising that many twice-exceptional children are unidentified or under-represented in gifted programmes in the school system in New Zealand (Leggett et al., 2010; Munn, 2016; Ng et al., 2016; Sturgess, 2011).

2.10. Characteristics of Twice-Exceptional Learners

The characteristics and behaviours commonly associated with twice-exceptionality have been well researched and documented in the literature (Baldwin et al., 2015; Brody & Mills, 1997; Nielsen, 2002; Wormald, 2011). The eclectic mix of traits, characteristics and personality types that make up twice-exceptional learners becomes apparent when we consider some of the well-known twice-exceptional prodigies that have overcome their disabilities and honed their talents (Hughes, 2017). These include Walt Disney, Richard Branson and Steven Spielberg all of whom have (had) dyslexia; Daniel Radcliffe who has a motor learning disability (dyspraxia); Justin Timberlake who has ADHD; and Einstein who was thought to have an autism spectrum disorder (Fetzer, 2005; Hughes, 2017).

Twice-exceptional learners are predominantly characterised by their acute asynchronous development (Gilman & Peters, 2018; Josephson, Wolfgang, & Mehrenberg, 2018; Ottone-Cross et al., 2017). This asynchrony typically presents in the form of a stark mismatch in intellectual, physical, and social-emotional development; the learner exhibits unusual maturity in some areas and immaturity in others (Silverman, 2009). Other characteristics and behaviours commonly used in the literature to describe twice-exceptional children include unorganised, easily distracted, messy, and often fail to complete tasks (Ruban & Reis, 2005; Wasserman, 2013). On the other hand, they are also portrayed as creative, persistent, curious, have a thirst for knowledge, capable of higher-level thinking, early readers, and their oral communication is usually more advanced than their written communication skills (Nielsen, 2002; Wasserman, 2013)

Twice-exceptional learners are distinctly different from other learners. Research shows the characteristics of twice-exceptional learners to be atypical of gifted students and students with disabilities (Foley-Nicpon et al., 2011; Ottone-Cross et al., 2017). The

inherent differences between gifted and twice-exceptional learners are shown by Baldwin et al. (2015), who collate a list of recurrent gifted characteristics and behaviours and illustrate how a co-existing disability might affect these attributes. For instance, gifted students regularly exhibit advanced verbal ability, whereas twice-exceptional learners can also be advanced verbally but may struggle with written language. Also, gifted learners are credited with long attention spans and intense concentration capability; while twice-exceptional learners may have attention difficulties but may be able to demonstrate sustained concentration in areas of interest. Balwin et al.'s exemplars offer clarity on how gifted indicators can re-form when other exceptionalities combine with the giftedness, thus confirming the developmentalist approach that giftedness is malleable and changeable over time and environment (Tapper, 2012).

Similarly, prominent theorists in the field assert the importance for educators to consider the strengths and weaknesses of twice-exceptional children simultaneously for an understanding of how to meet their needs (Pfeiffer & Foley-Nicpon, 2018; Ruban & Reis, 2005). For instance, they may have creative and highly-developed ideas *but* struggle to get these down on paper, so if they are allowed to communicate in a method that suits their needs, they may express a remarkable depth of knowledge (Baum et al., 2017). Similarly, the twice-exceptional child may have very high standards or perfectionist traits, *but* hand in sloppy and unfinished work; or, they may have a strong desire to fit in *but* do not have a developed sense of social awareness or appropriateness (Baum et al., 2017; Ruban & Reis, 2005).

The literature indicates that twice-exceptional children might also be prone to the emotional intensity and sensitivities commonly associated with giftedness (Benge & Montgomery, 1996; Dabrowski, 1964). In 1964, Dabrowski published his renowned *Theory of Disintegration*, labelling these intensities/sensitivities as *overexcitabilities.*

Dabrowski presents five overexcitabilities associated with giftedness: *psychomotor overexcitability* (impulsivity, hyperactivity, and insomnia); *sensual overexcitability* (high sensitivity to touch, smell, sound, and light); *intellectual overexcitability* (voracious need for information/solving problems); *imaginational overexcitability* (vivid dreams, imagination, and confusing truth and fiction); and *emotional excitability* (fears, phobias, anxieties, feeling isolated, and depression) (Dabrowski, 1964; Probst & Piechowski, 2011; Sampson, 2013).

On their current website, the MOE (n.d.-c) presents a typical profile of a *twice-multi exceptional learner,* with a list of characteristics that can be used as indicators for schools and teachers in New Zealand for identification purposes. The strength-based characteristics include proficiency in oral communication; sophisticated vocabulary; and exceptional interest, knowledge and abilities in specific domains. The deficit-based characteristics include visual/auditory processing deficits; poor writing skills; lack of organisation; poor memory; limited attention; significant variability in performance across differing tasks; and negative self-concept (MOE n.d.-c). The twice-exceptional characteristics identified by the MOE are well-supported in the literature as common twice-exceptional traits (Callard-Szulgit, 2008; Fetzer, 2005; Macfarlane, 2000; Trail, 2011). However, the 2018 update to the MOE website for gifted learners significantly reduced the content relating to twice-exceptional children, and the current information for teachers and parents lacks the necessary detail to identify and understand these heterogeneous learners.

While a discussion of the typical characteristics of twice-exceptionality gives us some insight into these complex learners, it should be recognised that this list of traits is only the tip of the iceberg. There is no typical profile of a twice-exceptional learner (Leggett et al., 2010; 2e Center, 2015). Each twice-exceptional child is moulded by their

unique blend of strengths and challenges, creating a rich diversity of characteristics and needs for these students (Barnes, 2015; Buică-Belciu & Popovici, 2014; Foley-Nicpon, 2015; Kirk et al., 2012). Moreover, it is rare for the gifted child to present with one overt and clearly established disability. Instead, twice-exceptional learners can have multiple disorders/conditions and can present with an array of traits and symptomology (Leggett et al., 2010; Pfeiffer & Foley-Nicpon, 2018). Consequently, no two students with dual exceptionalities are identical (Hughes, 2017; Lee & Ritchotte, 2018).

2.11. The Hidden Nature of Twice-Exceptionality: Problems with Identification

Early identification of twice-exceptional children is crucial for their academic success and reduces the risk factors for low self-confidence, poor self-efficacy, and school disengagement (Fetzer, 2005; Maddocks, 2018; Reis et al., 2000; Sturgess, 2011). However, a review of the twice-exceptional literature and research exposes the scarcity of early identification for these complex learners (Foley-Nicpon et al., 2011; Lovett & Sparks, 2013). Research has shown twice-exceptional children are often overlooked in primary school, with identification of their giftedness and/or disabilities occurring in later schooling, if identified at all (Kyung-Won, 1990; Reis et al., 1997; Ruban & Reis, 2005). The infrequency of early identification is exposed in Ferri, Greg, and Heggoy's (1997) research comparing twice-exceptional and learning-disabled students. Ferri et al. found that twice-exceptional students were typically identified later in schooling than learning-disabled students, with many (41%) identified in college/university years, having been overlooked in the school system altogether. Similar findings were reported by Kyung-Won (1990) in his earlier study comparing twice-exceptional and gifted underachievers, prompting him to describe twice-exceptional learners as an "invisible, underserved subgroup of the gifted" (p. 3).

In the last decade, two major empirical reviews of all twice-exceptional research have been published. As part of their reviews, both Lovett and Sparks (2013) and Foley-Nicpon et al. (2011) explored the issues around identifying twice-exceptional learners and examined the inconsistencies across the studies in relation to the twice-exceptional criteria and screening methods used for identification. The quantitative synthesis of empirical studies conducted by Lovett and Sparks (2013) specifically focuses its attention on the identification procedures and the performance (IQ and achievement test scores) of twice-exceptional learners. Conversely, the issue of identification is a smaller subset of the empirical review conducted by Foley-Nicpon et al. (2013). Both works indicate that researchers mostly attribute the failure to notice twice-exceptional learners to one (or more) of four key factors: discord about twice-exceptional and gifted definitions (Assouline, Foley-Nicpon, & Whiteman, 2010; Brody & Mills, 1997); the hidden nature of twice-exceptionality caused by masking effects (Baldwin et al., 2015; Dare & Nowicki, 2015); a lack of consensus regarding the best screening methods for identification (Amend, 2018; Gilman et al., 2013; Krochak & Ryan, 2007; Maddocks, 2018; McCoach et al., 2001); and a sustained lack of awareness about twice-exceptionality among educators (Foley-Nicpon et al., 2013; Lee & Ritchotte; 2018; Munn, 2016; Riley & Bicknell, 2013; Robertson et al., 2011).

2.11.1. Masking Effects. The concept that gifted strengths mask learning disabilities (and vice-versa) is a fundamental principle in gifted education (McCoach et al., 2001). Proponents of the phenomenon of *masking* believe that during early schooling, the exceptionalities of twice-exceptional learners are often hidden, with their gifted abilities compensating for their disabilities; their disabilities dwarfing the gifted potential; or both masking each other, so neither need is identified or addressed (Baldwin et al., 2015; Baum, 1989; Baum, Owen, & Dixon, 1991; Dare & Nowicki,

2015; Maddocks, 2018; Montgomery, 2009; Ottone-Cross et al., 2017). However, despite the widespread acceptance of masking within the literature, there has been no obvious empirical research conducted that underpins this theory. Hence, in their empirical review of twice-exceptional research, Foley-Nicpon et al. (2011) assert the need for further exploration into the occurrence of masking effects to validate its existence. Nonetheless, based on existing literature, the concept of masking and the three categories of twice-exceptional learner are pivotal to our current understanding of twice-exceptional learners so will be examined in more detail.

Learners Identified as Gifted with Unidentified Disabilities. These learners are recognised for their remarkable gifted strengths during early schooling, with their gifts masking their disability; therefore, there is an expectation from teachers, parents, and themselves that these learners will succeed (Assouline et al., 2010; Baum, 1989; MOE, n.d.-c; Sturgess, 2011). However, the incongruity between their anticipated performance and actual achievement increases as they advance through school, and it becomes harder to use their high-abilities to compensate for their deficiencies, so their school work progressively deteriorates, and they start to fall behind their peers (Barnes, 2015; Baum et al., 2017; Robinson et al., 2007). Often, the exceptionality causing this decline is not recognised for years, if at all. Instead, these students are branded as underachievers, lazy, or unmotivated, leaving them feeling frustrated and misunderstood (Dare & Nowicki, 2015; Foley-Nicpon, 2015; MOE, n.d.-c). In time, this can lead to self-doubt, low self-esteem, and depression (Reis et al., 2000). Notably, this twice-exceptional group are not usually referred for assessment of their deficiencies, as while these students are failing to realise their potential, they are not failing school (Kalbfleisch, 2011; McCoach et al., 2001).

Learners Identified Only for Deficits. This group of learners are noticed for their weaknesses. They are diagnosed with a disability/disorder, but their high-abilities are unseen (Brody & Mills, 1997; Dole, 2000; Nielsen, 2002). Once labelled with a disability, the education focus is normally on remediating this deficit until the child is within the standards for their year group before the consideration of any gifted potential (Barnard-Brak, Johnsen, Hannig, & Wei, 2015). Bianco's (2005) highly-acclaimed research reveals how teachers are negatively influenced by disability labels when making referrals to gifted programmes. Teachers were randomly shown one of three vignettes describing a student with gifted characteristics. The vignettes were identical, except the student was described as having a learning disability, or an emotional and behaviour disorder (EBD), or no added label/disorder. Participants were asked whether they would refer the student to a gifted programme as well as five "distractor questions" (Bianco, 2005, p. 288). The results showed significantly lower teacher expectations and fewer referrals to gifted programmes for students labelled with a disability.

Bianco's (2005) findings are concerning as deficit-based approaches, as opposed to the strength-based teaching advocated for successful learning, places twice-exceptional learners at serious academic risk (Baum et al., 2014; Dole, 2000; Weinfeld et al., 2013). Low self-esteem, coupled with boredom from incongruous curricular activities and frustration from their asynchronous skills, can lead to these twice-exceptional students exhibiting a range of social-emotional and behavioural problems, further concealing their gifted abilities (Amend & Peters, 2015; Montgomery, 2009; Reis et al., 2000; Webb et al., 2005; Zentall, 2014).

Learners Not Identified for Gifts or Disabilities. Most twice-exceptional students fall into the third group, who can remain 'invisible' in the school system for several years, if not permanently (Brody & Mills, 1997; Dare & Nowicki, 2015;

Josephson et al., 2017; Kyung-Won, 1990). The masking effects of their divergent exceptionalities mean these twice-exceptional children are performing averagely, so they progress through school without raising any major concerns about their learning needs (Baldwin et al., 2015; King, 2005; Trail, 2011). According to Baum et al. (2017), these learners are in “an ongoing tug of war” (p. 47) as their gifted abilities mask their deficits, and their disabilities conceal their gifted abilities. Constant underachievement in the classroom can lead to low self-efficacy, labelling themselves as ‘stupid’, lack of motivation, and disillusionment with school (Barnes, 2015; Reis et al., 2000). Hence, this category of twice-exceptional learners is thought to be at a “critical educational disadvantage” because neither exceptionality has been identified or provided for with specialist instruction, leaving them prone to a host of potential social-emotional issues (Rivera, Murdock, & Sexton, 1995, p. 34).

2.11.2. The Role of Parents in Recognising Twice-Exceptionality. Research has shown parents to be reliably accurate in recognising their child’s abilities and needs (Besnoy et al., 2015; Macfarlane, 2000; Silverman, Chitwood, & Waters, 1986; Wormald, Vialle, & Rogers, 2014). This accuracy is demonstrated in a study by Louis and Lewis (1992), who investigated the correlation between parental perceptions about the indicators of giftedness in their child and the child’s actual measured ability level. Their results showed that 61% of the children tested had an IQ in the superior or very superior ranges (scoring between 132 to 185). As only 2% of the population is statistically expected to score above 132, Louis and Lewis argue that the 61% who achieved this score confirms that parents are mostly accurate in their judgments of their children’s intellectual ability and gifted strengths. The parents of gifted children typically recognise their children are bright in their early years before they start school, and their involvement in identification is often critical to the early diagnosis of their

child’s exceptionalities (Macfarlane, 2000; Margarain & Farquar, 2012; Neumeister, Yssel, & Burney, 2013; Rivera et al., 1995).

Likewise, research shows that the parents of twice-exceptional children are also quick to notice deficits, when their bright child starts to fall behind their peers in certain areas, such as written language, spelling, or reading (Macfarlane, 2000; Neumeister et al., 2013; Sturgess, 1999a). This type of knowledge is vital for educators when building a picture of the twice-exceptional child, given that gifted behaviour before entering school and subsequent failure in school is often a key indicator of twice-exceptionality (Fetzer, 2005; Rivera et al., 1995). Studies by Besnoy et al., (2015), Neumeister et al. (2013) and Dare and Nowicki (2015) confirm the dominant role of parents in the early detection of their child’s gifts and disabilities, with the parents being the initiators in the identification process. The parents recalled the frustration and struggles they faced having to advocate for their children in the school system, forcing them to obtain private assessments to understand the complex needs of their children better. Their findings confirm the integral role of parents in identifying their child’s twice-exceptionality and show that twice-exceptional learners are overlooked and under-diagnosed in the school system. Furthermore, they raise concerns about how twice-exceptional children from less privileged families are identified and supported in the school system as the parents in their studies were all working professionals who could afford a private assessment for their children (Besnoy et al., 2015; Neumeister et al., 2013; Dare & Nowicki, 2015).

2.12. The Social-Emotional Needs of Twice-Exceptional Learners

> Neglected or suppressed strengths are like infections under the skin; eventually they cause serious damage.
>
> (Levine, 2002, p. 300).

The continued failure to identify the exceptionalities of twice-exceptional learners places these students ‘at-risk’ as their complex learning and social-emotional

needs are not being met in the classroom (Baum et al., 2017; Kirk et al., 2012; MOE, n.d.-c; Webb et al., 2005). The literature establishes that the potential ramifications for the overlooked twice-exceptional child can be as debilitating as their diagnosed exceptionalities, leading to severe social, emotional and behavioural issues (Dare & Nowicki, 2015; Montgomery, 2009; Nielsen, 2002; Zentall, 2014). According to Barnes (2015), the long-term consequences can be catastrophic, with the twice-exceptional child being vulnerable to school refusal, school failure, social and family problems, unemployment, low socioeconomic standing and grave mental health concerns.

Twice-exceptional learners typically present with complex social-emotional needs that accompany their individual mix of exceptionalities (Barber & Mueller, 2011; Buică-Belciu & Popovici, 2014; King, 2005; Strop & Goldman, 2011). Commentary on the multifarious social-emotional needs and challenges of twice-exceptional learners is ubiquitous in the literature (Foley-Nicpon & Assouline, 2015). Nevertheless, empirical research that focuses explicitly on the social-emotional needs of twice-exceptional learners remains sparse (Barber & Mueller, 2011; Beckmann & Minnaert, 2018; Foley-Nicpon & Assouline, 2015). To date, the preponderance of twice-exceptional research has, instead, focused its attention on identification concerns (Beckmann & Minnaert, 2018; Lovett & Sparks, 2013; Foley-Nicpon et al., 2011). Research concentrating on methods to improve the academic functioning of twice-exceptional students is also prevalent, with strength-based approaches showing the most success (Assouline & Whiteman, 2011; Baum et al., 2014; Olenchak, 2009; Willard-Holt et al., 2013).

2.12.1. Social and Emotional Concerns: Early Research. In the 1990s, twice-exceptional learners were given a voice through the pioneering works of Coleman (1992), Reis et al. (1997), and Vespi and Yewchuk (1992). In agreement with the researcher for this current study, the authors asserted that the best method of obtaining

an accurate portrayal of the lived experiences of twice-exceptional students was to allow them to share their personal stories (Reis et al., 1997; Vespi & Yewchuk, 1992). Participants' reflections revealed intense frustration and an overwhelming fear of failure as a result of repeated negative academic experiences from their conflicting high-abilities and disabilities (Coleman, 1992; Vespi & Yewchuk, 1992); feelings of anger, sadness and anxiety (Vespi & Yewchuk, 1992); and painful or distressing school memories (Reis et al., 1997).

The participants in Reis et al.'s (1997) study reported negative teacher interactions with at least one teacher, mostly in the form of being accused of being lazy or not working hard enough, which had a destructive influence on their education and self-esteem. Nevertheless, these negative school experiences were set within the context of also having many positive out-of-school experiences (hobbies, passions, or sports) which promoted feelings of self-efficacy and contributed to the later success at college. Still, the twice-exceptional learners in Reis et al.'s (1997) study made it clear that this success was achieved *despite* their schooling, re-affirming their negative school experiences. In line with this, Vespi and Yewchuk's (1992) research also exposed what they term as an "interesting paradox" (1992, p. 63). Although three of the four boys in their study demonstrated positive social skills and non-verbal skills, all participants reported having major problems fitting in with peers. Another seemingly contradictory finding was that all participants were challenged with extreme learning difficulties but, surprisingly, they voiced mostly positive affirmations about their self-confidence and self-image (Vespi & Yewchuk, 1992).

Recommendations from these founding studies included the early identification of twice-exceptional learners, recognition of the integral role of parents in their child's academic success, factoring social-emotional needs into any educational programmes,

and developing their social skills (Coleman, 1992; Reis et al., 1997; Vespi & Yewchuk, 1992). The researchers also recommended the explicit teaching of coping skills to build resiliency (Coleman, 1992; Vespi & Yewchuk, 1992); professional development for educators about twice-exceptionality (Reis et al., 1997); and the use of compensation strategies (Reis et al., 1997). Although the limited by their small sample sizes and focus on males, which restricts generalisability, these early studies provide valuable insight into the perceptions, feelings, and lived experiences of some twice-exceptional children, adding to our understanding of these learners (Coleman, 1992; Vespi & Yewchuk, 1992). Moreover, these esteemed early works have been consistently used to inform research and literature on twice-exceptionality; their recommendations remain relevant in contemporary twice-exceptional theory and are pertinent to this current study of social-emotional needs of twice-exceptional learners.

2.12.2. Negative School Experiences: Frustrated and Misunderstood. The literature promotes the notion that the paradoxical relationship between the twice-exceptional child's conflicting strengths and limitations often results in them feeling powerless, highly frustrated, misunderstood, and in need of additional support in the classroom (Callard-Szulgit, 2008; Foley-Nicpon, 2015; Reis & Colbert, 2004; Reis et al., 1997; Townend & Pendergast, 2015). In her paper ratifying the importance of addressing social-emotional needs, King (2005) highlights the "frustrating dichotomies" (p. 17) of being gifted but unable to achieve, stating this can lead to fear of failure, anxiety, depression, acting out behaviours, social problems, and feelings of isolation. The social-emotional 'side-effects' of twice-exceptionality discussed by King are consistent with the findings of Coleman (1992) and Vespi and Yewchuk (1992); the twice-exceptional learners in their studies felt highly frustrated by the constant conflict

between their expectations and their achievement, with the repeated failure negatively impacting on their self-concept and self-esteem.

Subsequently, several studies have reported the frustrating paradox of twice-exceptionality and the consequential negative school experiences (Dare & Nowicki, 2015; Reis & Colbert, 2004; Townend & Pendergast, 2015). The five parents in Dare and Nowicki's (2015) study disclosed that the interaction of their children's extreme strengths and disabilities commonly manifested as tears, anxiety, self-doubt, and feelings of being different, making schooling "an exercise in frustration" (p. 215). Similarly, the three twice-exceptional boys in the case study by Townend and Pendergast (2015) all spoke about negative school experiences and feeling frustrated, conflicted, socially stressed, and disengaged because of the constant pressure to perform academically, yet being consistently being restricted by their disabilities,

The highly-negative school experiences of some twice-exceptional children are evident in the findings of Reis and Colbert (2004) and Ronksley-Pavia et al. (2019b). The participants in these studies recalled situations where they were repeatedly punished (detention/missed breaks) for failing to complete work on time, placed in special education classes, called 'lazy' or criticised by teachers, and treated in a negative or bullying manner by peers. The participants described incidents where specific teachers seemed to target them in a bullying manner intentionally, which made them feel "vulnerable and unsupported" at school (Ronksley-Pavia et al., 2019a, p. 27). Furthermore, the participants disclosed that they had few, if any, close friends, which they mostly attributed to being 'different' from their peers (Reis & Colbert, 2004; Ronksley-Pavia et al., 2019b). Although the sample size of these two studies prevents generalisation, the detail-rich narratives of lived experiences and the social-emotional challenges shared by participants serve to broaden our understanding of twice-

exceptional learners, and the insights of these researchers have extremely valuable for this current study. Moreover, also in a similar vein to this present study, the authors make a point of stating that generalisability is not the intended outcome of their research.

Accounts of negative interactions with teachers are consistently referred to in the twice-exceptional literature and research (Beckmann & Minnaert, 2018). On the other hand, research also has shown some twice-exceptional learners to have positive and supportive teachers who nurture their strengths, as opposed to focusing on their weaknesses, and provided the social-emotional support they needed to thrive (Baum et al., 2014; Beckmann & Minnaert, 2018; Vespi & Yewchuk, 1992; Wen Wang & Neihart, 2015).

2.12.3. The Self-Concept of Twice-Exceptional Learners. Research has recurrently shown that twice-exceptional learners characteristically have a lower self-concept than their gifted peers and averagely-performing peers (Assouline et al., 2010; Foley-Nicpon, Rickels, Assouline, & Richards, 2012; Reis & Colbert, 2004; Townend et al., 2014). Self-concept refers to the way individuals perceive their self-worth and encompasses the two broad domains of social self-concept and academic self-concept (King, 2005). Social self-concept relates to perceptions of personal qualities, interpersonal relationships, and appearance. Conversely, academic self-concept is a student's perception of their academic performance, level of competence, and their expectations of academic success/failure, and is thought to be critical for academic success (Cooley & Ayres, 1988; Ghazvini, 2011; Townend et al., 2014).

Twice-exceptional learners commonly present with low self-concepts. In the last decade, mixed-methods studies by Townend (2015), Foley-Nicpon et al. (2012), and Barber and Mueller (2011) all found that the twice-exceptional children and adolescents they investigated exhibited low self-concept. The twice-exceptional boys in Townend's

study all reported feeling atypical and disassociated from their peers, while two of the three participants also presented as having low academic self-confidence. Barber and Mueller's (2011) study of the social and self-perceptions of 90 twice-exceptional adolescents indicated lower self-concepts and more problematic social functioning than the adolescents in the gifted and non-identified (average) comparison groups. Similarly, the intellectually-gifted learners with ADHD in Foley-Nicpon et al.'s study self-reported having lower self-esteem, self-concepts, overall happiness, and more negative perceptions of their own behaviour than the gifted students without ADHD.

Nevertheless, low self-perception is not experienced by all twice-exceptional learners (Beckmann & Minnaert, 2018). On the contrary, research has shown some twice-exceptional learners to have a positive self-concept and high confidence levels (Baum et al., 2014; Beckmann & Minnaert, 2018; Reis et al., 1997; Ronksley-Pavia et al., 2019b; Vespi & Yewchuk, 1992). When the environment of the child is safe, supportive, encouraging, promotes high expectations, and meets their social-emotional needs, twice-exceptional children can attain academic and social confidence, and positive overall self-concept (Baum et al., 2014; Reis et al., 1997; Ronksley-Pavia et al., 2019a, 2019b).

A learning environment that nurtures the specific academic and social-emotional needs of twice-exceptional learners can affect positive change in these students (Baum et al., 2014). A case study by Baum et al. (2014) observed notable increases in the self-concept of ten students (11-13 years) who entered a strengths-based private middle school, tailored for twice-exceptional learners. The participants all reported previous negative school experiences and exhibited a range of social-emotional problems, poor self-concept, anxiety, depression, inhibition, and feelings of hopelessness. However, at graduation (2 years later), the students were significantly more able to overcome social,

emotional and cognitive challenges, their social skills were improved, and their overall self-concept had increased considerably. Baum et al. credit this positive change to providing a psychologically safe environment; allowing students time to work at their own pace; understanding asynchronous behaviours; fostering positive relationships between the students and their teachers, peers, and family; and providing a strengths-based, talent-focused learning space.

2.12.4. Social Concerns of Twice-Exceptional Learners. Twice-exceptional students are vulnerable to a variety of social issues that can hinder their development and chances for success (Barber & Mueller, 2011; Hayes, 2014; King, 2005; Trail, 2011). Their poor social skills and low self-esteem cause many twice-exceptional children to struggle with friendships or be the target of bullying (Hayes, 2014; McEachern & Bornot, 2001; Ronksley-Pavia, Grootenboer, & Pendergast, 2019a). A recent ground-breaking study published by Ronksley-Pavia et al. (2019a) is the first to explore the bullying experiences of twice-exceptional learners specifically. All eight twice-exceptional learners (ages 9 to 16) disclosed they had been the target of bullying at school on more than one occasion. For some, the bullying was persistent and was carried out by multiple perpetrators, making it inescapable. In line with previous research (Reis et al., 1997, Vespi & Yechuck, 1992), participants believed the bullying and social isolation was a consequence of being perceived as different by their peers because of their exceptionalities (Ronksley-Pavia et al., 2019a). Bullying by teachers was also reported by the participants, compounding the feelings of social isolation at school. Nevertheless, the participants' also described protective factors in the form of supportive parents, empathetic teachers, or like-minded peers which helped to reconcile some of the negative experiences (Ronksley-Pavia et al., 2019a).

Like-minded peers are essential for positive peer relations, building self-confidence, and increasing the chance of personal success for twice-exceptional children (Baum et al., 2017; Nielsen & Higgins, 2005; Trail, 2011; Wen Wang & Neihart, 2015). The findings of Wen Wang and Neihart (2015) showed like-minded peers to be more influential than both teachers and parents for improving the academic success of the six twice-exceptional boys in their study. However, it can be a challenge for twice-exceptional learners to identify a like-minded peer group at school; although they share characteristics with their gifted, disabled, and typically developing peers, their multiple exceptionalities make them fundamentally different and places them more at risk for social disconnect (Foley-Nicpon et al., 2011; McEachern & Bornot, 2001; Ronksley-Pavia et al., 2019a). Twice-exceptional learners often struggle with perceptions of being different from their peers and report feelings of isolation and alienation (Nielsen & Higgins, 2005; Reis et al., 1997; Ronksley-Pavia et al., 2019a, 2019b). If unaddressed, these feelings of isolation can lead to anger, anxiety, and depression (King, 2005; Nielsen, 2002).

2.12.5. The Duality of Social-Emotional Characteristics. Duality in the social-emotional characteristics and behaviours of twice-exceptional learners is evident in twice-exceptional research (Beckmann & Minnaert, 2018; Foley-Nipon & Assouline, 2015). On the one hand, research findings describe well-supported twice-exceptional learners as being mostly well-adjusted, with positive self-concept and social functioning (Baum et al., 2014; Reis et al., 1997; Ronksley-Pavia et al., 2019b; Vespi & Yewchuk, 1992). On the other hand, the same researchers have also described twice-exceptional learners who exhibit serious and debilitating social-emotional difficulties (Baum et al., 2014; Reis et al., 1997; Ronksley-Pavia et al., 2019a; Vespi & Yewchuk, 1992).

This "pronounced duality" is discussed in Beckmann and Minnaert's (2018) recent systematic review of twice-exceptional research, which specifically focused on the non-cognitive characteristics of twice-exceptional learners (p. 10). Beckmann and Minnaert found several studies revealed stark contrasts between and within characteristic clusters. The most prevalent opposing characteristics to come out of the multifarious studies is that twice-exceptional learners can exhibit negative emotions and attitudes, poor interpersonal relationships, and low self-perceptions; while, on the other hand, often displaying strong motivation, coping skills, and resiliency. However, Beckmann and Minnaert acknowledge their findings are likely skewed concerning the high volume of positive characteristics observed in twice-exceptional learners. Unlike the wider population, many of the students in the studies they reviewed had already been identified as twice-exceptional. Hence, their academic and social-emotional needs were likely being served better than the unidentified twice-exceptional learner. Moreover, some studies purposefully included twice-exceptional students who had the supports to be academically successful. For that reason, Beckmann and Minnaert state that the 'true' population of twice-exceptional learners "might show somewhat less encouraging characteristics…the very negative emotions, attitudes and self-perceptions experienced by this population of students means that they are in fact very vulnerable" (2018, p. 17).

2.12.6. Social-Emotional Concerns: What Do We Know So Far? The educational pathways of twice-exceptional learners are often plagued with negative experiences (Reis & Colbert, 2004; Ronksley-Pavia et al., 2019b; Townend & Pendergast, 2015; Vespi & Yewchuk, 1992). This review of the research, with a focus on the social-emotional challenges of twice-exceptional learners, reveals that twice-exceptional learners typically present with complex social-emotional needs, exacerbated by the continual conflict between their gifted abilities and restricting disabilities (Barber

& Mueller, 2011; King, 2005; Strop & Goldman, 2011). The perpetual inability to reach the expectations of themselves and others can cause a myriad of social-emotional responses, including intense frustration, loss of confidence, task avoidance, underachievement and, in many cases, school disengagement/dropout (Nielsen & Higgins, 2005; Reis, & McCoach, 2002; Vespi & Yewchuk, 1992). Furthermore, the constant overriding fear of failure can lead to low self-concept (King, 2005; Trail, 2011).

The social-emotional intensities of twice-exceptional learners can make working with them a stressful and exhausting experience, and often result in the development of harmful patterns and reactions from peers, teachers, and family (Baum et al., 2017; Vespi & Yewchuk, 1992). Several studies have confirmed that twice-exceptional students are often mistakenly viewed as lazy or unmotivated, which aggravates the feelings of frustration and low self-concept (Reis & Colbert, 2004; Reis et al., 1997; Townend & Pendergast, 2015; Vespi & Yewchuk, 1992). This labelling of twice-exceptional learners is concerning, as numerous high-profile studies have shown the damaging effect of low/negative expectations of teachers on students and how this can be a self-fulfilling prophecy, with students absorbing these labels and acting in accordance with teacher perceptions (Brophy, 1983; Rubie-Davis, 2018).

Twice-exceptional learners have also commonly been shown to have poor social skills, struggle to make and retain same-age peers, and be at risk for bullying by peers (King, 2005; Nielsen, 2002; Ronksley-Pavia et al., 2019a, 2019b; Vespi & Yewchuk, 1992). Moreover, the interaction between the gifted abilities and debilitating deficits of twice-exceptional learners can make them feel atypical, isolated, and prone to social difficulties (Foley-Nicpon et al., 2011; McEachern & Bornot, 2001; Reis & Colbert, 2004; Ronksley-Pavia et al., 2019a).

On the other hand, what is also clear from the research is that not all twice-exceptional learners are troubled with persisting social-emotional difficulties (Beckmann & Minnaert, 2018; Ronksley-Pavia et al., 2019a). Supports from parents, teachers, and peers provide a protective factor which empowers the twice-exceptional learner, reducing their risk of social-emotional complications (Baum et al., 2014; Beckmann & Minnaert, 2018; Wen Wang & Neihart, 2015). When the academic and social-emotional needs of the child are met, it is feasible for twice-exceptional children to thrive (Baum et al., 2014; Reis et al., 1997; Ronksley-Pavia et al., 2019b; Vespi & Yewchuk, 1992; Wen Wang & Neihart, 2015).

It is evident from this comprehensive review of twice-exceptional research that studies focusing on the social-emotional challenges associated with twice-exceptionality are limited (Barber & Mueller, 2011; Beckmann & Minnaert, 2018; Foley-Nicpon & Assouline, 2015). The research to date provides sufficient evidence to confirm the critical need to address the social-emotional needs of twice-exceptional learners but offers little advice on how these needs should be met in the classroom (King, 2005). Few studies gave a voice to twice-exceptional students or their parents (Coleman, 2001; Dare & Nowicki, 2015; Ronksley-Pavia et al., 2019a, 2019b; Townend & Pendergast, 2015; Vespi & Yewchuk, 1992; Wen Wang & Neihart, 2015). And there is a dearth of research into the social-emotional needs of twice-exceptional children within a New Zealand context highlighting a clear gap in the twice-exceptional research.

This current study aimed to bridge this gap by exploring the social-emotional needs of twice-exceptional children and how these needs are being met in primary classrooms in New Zealand. Following the example of the majority of existing twice-exceptional research, this study will follow the format of a qualitative case study. To better understand and develop an accurate picture of the social-emotional needs of

twice-exceptional children in this study, it is vital that the subjects themselves are the primary source of information. Parent perspectives are also utilised as a close secondary information source because of the pivotal role they play in their child's development.

CHAPTER THREE

Methodology

> In a society that lauds strengths and laments weaknesses, the existence of both giftedness and a learning disability can be difficult for the student to navigate.
>
> (Ottone-Cross et al., 2017, p. 75).

3.1. Introduction

A qualitative case study approach, guided by a constructivist world-view, was the preferred methodological and theoretical framework for this research. This chapter delineates the rationale behind these methodological approaches, beginning with a brief introduction to the qualitative and constructivist paradigms that underpin the research design. Subsequently, a detailed review of case study methods will be provided, with a discussion of the strengths and limitations of this approach in relation to this study.

3.2. Qualitative Paradigm

Qualitative research methods were selected as the optimum framework for this study because of their richly-descriptive and inferential nature, and their use of spoken or written language as the primary data source (Braun & Clarke, 2013; Gillham, 2000). Concerned with the depth of data rather than breadth, qualitative studies focus on smaller numbers of participants to capture *rich* and *holistic* data (Blaxter, Hughes, & Tight, 2010; Creswell, 2014; Silverman, 2000). Furthermore, qualitative paradigms are commonly interested in understanding behaviour from the participants' frame of reference (Blaxter et al., 2010). Therefore, a qualitative approach was fitting for this study, which sought to explore the personal views, meanings, and lived experiences offered by twice-exceptional children and their parents.

Given the exploratory nature of this study, an inductive approach was adopted (Creswell, 2014; Silverman, 2000). Widely used in qualitative research, inductive

(bottom-up) methods allow the theory to emerge from the data, unlike deductive approaches (top-down), which are mainly concerned with proving or disproving an existing theory (Schultz; 2012; Schwandt & Denzin, 1994). The use of inductive methods in this research allowed the perspectives and lived experiences that the participants shared during the interviews to be used to create stories, themes, and generalisations to broaden our understanding of twice-exceptionality and potentially inform future research (Boylorn, 2008; Braun & Clarke, 2013).

3.3. Constructivist Paradigm

This exploratory study was guided by a constructivist (or interpretivist) worldview (Crotty, 1998; Lincoln, Lynham, & Guba, 2011). Constructivist paradigms are grounded in a relativist ontology and consider knowledge to be experientially and socially constructed by people (Guba & Lincoln, 1998; Lincoln et al., 2011; Ponterotto, 2005). To make sense of the world they live in, people attribute subjective meanings to their situation and experiences (Creswell, 2014). Constructivist research is ideal for this current study, as it is concerned with making sense of these personal meanings to attain a better understanding of the complexities and idiosyncrasies of lived experience from the viewpoint of those who live it (Mertens, 2015; Schwandt, 2000).

3.4. Case Study Research Design

Case study research designs are predominantly concerned with providing richly descriptive interpretations of the complexity and context of single or multiple individual cases, making this method ideal for this study (Johnson & Christensen, 2014; Punch & Oancea, 2014; Stake, 1995). MacDonald and Walker (1975) describe case study research as “the examination of an instance in action” (p. 2), and this definition continues to be commonly cited in contemporary literature (Simons, 2009; Stark & Torrance, 2011; Van Wynsberghe & Khan, 2007). More recently, definitions of case

studies mainly describe them as providing a detailed account of contemporary phenomena within their real-world settings, using multiple evidence sources (Hancock & Algozzine, 2017; Gerring, 2004; Sousa, 2014; Yin, 2018).

Cases can be simple or complex (Miles, Huberman, & Saldaña, 2014). Three broad types of case studies are discussed in the literature: *intrinsic* case studies, which are used to explore or understand the phenomenon being studied; *instrumental* case studies, which provide support to existing theories; or *collective* case studies, where multiple cases are investigated (Hancock & Algozzine, 2017; Stake, 1995). A combination of intrinsic and collective case study designs was used in this study as it explores multiple cases in a dimension of twice-exceptionality that has not previously been researched in New Zealand (Hancock & Algozzine, 2017; Punch, 2014; Starman, 2013). The study has a holistic focus as it sought to understand the individual cases in their entirety, taking into account the interrelationship between the participant's perspectives/lived experiences (the phenomena) and the differing real-life contexts of each case (Johnson & Christensen, 2014; Merriam, 1998; Yazan, 2015). A mix of data collection methods was utilised, including a document review and separate semi-structured interviews with the children and their parents, generating rich detail through multiple data sources (Punch & Oancea, 2014; Stark & Torrance, 2011).

Case studies are often criticised as being less rigorous than other research methods, intrinsically flawed through researcher bias or subjectivity, and not robust enough to allow for generalisation (Bassey, 1999; Firestone, 1993; Yin, 2018). Conversely, other theorists argue that case studies are “a necessary and sufficient method” of research (Flybverg, 2006, p. 26), and they do not need to generalise as the reason for case study research is *particularisation* (Stake, 1995). In agreement with the latter viewpoints, a case study design was ideal for this research, which sought to explore

the personal perceptions and lived experiences of participants in a natural context, without any manipulation of the phenomena being studied, and without the need to generalise to wider populations (Starman, 2013; Yin, 2018).

CHAPTER FOUR

Method

> I think it is extremely important that they foster those children who are creative thinkers, as they are the ones that are really going to change our world. I don't think that is being fostered enough.
>
> (Helana, Millie's Mother – Case Study Participant)

4.1. Introduction

This chapter focuses on the research methods and procedures used in this study, beginning with an outline of the overall research strategy and design. A detailed explanation of the purposive sampling techniques used to recruit research participants is provided. Data collection practices are presented, including an account of the document review process and semi-structured interview techniques. Next, the data analysis techniques are discussed, offering an overview of the narrative case stories and broad thematic analysis methods utilised in this research. Finally, the chapter outlines the ethical procedures adhered to and discusses the trustworthiness of the research.

4.2 Research Strategy and Design– An Overview

An exploratory case study approach was selected for this research as it aligned with the qualitative and constructivist paradigms preferred by the researcher (myself) and offered an appropriate framework to give twice-exceptional children and their parents a voice, increasing our understanding of twice-exceptionality. The case stories presented in this research endeavour to be heuristic, giving the reader a deeper understanding of what it feels like to be twice-exceptional in a primary classroom (Merriam, 1998; Starman, 2013; Yazan, 2015). The study was centred around semi-structured interviews with six twice-exceptional learners and their parents as well as a document review. Interviews were conducted in the participants' homes to ensure the

comfort of the participants and generate more true-to-life data as opposed to a school or clinical setting (Ronksley-Pavia et al., 2019). Purposive sampling techniques were employed, and participants were obtained through the New Zealand Association for Gifted Children (NZAGC) membership database and Facebook page.

The perceptions and lived experiences of the six twice-exceptional children that made up this multiple case study were explored, in parallel, to obtain a diverse and detail-rich understanding of the social-emotional needs (Miles et al., 2014). In turn, this data can provide a base layer of information for future research to help improve our understanding of the needs of wider twice-exceptional societies (Boylorn, 2008). The research focus is mostly on the individual cases and the narrative case stories constructed for each case (Yin, 2018). Nonetheless, cross-case comparisons were also made, using broad thematic analysis to ascertain the key similarities and differences between the distinct cases for discussion purposes (Guest, MacQueen, & Namey, 2012).

4.3. Sample and Sampling

Careful consideration was given to sampling procedures during the formative planning stages of this research (Punch, 2016). It was recognised that participants might be difficult to reach, particularly through the school system. After discussions with experienced gifted education researchers, it was decided that the most viable option would be to approach the New Zealand Association for Gifted Children (NZAGC), which also serves twice-exceptional communities, to request permission to recruit participants through their database of members. Therefore, a purposive sampling strategy was employed, as I intentionally sought to select study participants from a restricted population pool (Creswell & Guetterman, 2019; Punch & Oancea, 2014). Research literature confirms that purposive sampling is well-aligned with constructivist world-views (Mertens, 2015); is useful for in-depth studies of specific contexts to

understand the lived experiences and subjective meanings of those inhabiting that context (Coe, 2012; Creswell, 2014); and is best suited to research that is not intended for generalisation to wider populations (Yin, 2018). Hence, this form of sampling is entirely appropriate for this study.

Six cases were explored in this study—four boys and two girls—from a range of locations throughout the North and South Islands of New Zealand. Each case comprised of a twice-exceptional learner of primary school age (6 to 11 years) and their parents. As stated previously, for ease and consistency, the term *parents* has been used throughout this study to encompass all primary caregivers. All child participants have been identified as gifted and as having one or more identified disabilities that impair their learning. Furthermore, the parents confirmed that all child participants were capable of articulating their lived experiences as a twice-exceptional learner. The number of participants for this study was purposefully kept low to ensure that rich and thorough descriptions could be attained for each case (Yin, 2018). Correspondingly, there were enough cases to highlight an array of differing disabilities, disorders, and conditions, such as anxiety disorders, autistic spectrum, or specific learning disabilities, that can co-exist with gifted abilities.

To recruit the sample, I wrote to the Board of the NZAGC with details about my study and asked if they could forward the research information to their database of members (see Appendix A). The NZAGC Board were also sent copies of the information sheets for organisations, parents, and child participants (see Appendix B), and the parent and child consent forms (see Appendix C) to give them a broad understanding of my research and how it would be conducted. Permission was granted, and the parent information sheet was emailed to all database members in early December 2017. Concerningly, no interest was shown from potential participants to this

initial contact with the NZAGC database members. However, in February 2018, the NZAGC Board again emailed the research information to their members and also posted on the NZAGC Facebook page (https://www.facebook.com/NZAGC/) with a link to the research information and my contact details, so interested individuals could easily respond. Additionally, members of the NZAGC Facebook page shared the research link on the Facebook pages for the New Zealand Centre for Gifted Education (https://www.facebook.com/nzcge/); the Gifted and Talented Teachers Group (https://www.facebook.com/groups/137238016943562/); and the new AGE School for gifted learners in Takapuna, New Zealand (https://www.facebook.com/age.school.nz/). Within two weeks, I had achieved my case study limit of six cases.

4.4. Data Collection Procedures

A core benefit of using case study methods is the freedom to use multiple data sources, allowing me to add layers of rich data to my research to develop a more robust understanding of the social-emotional needs and lived experiences of the twice-exceptional children in my study (Day Ashley, 2012; Punch & Oancea, 2014). For each case, I conducted separate semi-structured interviews with the twice-exceptional child and with their parent/s, giving me two differing perspectives on the same phenomena. These narratives were supplemented by a comprehensive document review.

4.4.1. Document Reviews. Document reviews are an intrinsic element of all research and provide an essential baseline of information that can be used by the researcher to inform, illuminate, supplement, or validate their research findings (Creswell & Guetterman, 2019; Yin, 2018). Relevant MOE (n.d.-c, 2012, 2014) policy documents, ERO (2008) reports, and gifted/twice-exceptional newsletters and websites were all examined for information that was relevant to the research. Also, in each of the six cases, the parents shared copies of their child's assessments or diagnostic reports,

which were used to enhance the individual case narratives. An ongoing review of the literature occurred throughout the various research phases. Existing literature was used to inform the research at the outset and then continued to add evidence and detail during the data collection and analysis phases; this meant the different information sources all fed into each other to flesh out the data (Gillham, 2000).

4.4.2. Interviews. The semi-structured interviews with the twice-exceptional child participants and their parents provided the primary data source for this study. Open-ended questioning was used, so participants could freely express their perspectives and lived experiences of being twice-exceptional (Kvale, 2007; Morrow, 2005; Patton, 1990). A pre-determined semi-structured interview schedule was created (see Appendix D) to ensure a base level of consistency in the type of interview questions asked across all six case studies, to allow cross-case comparisons to be made (Gillham, 2000). To ensure the interviews ran fluently, I trialled the interview questions with parents of twice-exceptional children known to me before conducting the research interviews (Gillham, 2000). A digital voice recording device was used to record the interviews, and the voice recording application on my phone was used as a back-up method. The interviews ranged from 25 to 80 minutes (average 45 minutes) per participant, which was ample time to elicit rich, descriptive data for the individual case stories without being overly time-consuming or draining for participants (Yin, 2018).

An advantage of using semi-structured interviews is their inherent flexibility (Mertens, 2015). Although the pre-set interview schedule provided a framework for the interviews, the conversation was primarily guided by the individual participants, unconstrained by my perspectives (as the researcher), to allow their voice, meanings and experiences to shine through (Creswell & Guetterman, 2019; Kim, 2016). This data collection method allowed for digressions from the planned interview pathway to

explore unexpected and interesting avenues of conversation that I felt added value to the research (Rubin & Rubin, 2012). The interviews were conducted in the participants' homes rather than a school or clinical setting to help them feel more at ease and obtain more naturalistic interview data (Ronksley-Pavia et al., 2019). Additionally, face-to-face (as opposed to online) interviews allowed me to build a stronger rapport and better understand the meanings behind the participants' narratives as I could observe their body language and note any emotional reactions or changes to voice tone (Josselson, 2013). My ability to be friendly, open, and honest was reciprocated by the participants (Braun & Clarke, 2013; Yin, 2018). They were comfortable to share their lived experiences and challenges of being twice-exceptional in a primary school setting.

4.5. Data Analysis Procedures

Data analysis is the process of converting data into convincing research findings (Rubin & Rubin, 2012). Although time-consuming, I decided to transcribe the twelve interviews in this study. The act of converting the verbal narratives into written words facilitated a deeper understanding and connection to the spoken words (Bailey, 2008). Moreover, transcribing the spoken word into a written format facilitated an increased capability to make direct comparisons between the cases through broad thematic analysis (Kvale, 2007; Rubin & Rubin, 2012). As expected, the interviews in this study generated a voluminous amount of data to transcribe. Given the limited time frame for this study, I initially used a professional transcriber to transcribe the data from three interviews (see Appendix E for a copy of the Transcribers Confidentiality Agreement). Once completed, I read through the transcriptions while listening to the audio to make any necessary amendments. Thorough and time-consuming checks were essential due to errors where the transcriber had incorrectly heard what was said; did not know the terminology; or, understandably, did not pick up on the nuances, inferences, and

meanings behind the spoken words that I had noted during the interviews (Kvale, 2007; Rubin & Rubin, 2012). Consequently, I found it simpler to transcribe the remaining interviews myself, and the act of transcribing allowed me to fully immerse myself into the data (O'Brien, 2014). Full interview transcripts were sent to the parents to approve or amend before analysis (member checks), ensuring the credibility of the data and minimising any risk of harm by incorrect data (Massey University, 2015).

Once approved, the interview transcripts were used to create a comprehensive narrative case story about each of the twice-exceptional children in this study (Braun & Clarke, 2013). The objective of the individual case stories was to build a detailed picture of the lived experiences of the six twice-exceptional children in this study, incorporating their backgrounds, exceptionalities, and social-emotional needs; their perceptions about how these needs are currently being met at school; and what they hope for the future. The perspectives, meanings, and lived experiences of the participants are shared in their case stories, and their voices shine through these stories with the use of direct quotes from the interview data. Pseudonyms were used to protect the participant's anonymity and privacy (Massey University 2015). Each of the case stories follows a base framework to ensure that they are structured to answer the research questions and to allow comparisons across the cases.

The focus of this research was predominantly on the individual narrative case stories; however, broad thematic analysis was also undertaken to look at the re-occurring patterns and similarities across the cases, and notable points of difference to use in the discussion (Guest et al., 2012; Punch, 2016). The term *thematic analysis* is used to describe the data analysis procedure of categorising broad qualitative data into smaller, easier to analyse units of data (Boyatzis, 1998; Creswell & Plano Clark, 2011). An inductive approach was used for this study. Therefore, the themes presented in the

discussion are based on my subjective interpretation of the prominent data patterns that emerged out of the transcript data and the subsequent case stories rather than being driven by existing theory or literature (Boyatzis, 1998; Löfgren; 2013; Schultz; 2012). The thematic analysis began with reading through the individual transcripts numerous times. This process revealed several re-occurring themes as well as distinctive data that warranted further discussion (Creswell, 2014). Coloured codes were assigned to the chunks of data (words/sentences/paragraphs) that could be used to generate rich description in the individual case stories and the discussion of the similarities and differences across the cases (Miles & Huberman, 2014; Patton, 1990).

4.6. Ethical Issues

This research was conducted honestly and ethically, and in a manner that precluded any harm to participants (Denscombe, 2014). Throughout the research process, I adhered to the fundamental ethical principles of research and followed the guidelines in the Massey University (2015) *Code of Ethical Conduct for Research.* The importance of ethical research and the protection of research participants has been emphasised in recent years, driven by the sharp increase in people-focussed qualitative research (Punch, 2016). As this study involves children and vulnerable populations, ethical concerns are further magnified (Punch & Oancea, 2014). Hence, it was necessary to obtain full ethics approval from the Massey University Human Ethics Committee before commencing this research (Denscombe, 2014; Massey University, 2015).

The ethics process was extremely beneficial, allowing an in-depth consideration of the practices I would need to follow to ensure this study met the fundamental ethical principles of research (Creswell, 2014). As part of the ethics procedure, I also put together a strategy for working with Māori participants to ensure my research met the principles of partnership, participation, and protection that are outlined in the Treaty of

Waitangi, therefore meeting ethical guidelines relating to social and cultural sensitivity (Massey University, 2015). The guidelines offered in the Te Ara Tika Guidelines for Māori Research Ethics were followed (Hudson, Milne, Reynolds, Russell, & Smith, 2010), and I obtained the support of a Māori Cultural Advisor, Dr M. Webber, an Associate Professor at Auckland University. I consulted Dr Webber (personal communication, August 23, 2017) about a culturally inclusive definition of twice-exceptionality, and she kindly made herself available for support throughout the research. Full ethics approval was granted by the Massey University Human Ethics Committee on October 3, 2017, and a copy of the approval email is provided in Appendix F.

Information sheets (see Appendix B) were provided to all participants before they consented to be a part of this research to avoid any unnecessary deception (Massey University, 2015). The information sheet for child participants was written in language that was easy to read and understand. This information sheet was also read aloud to the child in cases where the child found personal reading a challenge. All participants were made aware they had the autonomy to refuse to be interviewed or to answer a question or to stop the interview at any point without any consequence (Massey University, 2015; Punch & Oancea, 2014). I reaffirmed the participants' rights immediately before the interviews to ensure they were fully informed and still happy to be a part of the research.

Informed consent was also obtained from all participants prior to the interviews (Massey University, 2015). After I had ascertained that participants understood what the research was about, and they knew what their rights were, they were asked to sign formal consent forms. Parents were asked to sign consent forms for themselves and their child, while the children signed a modified consent form that used child-friendly language and re-confirmed their rights as a further precaution. As advised in the ethical conduct for

research involving children, I did not offer any financial incentives to the participants to persuade them to be part of this study (Massey University, 2015). However, after the interviews were completed, I did offer a small gift to the child participants in the form of edible treats, a book, or colouring pens (as advised by the parents) to thank them for their time, which is permissible in the Code of Conduct (Massey University, 2015).

Safeguarding the confidentiality and anonymity of the participants in this study was considered to be of paramount importance (Punch, 2016). Participants real names are not revealed within the bounds of this thesis to protect their privacy (Massey University, 2015). The participants' real names are used in the consent forms and original transcripts. However, the consent forms are stored in a locked cupboard in the office of my thesis Supervisor; the audio recordings and transcripts are saved in a password protected device; and hard copies of the transcripts are stored in a locked drawer in the researcher's home (Massey University, 2015). Pseudonyms have been used for all participants, and any identifying information has been removed to protect their anonymity. In addition, the names of the schools, teachers, professionals, family members, and friends have all been altered to further protect the participants' identities (Punch, 2016).

Notwithstanding, total confidentiality and anonymity cannot be completely assured. Although unlikely, stakeholders in the participants' lives or other community members may be able to utilise contextual clues to identify participants; or, the parents may share information in informal situations or support networks that inadvertently reveal the identity of the study participants (Punch & Oancea, 2014). Regardless, I have endeavoured to maintain the anonymity and confidentiality of participants in this study. Moreover, participants were treated with the utmost respect and recognised for their integral role as the heart of this research (Massey University, 2015).

4.7. Trustworthiness: Qualitative Validity and Authenticity

All research is ultimately evaluated for its merits and worth (Cypress, 2017). Quantitative studies are evaluated by their validity and reliability, which are firmly established as being the critical components of quality and rigour (Cypress, 2017; Sousa, 2014). On the other hand, the criteria for determining the worth of qualitative research is still debated, with theorists using a variety of terms to convey the reliability of research, including *rigour*, *authenticity*, *credibility*, and *validity* (Sousa, 2014). I prefer to use the widely acknowledged term *trustworthiness* as a marker for the quality of this study, as it embodies the obligation I feel, as the researcher, to produce a credible research document that does justice to the stories entrusted to me by participants to foster a better understanding of twice-exceptionality. Lincoln and Guba (1985) theorise that are four sets of criteria that can be used to establish the trustworthiness of a piece of qualitative research, namely *credibility, transformability, dependability, and confirmability.* The methodological steps of this study will be evaluated using these criteria to determine the relative trustworthiness of this research.

4.7.1. Credibility. Credibility is pivotal to the establishment of trustworthiness and is measured by the level of confidence in the truth of the research findings (Anney, 2014; Lincoln & Guba, 1985). The techniques of *triangulation* and *member checks*, as well as the use of *thick-description*, were used to attain credibility for this study (Lincoln & Guba, 1985). Triangulation is the process of obtaining corroborating evidence, and was achieved through more than one data collection method being utilised (interviews and document review) and the use of multiple informants—twice-exceptional children and their parents (Lincoln & Guba, 1985; Onwuegbuzie & Leech, 2007). Additionally, member checks (informant feedback) were sought from participants—both at the written transcript stage and after the case stories had been developed—to verify that

their words, perspectives and lived experiences were accurately portrayed; therefore, eliminating researcher bias (Anney, 2014, Lincoln & Guba, 1985). In line with this, the findings presented in this study can be assured to have a reasonable level of credibility (Onwuegbuzie & Leech, 2007; Shenton, 2004). The credibility of this study is further enhanced by the use of '*thick description'*, which is vital for the trustworthiness of qualitative research (Lincoln and Guba, 1985). This study endeavours to provide a detail-rich description of each case, recounting the perceptions and lived experiences of participants, and clarifying the contexts that surround these experiences (Morrow, 2005; Sousa, 2014). This depth of description augments the credibility of this research, as it allows the reader a better understanding of the actual situations presented so they can make a judgement as to whether the findings seem truthful (Shenton, 2004).

4.7.2. Transferability. Transferability is the extent that the research findings can be applied to other contexts with other participants (Anney, 2014). As previously stated, the intention of this research is not generalisation (Stake, 1995; Shenton, 2004). Nevertheless, it is hoped that the thick descriptions and contextual information provided in the case stories, as well as the robust details concerning the methodological processes, are sufficient for the readers to make their own judgements about the transferability of this study (Anney, 2014). The reader can choose whether (or not) to relate the findings to their own situations or use them as a base of information to inform future research (Anney, 2014; Lincoln & Guba, 1985).

4.7.3. Dependability. Dependability in qualitative studies equates to the consistency of the findings over time, and whether the repetition of the same methods would likely yield the same results (Gasson, 2004; Lincoln & Guba, 1985). This study provides an explicit audit trail of all the steps taken during the data collection and analysis phases, which is the core requirement for dependability and allows the research

to be replicated (Lincoln & Guba, 1985; Morrow, 2005). Nonetheless, dependability is not considered to be a strength of this study as a repetition of this research is unlikely to yield the same results. These case stories only provide a snapshot in time of the participants' perceptions of their lived experiences, and perceptions are changeable over time and context (MacDonald & Walker, 1975). Moreover, each twice-exceptional learner has their own unique blend of exceptionalities and traits that impact on their lived experiences (Betts & Neihart, 1988). Therefore, research with other twice-exceptional learners may yield similarities in findings, but no two accounts will be the same (Ronksley-Pavia, 2015).

4.7.4. Confirmability. Finally, confirmability is described as the "degree to which the results of an inquiry could be confirmed or corroborated by other researchers" (Anney, 2014, p. 279; Baxter & Eyles, 1997). Essentially, confirmability of a study is reliant upon the findings being clearly derived from the data, rather than being fabricated from "the beliefs, pet theories, or biases of the researcher" (Gasson, 2004, p. 93). Confirmability in this study has been met through the use of triangulation techniques; peer monitoring of my research (supervisors); member checks; and providing an audit trail of the data collection and analysis phases (Bowen, 2009; Lincoln & Guba, 1985).

CHAPTER FIVE

Research Findings: Individual Case Stories

> …when you are twice-exceptional, people think….because you are really bright in maths that you should also be really bright in writing. Where, actually, here comes the other end of the bell curve when you are twice-exceptional. And people get confused.
>
> (Jake, Case Study Participant, Age 10)

5.1. Introduction

This chapter is the very heart of this thesis as it introduces the individual narrative case stories for the six twice-exceptional children in this study. These case stories reflect the narratives of lived experiences and perceptions shared by the twice-exceptional children and their parents during their interviews. The participants' voices are brought to the fore, using direct quotes to build a picture of their backgrounds, school experiences, social-emotional needs, and recommendations for future change. The participants approved these stories as an accurate portrayal of their/their child's experiences. The six cases explored in this study included four boys and two girls, from across New Zealand. Table 4.1 provides an overview of the profiles of the twice-exceptional child participants. Parent interviews were conducted with the mothers, except for Sophie's case where both parents contributed to the interview.

Table 4.1.
Participant Profiles and Disability/Condition Diagnoses

Participant	Gender	Age	Ethnicity	Disability/Condition Diagnoses
Sophie	F	11:10	NZ/E	Asperger's, OCD, Anxiety
Milly	F	10:9	NZ/E & Filipino	Auditory Processing Disorder
Elliot	M	9:8	NZ/E	SLD (Dyslexia), Anxiety
Jake	M	10:	NZ/E	GAD, SLD, Slow Processing, Sensitivities
Leo	M	10:	NZ/E	GAD, SLD, Sensory Processing Disorder, Slow Processing
Sam	M	6:6	NZ/E	Slow Processing, Overexcitability, Possible ASD

Note: NZ/E = NZ European; OCD = Obsessive-Compulsive Disorder; ASD = Autism Spectrum Disorder; GAD = Generalised Anxiety Disorder; SLD: Specific Learning Disorder.

5.2. Sophie's Story: "Being twice-exceptional is just really hard sometimes…"

Sophie is a bright, animated, and captivating 11-year-old girl of New Zealand (NZ) European descent. She lives in a small city in the North Island with her parents, Rachel and James, and her younger brother Lucas, who is also gifted. Soon after starting school, Sophie was found to have Dyspraxia. At the age of seven, she was identified as gifted and also diagnosed with Asperger's.

Who is Sophie? When Sophie starts speaking in her Kiwi with a twist of a British accent, you cannot help but get caught up in her whirlwind of enthusiasm and eloquent ideas to change the world around her. She has a strong sense of justice and a keen interest in global issues, but her parents say she can sometimes lack observation of things that are happening in her immediate vicinity. She is impulsive and inquisitive and is described by her teachers as a delightful bundle of energy. Sophie sees herself as: "A funny person. I am hoping this is not skiting [boasting], but I am nice. I like the environment, animals, reading and coding."

When asked about her dislikes, Sophie quickly says she does not like tidying her room or being bored. Sophie has a dry sense of humour and comes across as extremely quick-witted. Sophie's parents say she can sometimes struggle to read social situations correctly. She is often highly emotionally impacted by daily events or things she has seen on television; however, this emotional response can often be quite delayed (several hours/days). Sophie is a perfectionist, setting very high standards for herself. Her parents say she "sort of comes across as she knows it all but, to be honest, she often does".

Sophie thinks deeply about her world. She wants to start a petition for all the things she sees as injustices—having to wear a skirt as part of her school uniform is high on her current agenda. Although she has amazingly insightful ideas, her parents say Sophie is rarely organised enough to act on them. However, since the interview, Sophie

has written to Prime Minister Jacinda Ardern (and received a personal response) to thank her for funding an additional 600 Learning Support Co-ordinators and recommended they build awareness about twice-exceptionality, giftedness, Asperger's, OCD, and other conditions.

Early Recognition of Sophie's Exceptionalities. Insights from her parents indicate that the signs of Sophie's exceptionalities were evident at a very early age; they knew that something was going on, but they didn't know what it was exactly. Sophie had a normal birth but was kept at the birthing centre for several days as she would not sleep. The paediatrician suspected something was wrong but was unable to identify any physical cause of Sophie's sleep disturbance. Rachel reminisces about other early signs:

> Another thing I remember very distinctly… you would be holding her but rather than hugging; her arms would be out like this [like a plane]. She didn't really hug. We used to put her inside one of those playpens…and she would just be fascinated with books and little things. Just looking at them for ages.

Sophie was late to reach some of the milestones for movement as she was more focused on words and learning her shapes. Rachel says they began to notice her differences during kindergarten. She was the child that would not sit quietly on the mat. Her teachers often made comments about Sophie's abilities, saying, "She's going to go places. We are going to hear more about her." The other children at kindergarten were fascinated by her as they thought she played the most amazing games.

Sophie's Gifted Abilities. Sophie's overall intellectual ability is in the very superior range, scoring higher than 99.6% of same-age peers in the Woodcock-Johnson III (WJ III) Tests of Cognitive Abilities (Woodcock, McGrew, & Mather, 2001). Sophie was able to read before starting school without being explicitly taught. Initially, Rachel spent a lot of time reading to Sophie to get her to sleep. Sophie then took control of turning the pages and essentially taught herself to read. She also has an exceptional

memory and finds it easy to learn by rote. When asked what benefits her giftedness brings, Sophie answers:

> I find some things a lot easier than other kids….I am really good at certain things, and I think differently. I am a fast reader. Seriously fast… I am a huge bookworm! What else? I am getting better at maths. And I like science.

Sophie's Asperger's. Sophie has been diagnosed with Asperger's and is acutely aware that she can sometimes struggle to read situations or people clearly. She believes her Asperger's impacts on her ability to make friends, affects how she sees the world, and can sometimes make her feel "tired and low". Sophie also attributes her poor organisation and time management to her Asperger's: "I am also really, REALLY, bad at organisation. Very, extremely, bad! My mum and dad get very frustrated because we are nearly always late for school." Her parents confirm Sophie's poor organisational skills and inability to grasp the concept of time. They say that Sophie is the child that loses her pen all the time—so then she has to find a pen, and it always takes her a long time even to start her work.

Sophie's Dyspraxia. Sophie struggles with the physical act of writing due to her dyspraxia. She hates handwriting and sees it as a real challenge. Fortunately, Sophie's last school was technology-focused, so she was able to use a device instead (Sophie just started at intermediate school at the time of the interview).

Sophie's OCD and Anxiety. Sophie's OCD and anxiety are grave concerns to her parents. Rachel gives examples of Sophie's extreme handwashing, hitting her stomach, and tipping water from her drink bottle and wiping it on her face. Sophie is very aware and recalls: "One time during the disco, near the end of the year, I completely freaked out. So, the less said about that, the better! It was my OCD. People getting too close." Sophie says she is thinking about making a book to help other children with OCD, so they can stop it before it starts. Her advice to others would be: "See someone

as early as possible. Think of a strategy…don't give it what it wants. Otherwise, it keeps repeating and…then basically it just ruins your life."

Rachel says assemblies and group activities are a real problem for Sophie because of her irrational fear of touching others, thinking it will change her DNA. She does not even want to touch her brother as she thinks he has been taken over by a bug that he accidentally swallowed some months ago. She adds: "Her phobias just keep on moving from one thing, to the next…It is just like a trail of absolute disaster that she is unable to see the end of. It's out of control."

School Experiences. Sophie's achievement at school has been varied. Her parents say there were some very low points but also some relatively good points during Sophie's first few years at school—mostly determined by how well Sophie related to her teacher. Early on, Sophie was labelled as the naughty child as she was regularly hiding under tables and would not sit on the mat. At the time, Rachel thought little of it as Sophie was their first child. However, looking back, she thinks Sophie was overwhelmed and extremely unsettled. Sophie, too, was well aware of her difficulties:

> I used to have a problem with sitting still, but I am fine with that now. Sometimes I struggle with not calling out. Sometimes I struggle to not always go to the teacher…then they get annoyed and yell at me for interrupting their work with other children.

The family changed schools when Sophie was eight, as the class dynamics at her previous school increased her anxiety. Also, her teacher did not believe Sophie was gifted; she could not see past Sophie's deficits and poor handwriting. Rachel admits they seriously thought about homeschooling, but Sophie outright refused as she likes to be social. Nevertheless, Rachel confirms the change in schools was good for Sophie:

> It was totally different. It was open plan, 56 kids, two teachers. I knew the lady [teacher], she is a perfectionist, and she would not let Sophie fail. She understood about Sophie's anxiety and the need to repeat things for her. And it is a very technology-focused school, so Sophie was allowed to use a device.

Emotional Concerns at School. Rachel reports that Sophie tries to bottle her emotions up when she is at school. However, sometimes her anxiety ends up "blowing out" into school as well. Sophie describes a range of emotions she experiences at school: "…really happy, lonely, either really sad or mad, and one of them is also OCD worried." Currently, Sophie is being supported for her anxiety and OCD under the mental health team at the hospital but receives no support from the MOE. Rachel says she is going to insist on having an Individual Education Plan (IEP) so that the teachers can understand and better support Sophie's social-emotional needs.

Social Concerns at School. Sophie's ongoing social struggles are recurrent in her interview. Her failure to make friends is a core concern for Sophie, adding to her anxiety. Sophie admits she has recently been trying to go up and talk to people but says it is hard, as she doesn't want to look like a "weirdo". She says:

> This term, I am probably going to try to get some more friends because lately, I've been spending lunchtimes alone...My plan is that I find people who I think are nice and funny and say, "can I play with you?" Then, when you have played with them a while, I can ask if they want to be friends. It is just a slow [emphasis on slow] process…I would like more help with making friends, and I really think it would help other kids with Asperger's.

What Can Be Done Better? Sophie has some clear recommendations for future change to support the social-emotional needs of twice-exceptional children like her:

> There should be someone at the school who knows all the gifted kids, or kids with Asperger's to help them with their social life and get them to take risks earlier. Also, in primary schools, offer more opportunities for gifted children…gifted classes or a club for gifted kids and then they could do stuff together. Then they will meet other children who are similar to them.

Rachel would like more teaching of social skills and mindfulness/meditation in school as all students benefit from this. She also believes there needs to be an, increased general awareness about the challenges that twice-exceptional and gifted children face:

…understanding about what twice-exceptional and gifted children are all about, what traits they typically have, and that everything is not an easy life for them. They have difficulties. Teachers just think they are lazy. They need support as much as anyone else, but they are not getting it.

5.3. Millie's Story: "A perfectionist…but feels the weight on her shoulders"

Millie presents as a polite, highly accomplished and very astute ten-year-old girl of NZ European and Filipino descent. Millie lives in the South Island with her mother, Helena, and two younger sisters, Olivia and Isabella. Millie has wonderful support networks as her maternal grandmother, and best friend live nearby, and her mother is a postgraduate psychology student who takes an active role in her children's development. Millie does not know her biological father. Helena was aware that Millie was gifted and also had speech-language difficulties from a young age. Millie was also diagnosed with an Auditory Processing Disorder (APD) when she was nearly eight years old.

Who is Millie? Helena describes Millie as a bit of a perfectionist who has a strong desire to do well. She says Millie is very quiet, well-behaved, eager to please, and has a great sense of responsibility:

> …she is not a very expressive child at all. She will talk to me, but you have to probe quite a bit. She is fairly intense. The worst thing for her is getting told off. That is the end of the world kind of stuff.

Millie says she loves maths, reading, gymnastics, cooking, science experiments, and ballet. She is learning to play the keyboard, ukulele, and flute and is a fluent musician. Helena proudly says that Millie recently played the grand piano at a concert. At school, Millie enjoys participating in many extracurricular activities, including music, rock band, choir, winter sports, and robotics.

Early Recognition of Millie's Exceptionalities. According to Helena, there was no doubt in anyone's mind that Millie was gifted. At two years old, Helena bought Millie some puzzles. After doing them once with her, Millie was able to complete them quickly and easily by herself. Millie was doing 200 to 300 piece jigsaws before she turned three, and Helena says, "she could always memorise exactly where the pieces went after doing it once". At three years old, Millie had obvious speech problems, and

Helena went through the MOE to get the appropriate help. She recalls the Speech-Language Therapist held up numerous cards, and Millie had to say what they were:

> One had a picture of a cloud, and the lady said, “What is this?” and Millie said its cirrocumulus. And the lady said, “What? No, it’s a cloud”. So, I explained that cirrocumulus is a type of cloud.

Helena says that around the age of three, Millie had taught herself how to read. From the age of four, Millie was reading the *Ready to Read* school books that her grandmother (teacher) would access from school. When Millie started school, she was put straight on to Journals (aimed at Year 4–8 students). The school recognised Millie was gifted and said they could get her formally assessed (at a cost) but, at the time, Helena did not feel it was necessary.

Millie’s Gifted Abilities. At nine years old, Millie was assessed for giftedness using the Wechsler Intelligence Scale for Children–Fourth Edition (WISC-IV; Wechsler, 2003). Considerable variability between the scores prevented meaningful interpretation of her overall performance and intelligence. Nevertheless, perceptual reasoning was shown as a definite strength; Millie’s score was in the superior range, higher than 95% of same-age peers. Helena talks about the assessment:

> …in one test – Matrix Reasoning, she scored higher than 16 years. [The assessor] said she had never quite seen anything like it. She had a puzzle, and the puzzle is quite tricky, but Millie could look at it…she could see the patterns. She didn’t get any wrong.

Helena goes on to say that Millie is particularly adept at visual-spatial awareness: “… she has always been able to build. She does big constructions. And she can visualise them in her head. That kind of engineering type of stuff.” Millie also has an extraordinary memory for words and has never needed to practice words/spelling. At school, Millie is in the highest-level groups for reading and maths. She says that being gifted is good because it makes it easier and quicker for her to learn new things. Helena

says having gifted children keeps life interesting, but she does not push Millie to achieve:

> …she is gifted, but she isn't like those crazy, crazy gifted kids. She doesn't memorise encyclopaedias or anything like that. She is quite a normal kid. We are more about having fun around here than memorising the periodic table.

Millie's Auditory Processing Disorder (APD). Millie has been diagnosed with APD and finds it difficult to hear voices when there is background noise. The school has provided a sound field system in Millie's classroom, which makes the teacher's voice clearer and louder. Millie finds the device helpful but says the teacher does not always use it. Helena finds this frustrating as the equipment is hugely beneficial for students with APD.

Milly says it is harder to concentrate in environments like the 'Learning Hub' where there are multiple classes and more children and noise. A consequence of the APD is that Millie can get very irritable when there is too much noise (although she finds it much easier to tolerate the noise at school than the noise of her little sisters), and she often comes home from school exhausted. Although the APD affects Millie, Helena says they try to focus on her strengths:

> We don't talk about the auditory stuff much…it was only the other day that I used the term learning disability with her…she was like, "I've got a learning disability?" We tend to focus more on gifted strengths.

Millie's Speech-Language Problems. Millie's problems with her speech (unclear language/leaving ends off words) have been evident from an early age. It was the Speech-Language Therapist who identified Millie's APD, as Millie scored zero in an auditory memory test. Currently, it is Millie's poor expressive language that is causing Helena the most concern: "…is has become more noticeable over time. She has the ideas floating around in her head but struggles to verbalise them or write them down." This deficit impacts on Millie's schoolwork, particularly her writing, which is

Millie's weakest subject at school (still above average). Millie says she dislikes writing as she finds it difficult to come up with creative ideas.

Millie's Slow Processing. Helena mainly wanted an assessment because she suspected that Millie had issues with slow processing speeds. The test results showed that Millie scored 100% accuracy on the processing tasks, but she did them very slowly. The assessors said that Millie's results were classic for a perfectionist gifted child and indicative of slow processing speeds, though this could not be definitively stated.

School Experiences. Millie's school is a high decile school with 500+ students. Helena comments that in the first year, Millie stood out as being exceptionally bright, but now there is a big group of "really bright kids". Millie says she loves school, and Helena also reports that Millie's school experiences are mostly positive. She gives examples of the ways the school has extended Millie, including maths extension classes; robotics club; cross-school competitions; and putting Millie forward for the Golden Key, where she engaged in a research project with top academics. Millie also helps students who are struggling at school as part of her gifted extension. Helena says:

> … it has been a good school, and they have fostered her [Millie's] interests and strengths…They just make everything easy. I have heard from the gifted online community that…lots of schools refuse to give them books for their level and stuff. But ours really celebrates the kids learning.

The only negative school experiences that Helena could express were the limited use of the APD equipment, not enough science, and more support to help Millie with her social anxiety and public speaking. Regardless, the predominance of positive school experiences in Millie's case makes it stand out from the other cases in this research.

Emotional Concerns at School. Millie's APD can make her feel exhausted and emotionally drained. Millie says she tends to hold her emotions back at school as she does not think the teachers can help. Helena confirms that in previous years, Millie

would often hold it together at school but completely lose it when she came home. Millie's meltdowns are less frequent now, but Helena says:

> When she does lose it, it is very, very intense. It is very, very hard to calm her down… she escalates and escalates. She ends up pleading and crying. And she just clings to you instead of giving you the space to try and deal with it. So that can really be challenging.

Millie puts a lot of pressure on herself and always wants to be perceived as good. If a teacher tells her off, she will just burst into tears. Likewise, Millie is quite fearful of telling teachers if anything is wrong. Helena gives the example of when Millie had a tummy bug: "She literally just held it in…all day. And then when she saw me, she said, 'I'm gonna be sick'…She is too scared to tell the teachers."

Social Concerns at School. Millie has a good friendship group, but she can be shy and slow to warm to people. The teachers say that Millie never speaks out voluntarily, but she is very willing to help. This year, Millie is fortunate to be surrounded by like-minded female peers. There are twelve gifted girls in her class, and they all get on well. They often do things together in groups, which is new for Millie as, previously, she has preferred to have one or two very close friends. Helena has minor concerns that Millie can be "a little off socially" due to the APD restricting her ability to hear inflexions, meaning Millie is unable to differentiate between a question and a statement. Also, Millie can be a bit socially anxious: "If you keep her in her normal everyday life, she is absolutely fine. It is just when she goes into a new situation that she struggles…public speaking makes her petrified."

What Can Be Done Better? Millie's school experiences have been mainly positive in a very proactive school. Therefore, she only has one suggestion for change—to teach more science in primary schools. Helena discusses her recommendations for

change from a broader perspective, considering the negative experiences she regularly hears from other twice-exceptional/gifted parents:

> …there are lots of teachers who are not on board, and they don't even understand the concept of giftedness or twice-exceptionality. Just believing that it's a thing and...not thinking it is just pushy parents, or kids thinking that they are better than everyone else.

Also, Helena speaks of the need to recognise the challenges twice-exceptional children and their parents face because of their asynchronicity:

> I do often hear myself saying that it would be much easier if they were just above average across the board, rather than super, super, super amazing in a couple of subjects but kind of struggle a bit in other ways.

5.4. Elliot's Story: "That's the absolute hardest thing. The emotional stuff."

Elliot presents as an enthusiastic, kind-hearted, and composed nine-year-old boy of NZ European descent. He lives in the North Island with his parents, Angela and Simon, his sister Megan, and their dog, Izzy. At the age of eight, Elliot was identified as having dyslexia and being gifted. His elder sister, Megan, also has dyslexia, so the teachers recognised the same traits in Elliot and recommended getting him assessed.

Who is Elliot? Elliot's mother says he has an easy-going nature, a great sense of humour, and he likes to be a bit of a clown. She is grateful he does not have the "perfectionist traits, day-to-day anxiety, or social difficulties" that many twice-exceptional children exhibit; however, he does overthink things, can be intense, and shows depressive traits. Elliot is a "big thinker" and can get overwhelmed by his concerns. Angela worries that if Elliot does not have the tools to pull himself out of his lows, what that could mean in the future:

> …he worries a lot…but about big things, not little things. It's about death and not being able to do all the things he wants in his life and it kind of spirals…It goes from you're going to die, and this is going to happen, and what if I can't be a scientist?

Elliot is incredibly empathetic and caring, with a very strong moral compass. Angela is proud that Elliot is not a follower—if he disagrees with what another child is doing, he refuses to be a part of it. Elliot says: "I care for others if people get hurt. I care for my friends as people." Elliot loves playing sports (hockey and cricket) and enjoys playing with Lego, mini-figures, and his dog. His main dislikes are going to the grocery store and getting out of bed.

Early Recognition of Elliot's Exceptionalities. From a young age, Angela knew Elliot was bright but not necessarily gifted. She says Elliot has always been very logical, quick to learn, and could amuse himself for hours with things like Lego.

Looking back, the intensity of interest he showed in a variety of topics was indicative of his giftedness:

> He'd get obsessions with things. If he liked dinosaurs…he wanted to know everything about dinosaurs. Then, he would suddenly want to know all about space. Then he's moved onto history. So, once we got the diagnosis…and the level of it, we were like – okay, Elliot has actually got a lot going on in there. It helped to explain a little bit.

Elliot's Gifted Abilities. Elliot's overall intellectual ability, measured using the WISC-IV, is in the very superior range, higher than 99% of same-age peers. Elliot is very good with maths and puzzles, he loves science, and his current preoccupation is with Roman and Greek history. He loves to learn and has excellent memory recall of the information he absorbs on his topics of interest. Elliot has taken up drawing recently, and his mother says he has quickly developed into an excellent artist. When Elliot is asked what he likes about being gifted, he answers: "I find it easy to do maths. Listening—I don't need teachers to say things over again—I just usually hear it and understand it the first time."

Elliot's Dyslexia. There is a significant discrepancy between Elliot's oral language ability (well-above average) and his encoding/decoding (reading/spelling) abilities, which are well-below average. Elliot's dyslexia impacts on his writing and spelling—he knows what he wants to say but struggles to get it down on paper, neatly and with the appropriate grammar. Elliot said:

> …it is hard to always be writing the right sentence that I want. Like, when I think of the sentence in my head, when I write it out, it ends up different…Both the letters and the words are different…spelling can be quite hard sometimes.

Angela says Elliot's reading is "okay", but he struggles with difficult/unfamiliar words; this causes problems in test situations or when he is learning about complex topics, such as Roman history, as it is difficult to source child-friendly/picture books.

Even though Elliot is good at maths, his dyslexia can still hold him back as he reverses numbers or struggles to read problem-solving questions.

School Experiences. Elliot mostly enjoys school, and his relationships with his teachers and peers are quite good. Currently, there is no real provision for Elliot's dyslexia, nor his gifted abilities. Elliot previously took part in a literacy programme, but the funding was needed elsewhere. Angela expresses her frustration with the school's focus on remediating deficits rather than focusing on Elliot's strengths:

> In some things, he's fine anyway, like maths. And then in others, they bring him up to where he needs to be, so they can tick the box…he's capable of so much more, and it shouldn't be just about box-ticking…

Angela says the school has several children with overt special needs (behaviour and learning), so Elliot and his needs are mainly overlooked:

> Because Elliot has both – amazing strengths, but he's also got some weaknesses…and in a school environment, that makes Elliot looks average. He just gets lost… Sometimes I almost wish he would be more upfront; then he might get a bit more attention.

She would like to see the teaching of mindfulness and meditation in schools: "If that was just part of something they were all taught to help them through their lives, then it wouldn't seem like it's bad or there is something wrong with you."

Emotional Concerns at School. Elliot says he is usually happy at school, but sometimes he can feel sad. His reasons for being sad are a deeper level than an average nine-year-old boy: "Well, sometimes I am thinking about the things I used to love that I don't have anymore…my cat and my Great Great Nana." When he feels sad at school, Elliot says he sits somewhere quiet and thinks; the teachers do not typically notice his sadness, so Elliot waits until he gets home and tells his parents. Angela confirms that Elliot bottles things up at school, and then his emotions explode at home:

> Oh my god, it's almost like you get in the car, and I've got tears instantly. I think - why do I get this part? Because the teachers say "Oh, he's so lovely, so polite, he's so happy." And then you get them home, and it's just high emotions.

Elliot's high emotions are usually triggered when something doesn't go his way or if he perceives something as unfair. Angela says the "full-scale" worry episodes might occur twice a week. She wonders if Elliot's worries could be related to or exacerbated by school:

> A few days before heading back to school, we suddenly start to have the nights of worrying about death and dying, and what if I can't be [a scientist]…He never says, "I don't want to go back to school" and yet we have this pattern of him getting worked up before.

Social Concerns at School. On the whole, Elliot is very social and finds it relatively easy to make friends. However, a few school children sometimes give Elliot a hard time, calling him a tell-tale because of his strong moral compass. His mother says he has a strong friendship group of like-minded peers:

> Interestingly, the kids he's friends with are…all a bit quirky…and they're all very bright. It wasn't until I went to the gifted meeting at school…that I realised…[because] their parents were there too…that is why our kids have gravitated towards each other; they're all gifted.

What Can Be Done Better? Elliot thinks that schools could help students like him a lot more if teachers were more aware of twice-exceptionality. If he could change his teachers, he would get them to notice more, such as when he was sad, or things were not going so well. Angela also thinks teachers need more awareness of twice-exceptional children and should be prepared to make small accommodations to meet their needs: "Lots of incremental little things…will make a really big difference." She goes on to say:

> I think all schools should teach children to be more aware of their emotions, to help those kids that are a bit more highly strung. Or, make a point of understanding the children they are teaching and what families have to deal with, in terms of their children, at home.

5.5. Jake's Story: "They didn't understand why I felt frustrated and angry."

Jake is a ten-year-old boy of NZ European descent who exhibits an impressive vocabulary and a remarkable depth of thinking. Jake lives in the North Island with his parents, Amanda and Scott, his twin brother Leo (also part of this research), and his younger brother, Zac. At eight years old, Jake was identified as gifted and diagnosed with a generalised anxiety disorder (GAD) and a specific learning disability (SLD), which centres around writing. He is also a slow processor and is highly sensitive, which impacts on his day-to-day life. There will be elements of cross-over with Jake and Leo's case stories as their experiences are intertwined yet unique at the same time.

Who is Jake? Amanda describes Jake as a quirky child with a sharp sense of humour and interesting conversation, so other adults find him fascinating. He loves words and language and particularly enjoys Shakespeare. Jake is also highly sensitive and has an incredibly strong sense of justice. He will recall things that happened at school and ask "why did that happen?"; or question world events, saying "this is wrong, why is nobody doing anything about this?" Amanda says "his mind never stops," and it can sometimes make him quite melancholy.

Jake says he thinks deeply about everything he does. He is a perfectionist, and he likes to be precisely accurate and give everything his best. Otherwise, he feels like he has let himself down. Jake describes himself as "a person who has very many ideas" and an excellent negotiator. Jake's hobbies/interests include particle physics, using microscopes, designing and art, Lego, Taekwondo, and origami. He dislikes timed tests, pressure, and writing tasks as he finds writing "very tricky." Jake learns things exceptionally quickly; he memorised the periodic table at the age of seven. He says his biggest strengths are his ability to understand complex ideas and being very bright in the area of science.

Early Recognition of Jakes's Exceptionalities. Amanda and Scott realised that Jake and Leo were very bright when they were two years old. People would question if they were gifted, and the teachers at kindergarten and school recognised their brightness:

> [Jake and Leo] had a large vocabulary and could discuss things beyond their chronological age…they understood things at a level that was quite beyond their peers. And they were interested in things that other kids were not really interested in, like totally fascinated with the human body.

Jake's Gifted Abilities. Jake was assessed using the Wechsler Intelligence Scale for Children–Fifth Edition: Australian and New Zealand (WISC-V A&NZ). His overall intellectual ability is in the extremely high range, scoring higher than 98% of same-age peers (Wechsler, 2016). Jake's verbal comprehension is an area of significant strength, scoring higher than 99.9% of same-age peers.

Jake's Generalised Anxiety Disorder (GAD). Jake's anxiety centres around his learning difficulties and perceived constant failure to achieve at school. Jake was mostly able to hold his anxiety/emotions back while at school. Amanda says:

> Jake managed to hold it together at school but would burst into tears when I picked him up. Then there would be continual tears and anxiety, right the way through to bedtime…crying about what was happening at school.

Jake comments that he did feel anxious at school, but he mostly felt angry and frustrated:

> I bottled it up because if I let it out, I would get in serious trouble. And I don't like being told off. I don't think they understood why I was feeling frustrated and angry. They just thought—you are a bright kid, so why are you struggling?

Jake's Specific Learning Disability (SLD). Jake has a diagnosed SLD related to his writing. Amanda plans to have him re-assessed to ascertain the root cause of the SLD but suspects it is a dysgraphia problem as his letter formation and spelling are "appalling", and he finds writing tasks "utterly exhausting". Amanda was aware that Jake and Leo's handwriting was "atrocious" but seeing their work alongside their peers made her realise the severity of their writing difficulties and that prompted her to get

them formally assessed. Jake's inability to complete schoolwork even to an adequate level was a cause of deep frustration; he felt like a failure every day, which contributed to his GAD.

Jake's High Sensitivities. Jake has sensitivities related to temperature, touch, smell, and noise. He says: "I hate loud noises. It makes me feel sort of claustrophobic. Like there is not enough space to think." However, Jake is also highly sensitive emotionally, around the things that people say or do. He gets highly emotional about current events. Amanda gives an example of a class discussion about the war in Syria, which was of little interest to most of his peers but Jake was deeply concerned, saying, "this is terrible, the consequences of this could be so serious".

Jake's Asynchronicity. Jake is also highly asynchronous academically. Jake explains the difficulties of having gifted strengths and weaknesses at the same time:

> …when you are twice-exceptional, people think….because you are really bright in maths that you should also be really bright in writing. Where, actually, here comes the other end of the bell curve when you are twice-exceptional. And people get confused.

The narratives of lived experience offered by Amanda and Jake exposes the overwhelming emotional frustration that can occur as a result of severe academic asynchronicity:

> His [Jake's] actual maths ability in the 93rd percentile and he can process somewhere around the 10th percentile. So, for him, it is a really feral experience… He could not keep up, he was confused, and he was frustrated (Amanda).

> I usually just get very, very angry and feel like shredding a tree…They [teachers] just thought…you are a bright kid, so why are you struggling? They didn't understand why I was so frustrated and angry (Jake).

School Experiences. Jake has been homeschooled for over a year. Negative school experiences aggravated his GAD and sensitivities to such a severe extent that

Amanda felt there was no alternative but to homeschool him (and Leo). Nevertheless, she acknowledges that, on occasion, the school provided some fantastic enrichment opportunities, such as interviewing John Key. Amanda says the main challenge for Jake was that his teachers did not understand the highly asynchronous nature of his twice-exceptionality:

> They couldn't understand how a child who is so bright can struggle with processing speed and writing. And that someone…with the most amazing vocabulary, can't write a story down or would need extra time for writing tasks. They immediately jump to the conclusion that he was lazy.

Even after the assessment showed Jake to have an SLD and slow processing, the school did not make any allowances. Amanda says:

> He just could not keep up. And for him, that is an "I am stupid. I can't do this. I am not very bright. What is wrong with me?" He internalises everything. And the doubt in himself just got enormous…in his eyes, he failed again, and again.

This constant failure made Jake very anxious and destroyed his confidence. He became less able to control his anxiety at school and started to obsess over everything. Amanda gives an example of when Jake became extremely anxious about being kept in at playtimes to complete work, so she spoke with his teacher and Principal:

> …the teacher said "that has only happened twice". And I said the issue is that he thinks it might happen, and he is obsessing over it. And the Principal said "I think, actually, the issue is that he has been caught lying and exaggerating something".

Jake reflects back on his primary school experience with anger and frustration at the unfairness of it all; he does not feel that his teachers understood his needs and says he felt unsupported on academic, social, and emotional levels. When Jake was told that he would be homeschooled, he felt: "Relief…I am so glad that I do not have to go back to that hellish prison." However, Jake was incredibly positive about his upcoming start at the intermediate school, saying it is well-known for its gifted/twice-exceptionality

provision, and the Principal is his grandmother. (Since the interview, Jake attends the intermediate school, and is thriving).

Emotional Concerns at School. Jake's description of his emotions at primary school reveals his advanced vocabulary and high-level thinking: "…most of the negative ones. Just about most of the things from Pandora's Box – anger, discombobulation, doubt, nervousness." Jake says he bottled up his emotions at school; he goes on to describe this, using a diagram:

> If I was to draw you a picture; it would look like this [draws a picture of a jar with fizzing up swirl inside]. And this [points to swirl] would be a glowing, hot and red. That [coming out of the top of the jar] is if I got really, really angry and my emotions just became too big for the bottle. Then I would take myself away…and cry.

Social Concerns at School. Jake is quite social; he gets on well with other children but feels he does not have a real friend. Jake sees his social life and lack of like-minded peers as the primary cause of his anxiety at school, more so than his asynchronicity: "It was hard for me to make friends because I wanted to be with my intellectual peers, not my age peers. I did have a couple of intellectual peers, but I had very, very few." Jake also says he was occasionally the subject of teasing because of his giftedness, which he is quite accepting about and relates this behaviour to jealousy.

What Can Be Done Better? Jake would like there to be more science in primary schools and more access to microscopes and similar equipment, instead of it being locked away in a cupboard. He would like specific training for teachers, so they are better able to understand twice-exceptional children. Jake especially wants teachers to provide better support for students' social-emotional needs:

> If the teachers would actually help us. I mean properly. If they asked if we needed to talk about how we were feeling. If they made time for that…and if they paired us with like-minded peers.

Amanda has many ideas to improve the school experiences for gifted and twice-exceptional learners, including professional development on the needs of these learners, especially their social-emotional needs:

> Social-emotional support is probably as important as any academic support, if not more. Because they already come to school feeling 'I don't fit in', or 'I am different'.

She also stresses the importance of proper identification of their twice-exceptionality:

> ...there is a thing about putting labels on kids. Sometimes it is just really helpful. It is part of self-understanding. The number of kids who don't get identified until intermediate school level [who say] "I wondered what was wrong with me?"

Amanda would like schools to: provide opportunities for learning through sophisticated play; pair twice-exceptional learners with emotionally available and empathetic teachers; and cluster gifted students to ensure they have like-minded peers. She would also like to see more understanding of the impact anxiety has on children. Amanda finishes by saying that sometimes school staff can be quick to dismiss what parents are saying and view them as a 'problem parent' and stop looking for a solution/intervention to help the child:

> When schools decide that the problem is with the parent, at the same time, they withdraw the help from the child. And I think that is probably one of the most difficult things—given what we know now about the risks that gifted kids face as they grow, especially twice-exceptional kids.

5.6. Leo's Story: "Primary school was awful and torturous."

Leo is a well-spoken ten-year-old boy of NZ European descent who has an insatiable quest for knowledge. He lives in the North Island with his parents, Amanda and Scott, his twin brother Jake (part of this research), and younger brother, Zac. Leo is gifted with co-existing GAD and SLD. He is also highly sensitive and awaiting further testing for a possible sensory processing disorder. Additionally, Leo exhibits traits of autism. Elements of Leo and Jake's case stories will intersect. While the nature of their twice-exceptionality is quite different, their school experiences overlap.

Who is Leo? Amanda describes Leo as intense, quirky, and funny, with a great sense of humour. Leo prefers talking with adults who can engage him in stimulating conversation. He likes robotics, physics, quantum mechanics, Lego, microscopes, macramé, paracord, making/inventing, and dismantling electronics to see how they work. He is also fascinated with old clock parts and uses them to make amazing spinning tops. Leo describes himself as inventive; he has recently finished building an EV3 Tank Robot, and his latest project is prototyping a skimming robot that will skim over the water and is powered by carbon dioxide cylinders. His main dislike is writing.

Early Recognition of Leo's Exceptionalities. Amanda and Scott realised that Leo was extremely bright when he was two years old (see Jake's case study). Leo's interests in the preschool years were very different from most children his age. He had little interest in toys other than medical toys. Also, his preferred bedtime story was a book of anatomy, and he quickly memorised all the body parts and different skin layers. At four years old, he became preoccupied about what would happen if he did not have enough platelets in his blood. He also used to get very worried about things like volcanoes.

Leo was “miserable” at preschool, but settled better at kindergarten, as it was a rich learning environment with a big science corner, microscopes, cameras, and iPads to make movies. Likewise, Amanda says the junior school was flexible enough to be able to cope with Leo’s exceptionalities, though his anxiety and sensitivities were apparent. However, the older Leo got, the more trouble he had at school.

Leo’s Gifted Abilities. Leo’s vocabulary and oral language are remarkable for his age. The results of the WISC-V A&NZ show that Leo’s general intelligence is in the very high range, higher than 96% of same-age peers; and his verbal comprehension is higher than 99.9% of same-age peers. Amanda says that Leo excels in many areas:

> He has an amazing memory. He just understands science, especially physical sciences. He's really interested in history. He loves music and can teach himself to play things on a piano…he plays by ear.

When Leo becomes interested in something—like gems and stones or the periodic table—it is obsessive until he has more than a working knowledge of it, then he moves on.

Leo’s Generalised Anxiety Disorder (GAD). Leo’s anxiety mostly revolved around his sensory overload at school. He struggled with the transition into the senior section of the school (Year 5). Amanda explained to his teachers that Leo had anxiety issues: “I said if his anxiety was getting worse, I needed to know. But I don't think his teachers picked up he was anxious, they just thought he was naughty.”

Leo’s anxiety escalated, and he began having panic attacks. He would cling to Amanda when she dropped him at school and would hyperventilate, saying he felt dizzy and sick. It reached the point where Leo was unable to attend school without his mother being present. The teachers and Amanda initially thought it could be separation anxiety. When Amanda spent time in the classroom, she quickly realised Leo’s anxiety was much worse than she thought:

> He was completely disengaged…and he had done no work all year. He just wandered around and hid under tables and tried to hide in cupboards. His anxiety was absolutely out of control. I was amazed no one had contacted me. If they had got in contact sooner, that would have made a big difference.

Amanda spent a term in the classroom so that Leo could attend school. However, his anxiety continued to spiral, so she removed him from school. Leo's anxiety has significantly reduced while being homeschooled.

Leo's Specific Learning Disability (SLD). Leo's SLD is related to his writing. It is thought to be dysgraphia as Leo's letter formation and spelling are problematic. Leo talks about the intense frustration he felt at school with his writing difficulties. He had "excellent ideas" but found it onerous to get them down on paper. Amanda says that Leo particularly dreaded writing recounts in test situations because the pressure and the difficulty of a writing task "just shut everything down". Leo's teachers were aware of his SLD but discounted the need for extra time/assistance to complete tasks as his giftedness meant Leo's achievement was still above average.

Leo's High Sensitivities. Leo is thought to have a sensory processing disorder as he is highly sensitive to sound, smell, and touch. In the classroom, Leo struggled with having lots of other children in close proximity; the school bell and background noise; and the feel of the synthetic school uniform on his skin. This sensory overload caused full sensory meltdowns. Leo says:

> It made me feel claustrophobic. Not claustrophobic as in a small space but by being surrounded by people. During mat times, I felt extremely cramped. Like my personal space bubble had just gone bang. It made me feel annoyed…too uncomfortable to learn anything. Sometimes it would get too noisy, and I would hide under a table. I felt like I wanted to lock myself in a cupboard to get some quiet and some space.

School Experiences. Amanda appreciates that the primary school made some attempts to meet Leo's needs. They allowed him to use a dictaphone in some lessons

and put Leo under the Resource Teachers: Learning and Behaviour (RTLB) team when his anxiety reached a crisis point. She speaks positively about one teacher who genuinely sympathised and recognised Leo's difficulties. The teacher would often get him to help her score/count, so he would still be joining in activities. However, Amanda says these positives were not enough to counteract Leo's negative primary school experiences.

Amanda gives an example of how a routine task was enough to ruin the whole of Leo's school week. At the start of each week, the students had to copy a colour-coded timetable for the week. However, Leo struggled to understand the timetable, and his poor writing/spelling meant he was unable to read the parts he had copied in the allocated timeslot:

> He just fell to pieces over it, because the first thing he'd do every week he absolutely failed at, and then because the rest of the week hinges on knowing it, he's at a complete loss.

Leo feels the teachers did not provide the support needed to complete his schoolwork successfully. He continually asked for teacher help but rarely received it: "I put my name on the board most of the time…because I usually needed help. And I would end up waiting for most of the lesson." Leo also shares his frustration about the removal of his name from the list of students allowed to work in the independent learning area:

> …in the independent learning area, it was quiet and I achieved better standards of work. Apparently, it was a privilege…when it would have been better to assign people to the learning area based on their learning needs.

Leo describes his experiences at primary school as "torture" and jokes that he would like to burn it down, but he spoke hopefully about going to intermediate school. Since the interview, Leo started at the intermediate and is doing well.

Emotional Concerns at School. Amanda says that Leo's sensory issues and anxiety made the school environment a constant battle. When she asked how his day

was, he would usually reply, "It was terrible, it was disastrous, and if you want to rank it out of ten, I'd say zero". When asked to describe his emotions at school, Leo says:

> If I am having a bad day, then I mainly feel hate and dread. If I am having a good day, then maybe some feelings of melancholy. And tortured and bored on 'free-thinking Fridays'…because I definitely wasn't allowed to think freely.

Social Concerns at School. Amanda says that Leo "absolutely struggled" to find friends or like-minded peers at school. Leo has a lot of adult friends and chose adult guests for his birthday parties up until the age of five. His mother thought Leo lacked social skills with same-age peers until he became close friends with a girl at One Day School. Amanda says:

> They hit it off immediately, and they were like peas in a pod. So, I had kind of thought he's not very good at making friends. But actually, that's not true—he can make friends.

Amanda approached the teachers about Leo's lack of friendships, saying he has acquaintances do tasks with, but no close friends. The school put Leo through the RTLB programme on making friends and tried to pair him up with some boys in his class, without success. Amanda says: "What they totally failed to get was what he was looking for, in a friend. He was looking for an intellectual peer."

Leo says, at school, he mostly made friends with people who were also struggling like he was; he prefers to talk with people who are similar to him: "If they like the same things as me, they know about the same things as me. So that we can do something together, on the same level, and we know what we are doing."

What Can Be Done Better? To make the primary school environment better for twice-exceptional learners, Leo would change teacher expectations and methods of teaching to allow more flexibility; make the learning environment more stimulating; and have better control over student behaviour. He would like teachers to be more aware of

the needs of twice-exceptional children and wants more inside activities (reading/science) at playtimes rather than being forced to play outside.

Amanda has many positive suggestions to improve the primary school experiences of gifted and twice-exceptional learners. She points out that the further these learners go through school, the more they struggle because of the restrictions imposed by the school curriculum:

> Te Whāriki is an amazing curriculum for gifted kids; if they could have that at age ten, they would be fine. They would have figured out that they belong, that their experiences are valid. As opposed to the school curriculum, …it tries to squash them down into a particular thing [and] these kids realise 'I just don't fit'.

Amanda thinks educators need more awareness about the social-emotional needs of twice-exceptional learners:

> …realise that they have social-emotional needs and that they are different from those of other children…very different. Twice-exceptional kids can fall through the cracks at both ends of the bell curve…these kids are over-represented in mental health statistics, and suicide statistics, they drop out of school…

Amanda was also frustrated that while additional programmes and funding are targeted towards children who are academically underachieving, there needs to be a recognition of children who are very bright but also have very specific learning and social needs.

5.7. Sam's Story: "Fitting in with the system…but struggling quietly."

Sam is a bright and excitable six-year-old boy of NZ European descent who lives in the South Island with his parents, Emma and Mark, his younger brother, Max, and his new baby sister. At nearly six years old, Sam was identified as twice-exceptional—gifted with specific learning disabilities. Sam has obvious overexcitabilities. When nervous or excited, Sam stands still and holds his body rigid; this is often accompanied by a nervous/excited 'hmmm' sound. Because of this behaviour, Emma says that some see him as being on the autism spectrum.

Who is Sam? Sam presents as a delightful, fun-loving, and curious boy. He is highly creative, loves to draw maps and plans of his ideas, and he is always creating things like robots and models of buildings out of wood or recycled materials. Sam loves science and chemistry, and has a volcano toy that "really explodes". He also has a microscope and enjoys looking at different rocks under it. At school, Sam enjoys drawing and writing his letters.

Early Recognition of Sam's Exceptionalities. Emma recalled that she saw signs of giftedness very early in Sam but was in denial. When Sam was ten months old, a teaching colleague told her to "watch that kid" as Sam was acutely observing everything in a manner that was atypical for children his age. Other parents regularly commented about Sam's abilities as he was quick to reach all the milestones. Similarly, at kindergarten, the teachers often mentioned instances when Sam had displayed high-level learning ability, working theories, or advanced methods of play for his age. For example, in the sandpit, Sam might have 20 children joining in his game, and he would assign jobs to them all, so they worked together to achieve a goal.

Emma had worked with gifted children as an early years teacher but did not immediately see any resemblance of gifted traits in Sam. However, as Sam became

intensely obsessive about topics of interest, like memorising the periodic table at the age of four, Emma began to consider that he might be gifted. Kindergarten referred Sam to the MOE as they suspected him of having ASD. Emma and Mark researched the criteria for ASD; they were were unconvinced but agreed to the assessment as a matter of precaution. As suspected, the Paediatrician confirmed that Sam was not on the spectrum, saying "none of it fits".

School Experiences. The MOE implemented a transition to school plan for Sam to help with his anxiety/overexcitability. However, his class size quickly grew from 20 to 68 children, and Sam was in a constant state of anxiety due to the chaotic environment. Partway through the year, Sam and a friend were moved to another class as some problem children in the class were "freaking him". This class move was not entirely positive. Emma says that Sam's new teacher was unreceptive to the idea that he had any exceptionalities. She firmly believed there was nothing wrong with Sam, and he was just slow at picking up reading and writing. Emma recalls a meeting where Mark asked the teacher if she thought Sam could be gifted:

> She [the teacher] just sat looking at us like this [dumbfounded] and said, "Oh right. So, you think he is gifted?" I said, "Well, I can't put it down to anything else."… And she was, like, "No, definitely not."

After the meeting, Emma and Mark got Sam assessed, and he was identified as gifted. Since the assessment, Emma says there has been an occasional meeting with the school, but nothing has been actioned. There are no provisions for Sam's gifted abilities. In response to Emma's persistent requests for additional support for Sam, he has recently been assigned an RTLB. However, the RTLB has intimated that little can be done as Sam is mostly compliant in the classroom. Emma is frustrated by the lack of action by the school and says that all Sam is doing is "going through the motions":

> He's just spending his day…learning how to conform. He is bored out of his brains. I know it is all part of the social-emotional learning to be in that environment. But how much time do you need to learn that? I get quite torn about it.

Emma compares Sam's school and the special character school her younger son Max attends. Max's teacher has worked with twice-exceptional children and was able to offer advice about what Sam needs. Emma said she knows she should not compare the schools, but it is hard when they see the learning opportunities that Max has and that Sam is missing out on—a teacher who actually understands twice-exceptionality. Hence, at the time of the interview, Sam was on the waiting list to go to the same school as his brother, and Emma was seriously considering whether to homeschool in the interim.

Sam's Gifted Abilities. The Educational Psychologist verified that Sam's behaviours were undoubtedly related to his giftedness and not ASD. The results of the Woodcock-Johnson IV Tests of Cognitive Abilities (Schrank, McGrew, & Mather, 2014) show that Sam's Gf-GC Composite score (indicates his potential) is in the very superior range, higher than 97% of same-age peers. Emma says that Sam's gifted strengths do not currently benefit him at school:

> …school judges on English, reading, writing and maths, and they are not his strong areas. Well, maths is, but he is more science and creative stuff, and they don't do that at school. They don't even care about it.

Sam's Specific Learning Disability (SLD). Sam also has difficulties with visual and auditory processing and phonemic awareness. Sam's general intellectual ability score is significantly lower (67th percentile) than his potential due to slow processing, resulting in a diagnosis of mild SLD. Sam's slow processing is also the reason why his reading and writing do not meet the requirements for school, so he has private specialist tuition to improve his neurological processing. The way Sam sees

words/letters means reading becomes tricky when the words are more than five letters, and writing/spelling can also be challenging. Emma has spoken to the school about Sam's difficulties, but she says they are uninterested; as Sam's performance at school is average, they are unable to provide additional support because it is over-compensating. The Paediatrician and Psychologist told Emma that the education system is more likely to provide support if you have an ASD diagnosis. Emma states: "There is a pot load of money if you are on the spectrum…So, I guess that is what the Kindy and the school were pushing for."

Emotional Concerns at School. Sam worries about everything. Emma gives a recent example of a mufti day at school where they had to wear specific colour clothing: "A couple of days before he was just like this [rigid arms] constantly and he was saying 'I'm not going…I am not doing that.'…It just got ridiculous." Assemblies are also an issue for Sam because they are busy and noisy, and other children sit too close. Emma thinks he has sensory issues, and it all just gets "too much" for him:

> He will just totally freak out and then ball his eyes out. It was what he was doing in class, as well, if it gets…too chaotic, then he will stand there and…shake and ball his eyes out. But he doesn't make a sound, and so the teacher doesn't always know.

Emma is grateful that the teacher offers some emotional support as she now hugs/holds Sam to help calm him down. However, Emma does not feel this is done out of genuine empathy; it is a means to prevent disrupting the whole class.

Social Concerns at School. Sam initially struggled to form friendships at kindergarten and can lack confidence socially. However, his mother observes that Sam has made a little group of friends at school that he mainly plays with, so she is not concerned about his social functioning. Sam says he has a few good friends, and if he is sad or happy at school, his friends are the ones who he would go to for support.

What Can Be Done Better? Sam thinks that school would be much better if they did more science and experiments. His mother wishes that teachers were more aware of giftedness and twice-exceptionality in general, and to have a genuine interest in wanting to understand these unique students. She also wants increased recognition and acceptance of the more introverted children:

> As much as they have to understand the children with behavioural issues, they also have to understand the other side – the introverts. Not everyone has to be loud. Kids might be fitting in with the system but can be struggling quietly in their own way. It is just knowing the kids. It is really just taking the time to know them as an individual, not a number.

CHAPTER SIX

Discussion.

> Gifted kids and twice-exceptional kids experience the world differently and not just academically—socially, emotionally, they think, they feel, they just experience the world really differently.
>
> (Amanda, Jake and Leo's mother – Case Study Participants)

6.1. Introduction

Existing research indicates that twice-exceptional learners are often underserved, overlooked and misunderstood in primary school classrooms (Foley-Nicpon, 2015; Gilman et al., 2013; Reis & Colbert, 2004; Townend & Pendergast, 2015). However, minimal empirical research has focused explicitly on the social-emotional needs of this heterogeneous group of learners (Barber & Mueller, 2011; Beckmann & Minnaert, 2018; Dare & Nowicki, 2015; Foley-Nicpon, 2015), especially from a New Zealand context (Ng et al., 2016). In response to this research gap, this study explored the social-emotional needs of twice-exceptional learners, giving a voice to six twice-exceptional children and their parents. The narratives of lived experiences and perspectives shared by participants were used to develop the individual case stories that formed the research findings of this study.

This chapter discusses the research findings. The broad themes and key valuable insights that emerged from the data are examined in relation to existing research and literature. First, an overview of the role that the parents in this study played in recognising and advocating for their children's needs is provided. Subsequently, the discussion is framed around the research questions: the types of social-emotional needs identified in the narratives of twice-exceptional children and parents; their perspectives on how these social-emotional needs are currently met in primary schools, and their suggestions to improve the school experiences for twice-exceptional learners. Excerpts

from the participants' narratives will be used to enhance the discussion. Finally, the chapter reflects on the limitations of the study and offers recommendations for future research.

6.2. Role of the Parents

6.2.1. Recognising the Exceptionalities. The twice-exceptional learners in this study each had their own unique and complex combination of exceptionalities and needs. Nevertheless, their shared stories of lived experiences revealed commonalities. The main similarity across all six case stories is the integral role that parents played in the identification of their child's twice-exceptionality and advocating for their needs at school. Like the parents in Besnoy et al.'s (2015) research, all the parents in this study claimed to have noticed that their child's "precocious abilities" at a very early age (pg. 114). Likewise, the parents (as opposed to the teachers) were the first to recognise that their children were also struggling in specific areas, such as writing, spelling or expressive language, in comparison to their peers. These findings support the results of previous studies, which have shown parents to be remarkably accurate at recognising the abilities and needs of their children (Besnoy et al., 2015; Dare & Nowicki, 2015; Louis & Lewis, 1992; Neumeister et al., 2013; Wormald et al., 2014). Additionally, the findings of this study support the notion that twice-exceptional learners continue to be overlooked and underdiagnosed in early schooling; in five of the six cases, parents report their child's giftedness and/or disabilities went unnoticed by their teachers (Foley-Nicpon et al., 2011; Lovett & Sparks, 2013; Ottone-Cross et al., 2017).

6.2.2. Parents as Advocates. All the parents in this study were forced to seek and pay for support outside of the school system to formally identify their child's exceptionalities. The majority also expressed their frustration at having to continually advocate for their child in the school system to ensure their needs were being met or

considered, even after their child was formally identified as twice-exceptional. These findings concur with recent studies by Besnoy et al. (2015), Dare and Nowicki (2015) and Neumeister et al. (2013) which found parents to be the initiators in identifying their child's twice-exceptionality and highlighted their struggles when advocating for their child's needs at school.

6.2.3. Identification concerns. This study raised concerns about how many twice-exceptional children remain undetected and struggling in the school system, particularly those from less privileged backgrounds, corroborating the concerns expressed in the studies by Neumeister et al. (2013) and Dare and Nowicki (2015). The parents of the twice-exceptional children in this study all had the resources available to be able to recognise their child's differences and pay for a private assessment during early schooling. This early identification of their exceptionalities distinguishes these children from the vast majority of twice-exceptional learners who remain entirely overlooked during primary school, or recognised only for their giftedness or disabilities, because of the masking effects of their exceptionalities (Baldwin et al., 2015; Lovett & Sparks, 2013; Maddocks, 2018).

6.3. Research Question 1: What Are the Social-Emotional Needs of Twice-Exceptional Learners in Primary Classrooms?

The twice-exceptional children in this study all presented with significant social-emotional needs; this confirms previous research which has shown twice-exceptional learners to be prone to a manifold of social-emotional issues which co-evolve alongside their individual mix of exceptionalities (Barber & Mueller, 2011; Buică-Belciu & Popovici, 2014; Macfarlane, 2000). The discrepancy between the twice-exceptional child's high-abilities and debilitating deficits is thought to make them more vulnerable to feelings of extreme frustration, severe anxiety, poor self-concept, and emotional

sensitivities (Baldwin et al., 2015; Baum & Owen, 2004; King, 2005; Strop & Goldman, 2011). Moreover, the case narratives showed that both the parents and twice-exceptional children felt that more support was needed for these social-emotional needs in the school setting. This finding is concerning, as research has shown that when the needs of twice-exceptional children remain overlooked or unmet, the repercussions can be as harmful as their diagnosed disabilities/disorders, leading to severe social and emotional problems (Dare & Nowicki, 2015; King, 2005; Montgomery, 2009; Nielsen, 2002; Zentall, 2014).

6.3.1. Emotional Concerns at School. The intense and sometimes overwhelming emotions in the school setting, reported by the twice-exceptional children in this study, are consistent with the existing research which shows twice-exceptional children can experience feelings and emotions more intensely than the average child (Baldwin et al., 2015; Hayes, 2014; Strop & Goldman, 2011). When asked to describe their emotions at school, some of the comments from the children included: "really happy, lonely, either really sad or mad…and OCD worried" (Sophie); "…anger, discombobulation, doubt, nervousness" (Jake); "hate and dread…feelings of melancholy…and tortured and bored" (Leo). Similarly, the narratives offered by parents reveal the overwhelming nature of the emotions experienced by their twice-exceptional children: "He will just totally freak out and…ball his eyes out" (Emma); "When she does lose it, it is very, very intense" (Helena); "that's the absolute hardest thing, the emotional stuff. He doesn't seem to be able to cope with his own thoughts" (Angela).

Mostly, the twice-exceptional learners in this study felt unable to express their high-emotions at school. Four of the six participants (Elliot, Millie, Sophie, and Jake), spoke about "bottling up" their emotions until they were in the sanctity and safety of their home, citing reasons such as wanting to be perceived as well-behaved, avoid being

told off, or because they felt the teachers would not be able to help them. This suppression of emotion is a concerning finding, as it potentially places the twice-exceptional child at further risk of severe social-emotional difficulties (Baum et al., 2014; Reis et al., 1997). Jake spoke of this risk: “At school, I had to bottle the emotions up. And bottling up anger is not very good for your mental health.”

The suppression of emotions at school was also a source of real frustration to some parents because the teachers were unable to witness the extreme anxiety that their children were experiencing. For instance, Amanda spoke about how the school dismissed the problems with Jake and Leo and thought that she was the problem: “Which, I am big enough to handle…but the problem is that they think the kids are fine, full stop, end of intervention.” This observation by Amanda is a common dilemma faced by parents; too often school staff blame the problem on ‘pushy parents’ or the child being ‘lazy’ (Assouline et al., 2006; Neumeister et al., 2013), thus resulting in the twice-exceptional child failing to receive appropriate support for their needs.

Emotional Frustration. The findings of this current study concurs with the notion that twice-exceptional learners often experience intense frustration as a consequence of the paradoxical relationship between their gifted strengths and hindering disabilities/disorders (Betts & Neihart, 1988; Dare & Nowicki, 2015; Reis & Colbert, 2004; Reis et al., 1997; Townend & Pendergast, 2015; Vespi & Yewchuk, 1992). Frustration, as an emotional response, is recurrent throughout the interview data and subsequent case stories for this study. Four of the children (Leo, Sophie, Elliot and Jake), discussed their vexation about having “excellent” or “creative” ideas, but being unable to put them into written form on paper. Likewise, Millie has a remarkable memory for vocabulary but struggles with verbal expression. These accounts are reflective of the descriptors that Betts and Neihart (1988) ascribed to their Double-Labelled learners in

their Profiles of the Gifted and Talented, characterising twice-exceptional learners as having poor handwriting or other difficulties that impede their ability to complete school tasks, causing low self-esteem, frustration, and feelings of helplessness. The consistency between the narratives in this study and Betts and Neihart's depiction of twice-exceptional learners is an important finding, as it provides reassurance that their conceptualisation of giftedness is indeed a useful tool for educators to identify twice-exceptional learners, as promoted in the MOE literature (MOE, 2012).

The incongruity between the learning potential and ability of twice-exceptional children can be acute (Baum et al., 2017; King, 2005). The case story of Jake exposes the overwhelming emotional frustration that twice-exceptional children can experience as a consequence of their severe academic asynchronicity. The lived experiences described by Jake are reminiscent of the school experiences of the twice-exceptional students in Vespi and Yewchuk's (1992) and Reis et al.'s (1997) studies, in which the students reported an overwhelming fear of failure and expressed feeling immensely frustrated, dumb, confused and misunderstood. Given the severity of asynchronicity, and the resultant fear of failure and emotional frustration felt by Jake (and other participants), it is unsurprising that twice-exceptionality is commonly associated with negative self-concept, anxiety, depression, acting out behaviours, and social isolation (King 2005; Strop & Goldman, 2011). Moreover, it confirms the desperate need for additional support for twice-exceptional learners in the classroom, and a focus on meeting their social-emotional needs (Dare & Nowicki, 2015; Foley-Nicpon, 2015; Reis & Colbert, 2004).

Perfectionism. For the twice-exceptional child, perfectionist traits (unrealistically high expectations of themselves and others), can be particularly disabling, especially when combined with repeated academic failure due to the

mismatch between their gifted abilities and disabilities (Callard-Szulgit, 2012; Hayes, 2014; Silverman, 1993). In this study, Sophie, Millie, Jake and Leo identified themselves to be perfectionists. Consistent with the literature, their interview narratives and case stories suggest that their perfectionist traits exacerbate their frustration at being unable to reach their academic expectations, sometimes leading to fear of failure and emotional outbursts (Townend et al., 2014; Vespi & Yewchuk, 1992). Jake's perfectionism and perceived academic failure resulted in avoidance behaviours at school (Callard-Szulgit, 2012). Amanda said, "He became fearful of anything that someone might ask him to do because everyone expected him to be good…because he is clever". Likewise, Sophie demonstrates the hallmark traits of perfectionism as she often procrastinates but then becomes hyper-focused on detail (Callard-Szulgit, 2012), saying "well it has got to be perfect, hasn't [sic] it?". Much like the participants in Townend et al's (2014) study, Helena describes the enormous pressure that twice-exceptional children with perfectionist traits can feel, saying: "[Millie] is a bit of a perfectionist…she has a strong desire to do well and feels the weight of that on her shoulders."

Anxiety. The findings of this present study broadly support the notion that twice-exceptional children are more susceptible to anxiety issues/disorders (Baum et al., 1991; Dole, 2000; King, 2005; Schuler & Peters, 2008), with all six twice-exceptional children indicating varying levels of anxiety. Sophie has diagnosed OCD and anxiety issues that accompany her Asperger's and giftedness. Her anxiety issues are continually intensifying and expanding into different areas, so are gravely concerning. Her mother Rachel said: "We are trying to get her to take control…because it is taking over. We always talk about this little monster on your shoulder…it's getting bigger." The insidious and disabling nature of Sophie's OCD and anxiety is consistent with the findings of previous studies by Garcia-Delgar et al. (2018), Geller and March (2012),

and Stewart et al. (2017). Jake and Leo have been diagnosed with GAD; their severe and debilitating anxiety resulted in them being removed from school and homeschooled to minimise their distress. Amanda said that Leo's anxiety is mostly related to his overwhelming sensory issues, as he is highly sensitive to sound, smell and touch (Dabrowski, 1964; Sampson, 2013; Silverman, 1993). In contrast, Jake's anxiety is concentrated around the frustration he feels about his academic 'failings' (Dare & Nowicki, 2015; Vespi & Yewchuk, 1992).

Conversely, Elliot's mother said that he does not have the day-to-day anxiety related to his academic performance or perfectionism. However, Elliot is a "big thinker", with depressive traits, who often gets intensely worried about things like death and not being able to achieve all the things he aspires to in his life—like becoming a scientist. According to Dabrowski (1964), this form of emotional intensity is a common side-effect of giftedness. On the other hand, Sam's anxiety is linked to his sensitivities and overexcitability (Dabrowski, 1964; Probst & Piechowski, 2011). Sam has sensory issues (sound and touch) and Emma said that when things get "too much" he stands still, his arms go rigid, he shakes, and silently but profusely cries. Helana said that Millie potentially has some degree of social anxiety disorder as she is terrified of new social situations, and she gets unusually anxious about being told off or not being perceived as well-behaved, which is linked to her perfectionism (Callard-Szulgit, 2012; Silverman, 1993).

Overexcitabilities. The twice-exceptional learners in this study have all been shown to exhibit emotional intensity and sensitivities that are typically correlated with giftedness (Benge & Montgomery, 1996; Dabrowski, 1964; Sampson, 2013; Webb et al. 2005). These intensities/sensitivities are labelled overexcitabilities in gifted literature (Dabrowski, 1964). The case stories revealed that Sam, Leo, Jake and Sophie all

described challenges associated with sensual overexcitability, as they have heightened sensitivities to touch, smell, sound, and/or light which negatively impacts on their school experiences (Dabrowski, 1964). All the twice-exceptional participants, to varying degrees, demonstrate intellectual overexcitability, with a voracious need for information, solving puzzles or problems, and constant questioning that was evident from an early age (Dabrowski, 1964). Furthermore, all participants also display some emotional excitability which presents as fears (Jake, Leo, Sophie, Elliot, and Millie); phobias (Sophie); anxieties (all child participants); feeling isolated (Sophie, Jake and Leo); and depression (Elliot) (Dabrowski, 1964; Hébert, 2011; Probst & Piechowski, 2011; Silverman, 1993).

Emotional Sensitivity. Twice-exceptional learners (like gifted), often feel emotions more intensely and have deeper reactions to emotion-generating situations and life problems than typically developing children; they are also more predisposed to existential thoughts, becoming preoccupied with thoughts about death, isolation, or the meaning of life (Aron, 2010; Hayes, 2014; Webb et al., 2005). Consistent with the literature, all the children in this study, excluding Sam, exhibited emotional sensitivities. The narratives about Elliot showed that he could get consumed in thoughts about death or not achieving his big-picture life goals. These concerns can overwhelm Elliot and his mother worries about his depressive tendencies (Aron, 2010). Sophie's parents said that she gets transfixed on global issues, and she overthinks everything. Sophie admitted that her irrational fears affect how she sees the world, and can sometimes make her "feel tired and low". Whereas, Leo's emotional sensitivities are around his enduring reactions to life problems; for example, his continued focus on negative experiences at school, even after being homeschooled for over a year (Aron, 2010; Hayes, 2014). Amanda said, "he still thinks it would be a good idea to go and set fire to the place - which I always

reprimand him on". Similarly, Millie has intense reactions to emotion-generating situations (Aron, 2010; Hayes, 2014).

Jake's emotional sensitivities relate to his keen sense of justice and enduring emotional responses to current events. Amanda discusses instances where he has had profound reactions to events like Fukushima or the war in Syria in a manner that is atypical of a child. Jake's responses to this stimuli are: "This is wrong…Why is nobody doing anything about this?" Amanda reflects on Jake's asynchronicity and comments that although he is capable of high-level thinking: "He does not have the emotional maturity and life experience to understand that these problems have to be balanced with other factors." As Hayes (2014), observes, "Twice-exceptional children are often highly aware of world problems at a very young age. They have a mature understanding of inhumanity, but do not know what to do about it" (p. 247). This discussion by Amanda is a valuable finding to come out of this research, confirming the acute asynchronous development of some twice-exceptional children that is characterised by a significant discrepancy between the child's intellectual and social-emotional development (Gilman & Peters, 2018; Josephson et al., 2018). Hence, the child exhibits advanced maturity in some domains and immaturity in others (Silverman, 2009).

Self-Concept. Research has mostly shown that twice-exceptional learners often have a lower self-concept than gifted and averagely-performing students (Assouline et al., 2010; Coleman, 1992; Foley-Nicpon et al., 2012; Reis & Colbert, 2004; Townend et al., 2014). In line with these previous studies, the participant narratives in this current research exposed some negative self-perceptions. For example, Jake experienced serious self-doubt at school and would make statements like "I am stupid, I can't do this, I am not very bright" when faced with academic challenges, which indicated low academic self-confidence; this intense self-doubt experienced by Jake is resonant with

the feelings described by the participants in Townend's (2015) study. Similarly, Sophie seemed demoralised when talking about her problems in making friends. Her comments like "I just don't want to seem like a weirdo, I don't want to do that" suggested she potentially had a low social self-concept, which commonly co-exists with twice-exceptionality (Barber & Mueller, 2011; Foley-Nicpon et al., 2012).

In stark contrast to these earlier studies, however, the twice-exceptional children in this case study mostly identified as having positive overall self-concepts. Five of the six participants provided positive self-evaluations when asked to describe themselves. For example, Sophie said she is "a funny person. I am hoping this is not skiting [boasting], but I am nice…I am a very fast reader. Seriously fast." Likewise, Jake's description of himself indicated his overall self-concept is also extremely positive: "I am a person who has very many ideas and an excellent negotiator. I am very bright in the area of science [and] understand complex things." Therefore, despite experiencing negative self-perceptions in one of the two broad areas that make up self-concept—namely social self-concept or academic self-concept (Cooley & Ayres, 1988; Ghazvini, 2011; Piers & Herzberg, 2002), most of the twice-exceptional learners in this study still presented with a positive self-concept.

A possible explanation for this seemingly contradictory finding is that the children in this study all came from highly-supportive families, who fostered their strengths. Their social-emotional needs were being well-supported at home, and in some instances at school; therefore, they were able to feel confident in themselves (Baum et al., 2014; Ronksley-Pavia et al., 2019b). This theory is supported by existing research which has also shown that twice-exceptional learners can achieve a positive self-concept and high confidence levels when the environment of the child is safe, supportive, encouraging, promotes high expectations, and meets their social-emotional needs

(Baum et al., 2014; Beckmann & Minnaert, 2018; Reis et al., 1997; Ronksley-Pavia et al, 2019b; Wen Wang & Neihart, 2015). Finally, a note of caution with regards to the interpretation of the data on self-concept is necessary, as no tests were conducted to accurately assess the 'true' self-concept of the twice-exceptional children in this study and the children or parents were not directly asked about self-concept. The assumptions on the self-concepts were based on their narratives and from observing the children during the interviews, but there is the potential that these could have been taken out of context as the data is just a snapshot of the personal experiences of the twice-exceptional children in this study.

6.3.2. Social Difficulties at School. The research establishes that twice-exceptional children often have social difficulties and can find it hard to make friends with same-age peers, putting them at risk for peer rejection and bullying (Baldwin et al., 2015; Nielsen, 2002; Ronksley-Pavia et al., 2019a; Vespi & Yewchuk, 1992). The mixed findings of this study neither support nor contradict this common perception of twice-exceptional children. In three cases, the children and parents voiced serious concerns about their social functioning. Sophie and Jake seemed despondent as they talked about their repeated (unsuccessful) attempts to form close friendships at school, while Leo's mum said he "absolutely struggled" to make friends with same-age peers. Conversely, the interview narratives and case stories for Sam, Elliot and Millie revealed that they all have stable friendship groups, including some like-minded peers.

Social Skills. It is widely accepted that twice-exceptional children commonly lack social skills (King, 2005; Nielsen, 2002; Ronksley-Pavia et al., 2019a; Vespi & Yewchuk, 1992). However, the social issues of the children in this study do not appear to be a consequence of underdeveloped social skills. On the contrary, Jake, Sophie and Leo demonstrated extremely competent social skills in certain situations, and they all

presented as highly-likeable, enthusiastic, confident, and socially adept individuals. Adults and younger children adore Sophie, but she struggles to retain friendships with same-age peers. Similarly, Jake and Leo prefer the company of adults who can engage in stimulating conversation. Amanda admitted that Leo has impressive social skills, but “he is just not interested in using them, except with adults”; this finding is in line with the findings of Vespi and Yewchuk (1992), who noted that despite some of the twice-exceptional children in their study having effective social skills, they did not consistently use them, particularly with same-age peers.

Atypical Among ‘Typical’ Peers The findings offer some support for the observations made by Foley-Nicpon et al. (2011), McEachern and Bornot (2001), and Townend (2015), who all noted that the conflicting high abilities and inabilities of twice-exceptional learners could make them feel atypical, isolated, and socially awkward. The shared narratives and assessment/diagnostic reports data for Jake, Leo and Sophie all showed they experience higher levels of academic and developmental asynchronicity than the other children in this study. Likewise, they also experienced significantly more social difficulties and expressed feeling “different” from their peers. This finding can offer additional support to the theory that the inconsistencies between the twice-exceptional child’s high abilities and disabilities increase their vulnerability to social difficulties with peers (Barber & Mueller, 2011; Leggett et al., 2010; Nielsen, 2002; Reis et al., 2000; Vespi & Yewchuk, 1992; Weinfeld et al., 2013). However, another possible explanation could be that, unlike the other twice-exceptional participants, Jake, Leo and Sophie all experience intense and encumbering anxiety in the form of GAD or OCD with anxiety, has also been shown to be associated with feelings of social isolation and poor social functioning (Schuler & Peters, 2008). Therefore, these findings need to be considered with an element of caution.

Like-Minded Peers. The twice-exceptional children and their parents recurrently spoke of the importance of like-minded peers for enhancing their self-esteem, peer relations, and chances of personal success (Hayes, 2014; Nielsen & Higgins, 2005; Wen Wang & Neihart, 2015). Jake, Leo and Sophie all struggled to find like-minded peers at school who had similar interests, abilities, and drive (Wen Wang & Neihart, 2015). Sophie's narratives implied that she was happy to make any friends at school, whereas Jake and Leo were explicitly seeking like-minded peers. Amanda explained their reasoning: "They want their friend to fill a gap that is not being met in class. Then they can go and have this escapist playtime. And there are just not so many of those kids around." Finding like-minded peers at school is particularly challenging for twice-exceptional learners; although they have traits in common with gifted, disabled, and typically developing peers, their multiple exceptionalities make them intrinsically different and more vulnerable to feeling of isolation and alienation (Foley-Nicpon et al., 2011; Reis & Colbert, 2004; Ronksley-Pavia et al., 2019a). Jake's narratives support this notion of being different from his peers:

> It was very hard for me to make friends because I wanted to be with my intellectual peers, not my age peers. And since I am brighter than a whole bunch of other kids in my class. Or, in this case, brighter and not so bright…it was impossible.

The literature promotes the need to address such feelings of isolation, otherwise, they can lead to anger, anxiety, and depression (King, 2005; Nielsen, 2002). Amanda removed Jake from school to reduce his anxiety and rebuild his self-esteem and confidence; this was beneficial, as Jake's return to school at the intermediate since this interview, has been successful and he has found his group of like-minded peers.

Twice-exceptional research mostly delves into the negative social experiences of these unique learners (Coleman, 1992; Foley-Nicpon et al., 2011; Reis & Colbert,

2004; Reis et al., 2000; Ronksley-Pavia et al., 2019a; Vespi & Yewchuk, 1992). Therefore, an unexpected but pleasing finding was that half of the participants (Millie, Elliot and Sam) had established friendship groups with multiple like-minded peers. In each of these cases, the parents reported that fortunately, the school was sufficiently large enough to have several gifted children. Angela discusses how Elliot and his group of "quirky" friends all naturally found each other across four different classrooms, suggesting an innate need to find like-minded peers (Wen Wang & Neihart, 2015). Millie's school was the only school to cluster gifted/twice-exceptional children purposefully. In her classroom, she had a supportive friendship group with eleven other gifted and talented girls. Interestingly, Millie is also the only twice-exceptional child in this study to have predominantly positive school experiences, providing some support for the positive effects that like-minded peers has on the school experience of twice-exceptional learners (Baum et al., 2014; Wen Wang & Neihart, 2015).

Bullying. Studies indicate that twice-exceptional learners are at an increased risk of bullying (Hayes, 2014; Reis & Colbert, 2004; Ronksley-Pavia, 2019a, 2019b; Vespi & Yewchuk, 1992). In her research, Hayes (2014) describes twice-exceptional children as "bully magnets" (p. 249). Equally, in their groundbreaking research into the bullying experiences of twice-exceptional children, Ronksley-Pavia et al. (2019a) found that all eight participants disclosed repeated bullying by peers at school. Ronksley-Pavia et al. concluded that the differentness and isolation of the twice-exceptional children in their study made them easy targets for bullying. Conversely, the findings of this current study do not support this previous research. When asked if other children at school were ever unkind, only Jake specifically said that he was "bullied" and described how some boys teased him and called him "cappuccino"; also, two "bum-smack" girls liked to

follow him and smack his bottom. Angela also mentioned that Elliot's strong moral compass meant that other children were sometimes called him a "tell-tale".

However, no participants reported that they had experienced the pervasive and damaging bullying by peers described by participants in Ronksley-Pavia et al.'s research (2019a, 2019b). This result can be partly explained by the fact that half of the twice-exceptional children in this study had a stable group of like-minded peers. Other possible explanations include: the children in this study were identified early in their school lives and were well-supported at home, increasing their social self-concept (Ghazvini, 2011; Townend et al., 2014; Reis et al. 1997); their peers were aware of their labels and were more understanding and empathetic (Baum et al., 2014); or the increased presence of the twice-exceptional children's parents at school. Alternatively, it could simply be that the twice-exceptional children in this study didn't recognise or want to talk about incidents of bullying (Ronksley-Pavia et al., 2019a).

6.4. Research Question 2: How Are the Social-Emotional Needs of Twice-Exceptional Learners Being Met in Primary Schools?

Discussion about the importance of understanding and supporting the multifarious social-emotional problems of twice-exceptional children is prevalent in the literature; however, empirical research to support this dialogue is limited (Dare & Nowiki, 2015; Foley-Nicpon & Assouline, 2015; Barber & Mueller, 2011; Ronksley-Pavia et al., 2019b). This current study, however, has added to the existing bank of knowledge and has highlighted a diversity of social-emotional concerns expressed by the participants in their personal narratives. Next, a discussion of the lived experiences of twice-exceptional children and their parents in the school environment is offered to build a better understanding of how the social-emotional needs of twice-exceptional learners are currently being met in primary schools across New Zealand.

6.4.1. Teacher-Student Relationships. The findings of this study supports previous research which has shown that in order to thrive, twice-exceptional learners need a safe and nurturing classroom environment and high-trust relationships with teachers, who are empathetic to their social-emotional needs and focused on developing their strengths (Baum et al., 2014; Josephson et al., 2018; Wen Wang & Neihart, 2015). The six children and parents in this study shared a broad spectrum of perspectives on teacher-student relationships.

Millie had predominantly positive teacher interactions, saying her teachers were supportive, nurtured her strengths, and made accommodations for her needs (Baum et al., 2014; Wen Wang & Neihart, 2015), which was confirmed by her mother, Helena. On the other hand, the remaining five child participants in this study all recalled some negative interactions with at least one teacher, to varying degrees (Reis & Colbert, 2004; Reis et al., 1997; Vespi & Yewchuk, 1992). The parents of Sam, Sophie, Jake and Leo also reported negative teacher interactions and said that the teachers were often dismissive of the child's potential gifts or deficits, which is what compelled them to get their child assessed (Besnoy et al. ,2015; Dare and Nowicki, 2015; and Neumeister et al. 2013). What stood out across all the cases, however, was the fundamental role that teachers play in fostering the academic success and social-emotional well-being of twice-exceptional learners (Baum et al., 2014; Wen Wang & Neihart, 2015).

The importance of the teacher-student relationship is highlighted in the case story of Sophie. Rachel reflected on some relative high and low points during the primary school years which she said were mostly determined by how well Sophie related to her teacher at the time. In the years when Sophie had an empathetic teacher who fostered her gifted strengths and made accommodations for her anxiety, OCD and writing difficulties, her school experiences were mostly positive. This outcome is in line

with the reflections of Wen Wang and Neihart (2015) who maintain that “Students who experienced high levels of warmth and support or low levels of conflict in teacher-student interactions had better achievement”. Conversely, other teachers were unable to see past Sophie’s deficits and refused to accept that she was gifted, or they labelled Sophie as “the naughty child” because her anxiety and sensory issues meant she would hide under tables to avoid mat times. This lack of understanding by Sophie’s teachers and the consequential negative teacher-student interactions support the findings of several existing studies (Reis et al., 1997; Reis & Colbert, 2004; Ronksley-Pavia et al., 2019a, 2019b; Vespi & Yewchuk, 1992).

6.4.2. Negative School Experiences. In four of the six cases in this study, the twice-exceptional children and their parents recollect some negative school experiences which had a damaging effect on the children’s education and self-esteem (Reis et al. ,2014; Ronksley-Pavia et al. 2019a). The children discussed either being ignored or yelled at when asking the teacher for help (Ronksley-Pavia, 2019a, 2019b); being called lazy or told to work harder (Foley-Nicpon & Assouline, 2015; Reis et al., 1997; Vespi & Yewchuk, 1992); and being punished (missing breaks) for not completing work (Reis & Colbert, 2004; Ronksley-Pavia et al., 2019a). They also felt there was no support for their social and/or emotional needs (Montgomery, 2009; Munn, 2016; Townend & Perndergast, 2015). The parents talked about the teachers refusing to recognise their child’s giftedness and/or their disabilities (Baum et al., 2017; Brody & Mills, 1997; Nielsen, 2002); and refusing accommodations/support for their child's disabilities, even after diagnosis (Reis et al., 1997, p. 470). Some parents also admitted that the school/teacher viewed them as the problem; Amanda was labelled the “problem parent”, and Emma was seen as the “pushy parent” who believed her ‘average’ child (teacher’s perspective) was gifted (Assouline et al., 2006; Neumeister et al., 2013).

It is evident from the case stories that the lived experiences at school for Jake and Leo were exceptionally negative, aggravated by their acute asynchronicity, high-sensitivities and GAD. Jake and Leo's narratives about the extreme frustration and distress they felt, as a result of negative school experiences, are resonant with those shared by the twice-exceptional young people in Reis et al.'s (1997) study. Jake and Leo discussed feeling frustrated, unsupported, and misunderstood, as they thought the teachers viewed them as lazy and not trying very hard (Reis et al., 1997). This finding is concerning, as several studies have exposed the harm that can be caused by low teacher expectations, as students can take on these labels and start to conform with the teacher perceptions (Brophy, 1983; Rubie-Davis, 2018). Even though Jake and Leo had been homeschooled for over a year (at the time of the interviews), their recollections of primary school were still obviously painful. Jake described his primary school experience as "torture", and Leo jokingly intimates that he would like to set fire to the school. Again, this provides support for Reis et al.'s (1997) study, where they found that nearly half of twice-exceptional college students still carry the painful memories and wounds of their earlier schooling.

The schools' focus on deficit-based approaches and 'box-ticking' also stood out in the case stories as a major source of negative school experiences for the participants in this study. The parents discussed how the school is only interested in providing support to children if they need to be brought up to expected standards, asserting that it is only so the school can "tick the boxes". In four cases (Sophie, Elliot, Jake and Leo), the parents expressed deep dissatisfaction about the school's refusal to support or make accommodations for the disabilities/deficits of their children, as they do not "come off needy enough" (Rachel). The children in this study are performing to the required standards in most areas because their gifted strengths were compensating for their

deficits (Baldwin et al., 2015). Therefore, the parents were told that no additional support was necessary, even though their children were struggling. Emma said: “Because his [Sam’s] performance at school is average, they won’t help because they said it is over-compensating.” Likewise, both Rachel and Amanda talked about the school’s need to recognise that there are children who are ticking the boxes but still have very specific learning and social needs. Amanda stated: “I think to realise that just because a child is achieving, it doesn't mean they're ok, or that they're doing well…achievement data is not a reflection of the child’s social-emotional well-being.” The frustrations voiced by the parents in this study echo the perspectives shared by the parents in the studies by Besnoy et al. (2015) and Neumeister et al. (2013).

Similarly, in three cases (Sam, Elliot and Sophie), the parents expressed their frustration about the children’s school focusing on remediating their child’s deficits to bring them up to expected standards, rather than the strength-based teaching which research has shown to be successful with twice-exceptional learners (Baum et al., 2014; Bianco, 2005; Dole, 2000; Weinfeld et al., 2013). Sam and Elliot’s mothers were particularly discouraged about the lack of extension or enrichment to develop the strengths of their children. Angela said: “…he’s [Elliot] capable of so much more, and it shouldn’t be just about box-ticking”. In the same vein, Emma describes Sam’s school experiences: “…all he’s doing is going through the motions. He’s just learning how to conform. He is bored out of his brains.”

This focus on deficit-based approaches and boredom from a lack of educational challenge indicated by the parents in this study is troubling, as it puts the twice-exceptional learners at risk of academic failure (Baum et al., 2014; Bianco, 2005; Dole, 2000; Weinfeld et al., 2013). Also, low self-esteem, combined with boredom from overly-easy work tasks and frustration from their mismatched abilities and disabilities

has been shown to increase the likelihood of social-emotional and behavioural problems (Baum et al., 2014; Montgomery, 2009; Nielsen, 2002; Zentall, 2014).

6.4.3. Positive Experiences at School. On the other hand, the participant narratives also disclose many positive experiences, reinforcing that proactiveness and innovation with regards to the provision for gifted and twice-exceptional learners is happening in some New Zealand primary schools, as previously indicated Riley and Bicknell (2013). In all six cases, the twice-exceptional children and parents were able to recall some positive school experiences. These included: individual teachers who were more empathetic to their needs (Jake, Leo, Sophie, Millie and Elliot); strength-based learning opportunities, extension classes, and enrichment opportunities (Millie, Sophie, Jake and Leo); accommodations, specialist instruction, or RTLB support for weaknesses (Elliot, Millie, Sophie, Sam and Leo); and extracurricular activities/clubs of interest to gifted learners (Millie, Elliot, Lucas and Leo). These findings reflect those of Beckmann and Minnaert (2018), whose empirical review revealed several studies in which the participants had also reported positive interactions with teachers who nurtured their strengths and encouraged them, improving their academic outcomes.

Nevertheless, given that the preponderance of research has exposed negative school experiences for twice-exceptional children (Beckmann & Minnaert, 2018; Besnoy et al., 2015; Dare & Nowicki, 2015; Townend & Pendergast, 2015), the case story of Millie was a surprising, but welcome, finding. The narratives of Millie and her mother reveal mostly positive school experiences. Millie's school has teachers that understand gifted and twice-exceptional children, and they offer a broad range of extra-curricular activities and/or extensions to cater for gifted children. Also, the school purposefully clusters gifted children together, so they have the support of like-minded peers (Nielsen & Higgins, 2005; Wen Wang & Neihart, 2015). Helena talked about how

great the school was, “They just make everything easy…they really celebrate the kids learning”. Millie is also the only twice-exceptional child in this study to have had extremely positive school experiences, and she said that she loves school, confirming earlier research that when the school environment is supportive, encouraging, has high expectations, and promotes strength-based learning that twice-exceptional children can flourish academically and personally (Baum et al., 2014; Beckmann & Minnaert, 2018; Reis et al., 1997; Vespi & Yewchuk, 1992; Wen Wang & Neihart, 2015).

6.5. Research Question 3: What Could Be Done Better in Primary Schools to Meet the Social-Emotional Needs of Twice-Exceptional Learners?

What stood out from the data was that the participants—the twice-exceptional children and their parents—all identified two intertwined areas for improvement: firstly, to increase the awareness among educators about both aspects of twice-exceptionality; secondly, to provide more support for the social-emotional needs of twice-exceptional learners. Additionally, the participants identified a variety of other suggestions and recommendations that would improve the academic and social-emotional outcomes for twice-exceptional children.

6.5.1. Increasing Awareness and Understanding of Twice-Exceptionality. Consistent with contemporary research, the findings of this study indicate that there is still insufficient awareness about twice-exceptionality among educators (Bianco, 2005; Besnoy et al., 2015; Foley-Nicpon & Candler, 2018; Munn, 2016; Ronksley-Pavia et al., 2019b). Across all six cases, the parents’ experience of advocating for their children in the school system has lead them to the conclusion that most teachers have very little (if any at all) knowledge and understanding about twice-exceptional children and their academic and social-emotional needs (Besnoy et al., 2015; Dare & Nowicki, 2015; Foley-Nicpon & Candler, 2018; Neumeister et al., 2013). Helena said, “…there are lots

of teachers who are not on board, and they don't even understand the concept of giftedness or twice-exceptionality". Likewise, Amanda said that teachers require "massive professional development on the needs of gifted kids and twice-exceptional kids, particularly their social and emotional needs".

6.5.2. Increased Support for Social-Emotional Needs at School. The crucial need for educators to better understand and meet the social-emotional needs of twice-exceptional learners was prominent in the narratives of all six cases in this study, providing further support for the evidence from existing research (Dare & Nowicki, 2015; Foley-Nicpon & Assouline, 2015; Reis & Colbert, 2004; Reis et al., 1997; Townend & Pendergast, 2015; Vespi & Yewchuk, 1992). Rachel talked about the desperate need for teachers to better understand the characteristics and social-emotional needs that twice-exceptional/gifted children present with: "understanding what these children are all about, what traits they typically have, that everything is not an easy life for them, and they have these difficulties". Likewise, Amanda said that to provide effective support for twice-exceptional learners, teachers need to: "realise that they have social-emotional needs and that they are different from those of other children. Not a little bit different, very different." She went on to say, "Social and emotional support is as important as any academic support, if not more. Because they already come to school with this feeling of 'I don't fit in', or 'I am different'".

Parents discussed the importance of teachers having a genuine interest in wanting to understand twice-exceptional children and to be empathetic to their social-emotional needs, which is vital for the success of these learners (Baum et al., 2014; Wen Wang & Neihart, 2015). Emma said, "It is just knowing the kids. It is really just taking the time to know them as an individual, not a number". Similarly, Angela mentioned that the teachers need to have some understanding of the whole child, and make a

concerted effort to understand their home life, as well as school: "[teachers should] make a point of understanding the children they teach and what families have to deal with, in terms of their children, at home". Some of the children also spoke of wanting teachers to be more connected and notice the times when twice-exceptional children are struggling or emotional, so that the child does not feel like they are struggling on their own (King, 2005; Nielsen & Higgins, 2005; Ronksley-Pavia et al., 2019a).

In five cases (Sophie, Sam, Elliot, Jake and Leo), the parents also wanted educators to have a better understanding of anxiety-related disorders and children who are introverts - to recognise that children do not always overtly display their disorders, anxieties, or emotions at school but that does not mean they are 'okay' (Rynn & Franklin, 2002). Sam's mother said, "Kids might be fitting in with the system but can be struggling quietly in their own way". Several parents also suggested the use of mindfulness techniques and teaching children to be more aware of their emotions.

Providing Support for Children's Social Well-Being. Across all cases there was some discussion of the importance of clustering gifted and twice-exceptional children together so that they have access to like-minded peers, to improve their social-emotional well-being at school and make them feel more connected (Baum et al., 2017; Nielsen & Higgins, 2005; Wen Wang & Neihart, 2015). Three of the children in this study (Sophie, Jake and Leo) thought that schools needed to do more to help twice-exceptional children to make friendships at school. Sophie suggested:

> Maybe, there should be someone at the school who knows all the gifted kids, or kids with Asperger's, or twice-exceptional kids to help them with their social life. They should pair gifted kids up that are lonely, or kids that they think could work well together or be friends with each other.

6.5.3. Focus on Strengths. Most participants discussed wanting more opportunities to develop the gifted strengths of twice-exceptional children at school,

"fostering their curiosity and pushing their strengths as much as possible" (Helena). Participants want a strength-based approach to teaching to be endorsed across all schools, rather than the deficit-focused approach that many schools seem to take (Baum et al., 2014; Bianco, 2005). Emma said: "There is such a focus on the kids who are struggling in schools, and there needs to be more done to improve children's gifts or strengths." Several participants, both children and parents, talked about schools needing to offer extension classes, extra-curricular activities suited to gifted children, and interesting or scientific play equipment - much like what Millie's school currently offers. Helena makes a poignant comment that is reminiscent of the observations of Kalbfleisch (2011) when discussing the importance of nurturing children's strengths: "I think it is extremely important that they foster those children who are creative thinkers, as they are the ones that are really going to change our world and I don't think that is being fostered enough."

Broadening the curriculum content for primary school was also highlighted by the participants as a means to improve the school experiences of twice-exceptional and gifted children, by providing them with opportunities to excel in their areas of strength and improve their academic self-concept (Baum et al., 2014; Bianco, 2005). Sam, Millie, Jake, and Leo all think that primary school would be much better if they taught more science, and they could access microscopes and do more experiments at school. Similarly, Elliot would love to see more teaching of history. Emma feels that the curriculum is too narrow; although the strengths of many twice-exceptional and gifted children lie in the sciences or creativity, at the primary school level the children are only being judged on their achievements in reading, writing and maths, which can often be areas of weakness for many twice-exceptional children (Baldwin et al., 2015; Betts & Neihart, 1988; MOE, n.d.-c). Likewise, Amanda would like to see *Te Whāriki* to be

continued into primary school (MOE, 2017), rather than the school curriculum which "tries to squash them down into a particular thing" to the point where they feel "I don't fit", leading to self-doubt and low self-concept (Foley-Nicpon et al., 2012).

6.5.4. Support for Difficulties. Participants wanted teachers to recognise that, even though their academic performance may be average (or above), they also had significant challenges caused by their difficulties that make some elements of learning highly frustrating (Dare & Nowicki, 2015; Foley-Nicpon, 2015; Reis & Colbert, 2004; Reis et al., 1997; Vespi & Yewchuk, 1992). Therefore, twice-exceptional learners need to be provided with the appropriate support or accommodations to increase their chances of academic success and reaching their potential (Bianco, 2005; Ruban & Reis, 2005).

6.6. Limitations of This Research

This research is limited by the sample size of only six cases, which makes it unsuitable for generalisation to wider populations (Yin, 2018). The number of cases was purposely kept low to attain thick descriptions and contextual information. Generalisation was never the intent of this research. Instead, the purpose was to give twice-exceptional children and their parents a voice to share their stories of lived experiences and to use their stories to create a base of knowledge and understanding that can hopefully act as a springboard for further research in this field. This study generated some valuable insights into the social-emotional needs of twice-exceptional learners and how they are being met in primary schools across New Zealand. It will be the decision of the reader whether (or not) the findings of this study are appropriate to relate to their own contexts or to use them as a starting point of information to inform future research (Anney, 2014).

The six twice-exceptional children in this study were all identified during primary school years, as their families had the resources to pay for a private assessment.

The literature review for this study shows that twice-exceptional children are typically overlooked in the primary school years (Ng et al., 2016). Therefore, the lived experiences shared by participants may not be representative of other twice-exceptional learners who continue to be overlooked in the school system, or who have only been recognised for their gifted strengths or hindering disabilities (Baldwin et al., 2015). Furthermore, this study raises concerns about the lack of opportunity for twice-exceptional children from less privileged families to be identified and supported in the school system. This limitation was unavoidable, as to research twice-exceptional children, they first need to have been identified as twice-exceptional.

A further limitation was the one-sidedness of the data. The study findings are purely from the perspective of the twice-exceptional children and their parents. No data was captured from the perspective of the teachers/schools. It is also possible that parents who have had negative experiences with their twice-exceptional children at school were more inclined to respond to the request for participants. However, not all of the participants in this study reported negative school experiences.

The final limitation relates to the selection of participants, as they may not be a representative sample of twice-exceptional children, given that none of the participants presented with co-existing physical or behavioural disabilities/disorders, such as ADHD or oppositional defiant disorder. However, as twice-exceptional children are a heterogeneous group of learners, it would require a much larger-scale study to capture the main disabilities that can co-occur with giftedness.

6.7. Recommendations for Future Research

This study examined the lived experiences and perceptions of twice-exceptional children and their parents. The findings highlighted several opportunities for further research:

1. This study raised concerns about how twice-exceptional children are being identified or supported in the school system in New Zealand, particularly children from less privileged backgrounds. In light of this, further research is needed to:
    a. Ascertain an estimation of the prevalence of twice-exceptionality in New Zealand, broken down by ethnic background.
    b. Examine how twice-exceptional children are currently being identified (or not) in the New Zealand school system.
    c. Investigate how many schools across New Zealand currently have acceptable gifted and twice-exceptional definitions, identification criteria, and provisions (following on from the last review by Riley and Bicknell, 2013).
2. This exploratory study has provided a useful base of information. However, further research on the current topic is recommended to create a more in-depth picture of the lived experience of twice-exceptional children in schools, including:
    a. Replication studies with additional cases to increase the generalisability of the research.
    b. An investigation of the social-emotional needs of twice-exceptional children in secondary schools.
    c. A broader (more generalisable) mixed-methods study into the social-emotional needs of twice-exceptional learners and how they are being met in schools, using a survey with open-ended questions.
    d. Research looking at the teacher perspectives on the social-emotional needs of twice-exceptional learners.
3. Additionally, this study raised some further associated questions that require further investigation:

a. Research investigating the self-concept (social and academic) of twice-exceptional learners in a New Zealand context (combining the Piers-Harris Self-Concept Scale and personal perspectives).
b. Research into the role of parents in identifying their child's exceptionalities and advocating for them in the school system from a New Zealand context.
c. A case study of one (or more) of the bespoke independent schools for gifted and twice-exceptional learners in New Zealand, such as AGE in Takapuna.

CHAPTER SEVEN

Conclusion

> So why are our best and brightest kids end up being among the kids who do the worst in our schools? That is just wrong.
>
> (Amanda, Jake and Leo's mother – Case Study Participants)

This exploratory study gave six twice-exceptional children and their parents a much-needed voice to share their perspectives and lived experiences about the social-emotional needs of twice-exceptional learners, and how these needs are being met in primary schools across New Zealand. The participant narratives reveal that the lived experiences of twice-exceptional children are inimitable—each of the six children in this study had their own unique and complex combination of exceptionalities and social-emotional needs which shaped their perspectives and lived experiences. However, their shared stories revealed meaningful commonalities which can be used to broaden our knowledge of twice-exceptionality.

The findings of this study indicate that the paradoxical high-abilities and inabilities of twice-exceptional learners can make them vulnerable to a host of social-emotional issues that can be equally (or more) hindering than their primary disabilities if they are not adequately supported (King, 2005). It is also evident that parents of twice-exceptional children are often compelled to play a vital role in recognising and advocating for the needs of their children, as primary school teachers are still mostly unaware of the existence of twice-exceptional learners. This lack of knowledge raises grave concerns about how many twice-exceptional children are being overlooked and left to struggle in the school system, particularly those from less privileged backgrounds.

There appears to have been minimal advancement made in the field since Riley and Bicknell (2013) exposed the lack of awareness about twice-exceptionality in their

review of the gifted provision in schools across New Zealand. In line with this, the researcher and participants of this study express an urgent need to explicitly teach all educators in New Zealand about gifted and twice-exceptional learners, and to ensure they are aware of the obligation to support the social-emotional needs of these learners as well as their academic needs. Another recommendation to come out of this study was for teachers to have a genuine interest in wanting to understand twice-exceptional children and to be authentically empathetic to their social-emotional needs, which is vital for the well-being and academic success of these learners (Baum et al., 2014).

Many positive school experiences came out of the participant narratives, heralding the innovative and inclusive twice-exceptional and gifted provision that is being offered in some New Zealand primary schools. Unfortunately, the positive encounters have been far outweighed by mostly negative school experiences for five of the six cases in this study. The participants recalled negative teacher interactions and minimal support or accommodations for the academic or social-emotional needs of the twice-exceptional children in this study, even after teachers were made aware of the children's exceptionalities. These results are somewhat disappointing, but they add to the knowledge of existing research. Moreover, the findings confirm the critical need for increased awareness and understanding of twice-exceptionality among educators, so they can address the complex needs of these diverse learners and help them to reach their potential.

Glossary of Terms

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[i] **Whānau** – *family*
[ii] **Aotearoa** - *New Zealand*
[iii] **whaikōrero –** *to make a formal speech*
[iv] **whakapapa** – *recite genealogy*
[v] **waiata** - *song*
[vi] **manaakitanga** - *hospitality, kindness, generosity, support*
[vii] **mana** – *prestige, power*

References

Amend, E. R. (2018). Finding hidden potential: Towards best practices in identifying gifted students with disabilities. In S. B. Kaufman (Ed.), *Twice-exceptional: Supporting and educating bright and creative students with learning disabilities* (pp. 66-82). New York, NY: Oxford University Press.

Amend, E. R., & Peters, D. (2015). The role of clinical psychologist: Building a comprehensive understanding of 2e students. *Gifted Child Today, 38*(4), 243-245. https://doi.org/10.1177/1076217515597286

American Psychiatric Association. (2013). *Diagnostic statistical manual of mental disorders* (5th ed.). Washington, DC: Author

American Psychiatric Association. (2017a). *What are anxiety disorders?* Retrieved from https://www.psychiatry.org/patients-families/anxiety-disorders/what-are-anxiety-disorders

American Psychiatric Association. (2017b). *What is obsessive-compulsive disorder?* Retrieved from https://www.psychiatry.org/patients-families/ocd/what-is-obsessive-compulsive-disorder

American Psychiatric Association. (2018). *What is specific learning disorder?* Retrieved from https://www.psychiatry.org/patients-families/specific-learning-disorder/what-is-specific-learning-disorder

Anholt, G. E., Aderka, I. M., van Balkom, A. J. L. M., Smit, J. H., Schruers, K., van der Wee, N. J. A., . . . van Oppen, P. (2014). Age of onset in obsessive-compulsive disorder: Admixture analysis with a large sample. *Psychological Medicine, 44*(1), 185-194. https://doi.org/10.1017/S0033291713000470

Anney, V. N. (2014). Ensuring the quality of the findings of qualitative research: Looking at trustworthiness criteria. *Journal of Emerging Trends in*

Educational Research and Policy Studies, 5(2), 272-281. Retrieved from https://pdfs.semanticscholar.org/1419/f7b54e6b7f1215717a5056e0709f8946745b.pdf

Armstrong, T. (2010). *Neurodiversity: Discovering the extraordinary gifts of autism, ADHD, dyslexia, and other brain differences*. Boston, MA: Da Capo Press.

Aron, E. (2010). *Psychotherapy and the highly sensitive person: Improving outcomes for that minority of people who are the majority of clients*: New York, NY: Routledge.

Asperger H. (1991). 'Autistic psychopathy' in childhood (U. Frith, Trans.). In U. Frith (Ed.), *Autism and Asperger syndrome* (pp. 37-92). New York, NY: Cambridge University Press. (Original work published 1944).

Assouline, S. G., Nicpon, M. F., & Doobay, A. (2009). Profoundly gifted girls and autism spectrum disorder: A psychometric case study comparison. *Gifted Child Quarterly*, *53*, 89-105. https://doi.org/10.1177/0016986208330565

Assouline, S. G., Foley-Nicpon, M., N., & Huber, D. H. (2006). The impact of vulnerabilities and strengths on the academic experiences of twice-exceptional students: A message to school counselors. *Professional School Counseling, 10*(1), 14-24. https://doi.org/10.1177/2156759X0601001S03

Assouline, S. G., Foley-Nicpon, M., & Whiteman, C. (2010). Cognitive and psychosocial characteristics of gifted students with written language disability. *Gifted Child Quarterly, 54*(2), 102-115. https://doi.org/10.1177/0016986209355974

Assouline, S. G., & Whiteman, C. S. (2011). Twice-exceptionality: Implications for school psychologists in the post–IDEA 2004 era. *Journal of Applied School Psychology, 27*(4), 380-402. https://doi.org/10.1080/15377903.2011.616576

Bailey, J (2008). First steps in qualitative data analysis: Transcribing. *Family Practice*, *25*, (2), 27–131. https://doi.org/10.1093/fampra/cmn003

Baldwin, L., Omdal, S. N., & Pereles, D. (2015). Beyond stereotypes: Understanding, recognizing, and working with twice-exceptional learners. *Teaching Exceptional Children, 47*(4), 216-225. https://doi.org/10.1177/0040059915569361

Barber, C., & Mueller, C. T. (2011). Social and self-perceptions of adolescents identified as gifted, learning disabled, and twice-exceptional. *Roeper Review, 33*(2), 109-120. https://doi.org/10.1080/02783193.2011.554158

Barnard-Brak, L., Johnsen, S. K., Hannig, A. P., and Wei, T. (2015). The incidence of potentially gifted students within a special education population. *Roeper Review, 37*, 74–83. https://doi.org/10.1080/02783193.2015.1008661

Barnes, C. (2015). Gifted with learning disability. *TableAus, 418,* 8-10. Retrieved from https://www.gfsg.org.au/articles/Published%20-%20Mensa%20Mag%20-%20GLD%20-%20intro%20-%20July%202015.pdf

Bassey, M. (1999). *Case study research in educational settings*. Buckingham, England: Open University Press.

Baum, S. (1989). Gifted but learning disabled: A puzzling paradox. *Preventing school failure: Alternative education for children and youth, 34*(1), 11-14. https://doi.org/10.1080/1045988X.1989.9944546

Baum, S. M. (1994). Meeting the needs of gifted/learning disabled students: How far have we come? *Journal of Secondary Gifted Education, 5*(3), 6-22. Retrieved

from
https://www.researchgate.net/publication/234605313_Meeting_the_Needs_of_GiftedLearning_Disabled_Students_How_Far_Have_We_Come

Baum, S. & Owen, S. (1988). High ability/learning disabled students: How are they different? *Gifted Child Quarterly, 32*(3), 321-326. https://doi.org/10.1177/001698628803200305

Baum, S. M., & Owen, S. (2004). *To be gifted and learning disabled.* Mansfield, CT: Creative Learning Press.

Baum, S. M., & Owen, S., & Dixon, (1991). *To be gifted and learning disabled: From identification to practical intervention strategies.* Melbourne, VIC: Hawker Brownlow Education.

Baum, S. M., Schader, R. M., & Hébert, T. P. (2014). Through a different lens: Reflecting on a strengths-based, talent-focused approach for twice-exceptional learners. *Gifted Child Quarterly, 58*(4), 311-327. https://doi.org/10.1177/0016986214547632

Baum, S. M., Schader, R. M., & Owen, S. V. (2017). *To be gifted & learning disabled: Strength-based strategies for helping twice-exceptional students with LD, ADHD, ASDF, and more.* Waco, TX: Prufrock Press

Baxter, J., & Eyles, J. (1997). Evaluating qualitative research in social geography: Establishing 'rigour' in interview analysis. *Transactions of the Institute of British Geographers, 22*(4), 505-525. https://doi.org/10.1111/j.0020-2754.1997.00505.x

Beckmann, E., & Minnaert, A. (2018). Non-cognitive characteristics of gifted students with learning disabilities: An in-depth systematic review. *Frontiers in Psychology, 9*(504), 1-20. https://doi.org/10.3389/fpsyg.2018.00504

Benge, B., & Montgomery, D. (1996). Understanding the emotional development of twice exceptional rural students. *Rural Goals 2000: Building Programs That Work,* 392-397. Retrieved from https://files-eric-ed-gov.ezproxy.massey.ac.nz/fulltext/ED394784.pdf

Besnoy, K. D. (2006). *Successful strategies for twice-exceptional students.* Waco, TX: Prufrock Press.

Besnoy, K., Swoszowski, N., Newman, J., Floyd, A., Jones, P., & Byrne, C. (2015). The advocacy experiences of parents of elementary age, twice-exceptional children. *Gifted Child Quarterly, 59*(2), 108–123. https://doi.org/doi:10.1177/0016986215569275

Betts, G. T., & Neihart, M. (1988). Profiles of the gifted and talented. *Gifted Child Quarterly, 32*(2), 248-253. https://doi.org/10.1177/001698628803200202

Bevan-Brown, J. (2002). *Culturally appropriate, effective provision for Mäori learners with special needs: He waka tino whakarawea* (Doctoral thesis, Massey University, Palmerston North, New Zealand). Retrieved from https://mro.massey.ac.nz/handle/10179/1935

Bevan-Brown, J. (2003). *The cultural self-review: Providing culturally effective, inclusive, education for Māori learners*: Wellington, New Zealand: New Zealand Council for Educational Research.

Bevan-Brown, J.M. (2004). Gifted and talented Māori learners. In D. MacAlpine & R. Moltzen (Eds.), *Gifted and talented: New Zealand perspectives* (2nd ed.) (pp. 171-196). Auckland, New Zealand: Kanuka Grove Press.

Bevan-Brown, J. M. (2009). Identifying and providing for gifted and talented Māori students. *APEX, 15*(4), 6-20. Retrieved from

http://www.giftedchildren.org.nz/wp-content/uploads/2014/10/Bevan-Brown-J.pdf

Bevan-Brown, J. (2011). Gifted and talented Māori learners. In R. Moltzen (Ed.), *Gifted and talented: New Zealand perspectives* (3rd ed., pp. 82-110). Auckland, New Zealand: Pearson.

Bianco, M. (2005). The effects of disability labels on special education and general education teachers' referrals for gifted programs. *Learning Disability Quarterly, 28*(4), 285-293. https://doi.org/10.2307/4126967

Blackett, R. (2012). *To be gifted and Māori.* Retrieved from http://sengifted.org/to-be-gifted-and-maori/

Blaxter, L., Hughes, C., & Tight, M. (2010). *How to research* (4th ed.). New York, NY: McGraw-Hill.

Bowen, G. A. (2009). Supporting a grounded theory with an audit trail: An illustration. *International Journal of Social Research Methodology, 12*(4), 305-316. https://doi.org/10.1080/13645570802156196

Boyatzis, R. E. (1998). *Transforming qualitative information: Thematic analysis and code development*. Thousand Oaks, CA: Sage Publications.

Boylorn, R. M. (2008). Lived experience. In L. M. Given (Ed.), *The SAGE encyclopedia of qualitative research methods* (pp. 489–490). Thousand Oaks, CA: Sage.

Bracamonte, M. (2010). Twice-exceptional students: Who are they and what do they need? *2e: Twice-Exceptional Newsletter, 39.* Retrieved from http://www.2enewsletter.com/article_2e_what_are_they.html

Braun, V., & Clarke, V. (2013). *Successful qualitative research: A practical guide for beginners*. London, England: Sage.

Broadstock M. (2014). *New Zealand autism spectrum disorder guideline supplementary paper on implications of DSM-5 for the diagnosis of ASD.* Christchurch: INSIGHT Research. Retrieved from https://www.health.govt.nz/system/files/documents/publications/nzasd-supplementary-paper-implications-dsm-5-for-diagnosis-asd-mar14.pdf

Brody, L. E., & Mills, C. J. (1997). Gifted children with learning disabilities: A review of the issues. *Journal of Learning Disabilities, 30*(3), 282. https://doi.org/10.1177/002221949703000304

Brophy, J. E. (1983). Research on the self-fulfilling prophecy and teacher expectations. *Journal of educational psychology, 75*(5), 631-661. Retrieved from https://doi.org/10.1037/0022-0663.75.5.631

Buică-Belciu, C., & Popovici, D.-V. (2014). Being twice exceptional: Gifted students with learning disabilities. *Procedia - Social and Behavioral Sciences, 127*, 519-523. https://doi.org/10.1016/j.sbspro.2014.03.302

Buonomo, I., Fiorilli, C., Geraci, M. A., & Pepe, A. (2017). Temperament and social-emotional difficulties: The dark side of learning disabilities. *Journal of Genetic Psychology, 178*(3), 193-206. https://doi.org/10.1080/00221325.2017.1304890

Callard-Szulgit, R. (2008). *Twice-exceptional kids: A guide for assisting students who are both academically gifted and learning disabled*. Plymouth, England: Rowman & Littlefield Education.

Callard-Szulgit, R. (2012). *Perfectionism and gifted children* (2nd ed.). Plymouth, England: Rowman & Littlefield Publishers.

Coe, R. J. (2012). Conducting your research. In J. Arthur, M. Waring, R. Coe, & L. Hedges (Eds.), *Research methods and methodologies in education* (pp. 41-52). Thousand Oaks, CA: Sage.

Coleman, M. R. (1992). A comparison of how gifted/LD and average/LD boys cope with school frustration. *Journal for the Education of the Gifted, 15*(3), 239-265. https://doi.org/10.1177/016235329201500304

Coleman, M. R. (2001). Surviving or thriving? *Gifted Child Today, 24*(3), 56-63. https://doi.org/10.4219/gct-2001-538

Coleman, M.R., Harradine, C., & King, E. W. (2005). Meeting the needs of students who are twice exceptional. *Teaching Exceptional Children, 38*(1), 5-6. https://doi.org/10.1177/004005990503800101

Cooley, E. J., & Ayres, R. R. (1988). Self-concept and success-failure attributions of nonhandicapped students and students with learning disabilities. *Journal of learning disabilities 21*(3), 174-178. https://doi.org/10.1177/002221948802100310

Coster, E. (2013). *Operation Houndstooth: Gifted learners develop social and moral reasoning skills within a social capital framework* (Master's thesis, University of Canterbury, Christchurch, New Zealand). Retrieved from https://ir.canterbury.ac.nz/bitstream/handle/10092/8927/thesis_fulltext.pdf?seqseque=1&isAllowed=y

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Thousand Oaks, CA: Sage.

Creswell, J. W., & Guetterman, T. C. (2019). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (6th ed.). New York, NY: Pearson.

Creswell, J. W. & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage.

Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process.* Thousand Oaks, CA: Sage.

Cypress, B. S. (2017). Rigor or reliability and validity in qualitative research: Perspectives, strategies, reconceptualization, and recommendations. *Dimensions of Critical Care Nursing, 36*(4), 253-263. https://doi.org/10.1097/dcc.0000000000000253

Dabrowski, K. (1964). *Positive disintegration.* Boston, MA: Little, Brown & Company.

Dai, D. Y. (2010). *The nature and nurture of giftedness: A new framework for understanding gifted education*. New York, NY: Columbia University.

Dai, D. Y. (2018). A History of giftedness: A century of quest for identity. In S. I. Pfeiffer, E. Shaunessy-Dedrick, & M. Foley-Nicpon (Eds.) *APA Handbook of Giftedness and Talent* (pp. 3-23). Washington, DC: American Psychological Society.

Dare, L., & Nowicki, E. A. (2015). Twice-exceptionality: Parents' perspectives on 2e identification. *Roeper Review, 37*(4), 208-218. https://doi.org/10.1080/02783193.2015.1077911

Day Ashley, L. (2012). Case study research. In J. Arthur, M. Waring, R. Coe, & L. Hedges (Eds.), *Research methods and methodologies in education* (pp. 102-107). Thousand Oaks, CA: Sage.

Denscombe, M. (2014). *The good research guide: For small-scale social research projects* (5th ed.). Maidenhead, England: McGraw-Hill Education/Open University Press.

Dix. J. & Schafer, S. (2005). From paradox to performance: Practical strategies for identifying and teaching gifted/LD students. In S. K. Johnsen & J. Kendrick

(Eds.), *Teaching gifted students with disabilities* (pp. 153-159). Waco, TX: Prufrock Press.

Dole, S. (2000). The implications of the risk and resilience literature for gifted students with learning. *Roeper Review, 23*(2), 91-96. https://doi.org/10.1080/02783190009554074

Education Review Office. (2008). *Schools' provisions for gifted and talented students.* Wellington, New Zealand: Education Review Office.

Elkind, J. (1973). *The Gifted Child with Learning Disabilities*: Gifted Child Quarterly. 17(2), 96-97. Retrieved from http://journals.sagepub.com/doi/pdf/10.1177/001698627301700202

Faaea-Semeatu, T. (2011). *Celebrating gifted indigenous roots: Gifted and talented Pacific Island (Pasifika) students.* Retrieved from http://www.aaegt.net.au/DEEWR%20Books/10%20Indig.pdf

Fergus, T. A., & Wu, K. D. (2010). Do symptoms of generalized anxiety and obsessive-compulsive disorder share cognitive processes? *Cognitive therapy and research, 34*(2), 168-176. https://doi.org/10.1007/s10608-009-9239-9

Ferri, B. A., Gregg, N., & Heggoy, S. J. (1997). Profiles of college students demonstrating learning disabilities with and without giftedness. *Journal of Learning Disabilities, 30*(5), 552–559. https://doi.org/10.1177/002221949703000511

Fetzer, E. A. (2005). The gifted/learning-disabled child: A guide for teachers and parents. In S. K. Johnsen & J Kendrick (Eds.), *Teaching gifted students with disabilities* (pp. 3-16). Waco, TX: Prufrock Press.

Firestone, W. A. (1993). Alternative arguments for generalizing from data as applied to qualitative research. *Educational Researcher,* 22(4), 16-23. https://doi.org/10.3102/0013189X022004016

Fletcher, J. M., Foorman, B. R., Boudousquie, A., Barnes, M. A., Schatschneider, C., & Francis, D. J. (2002). Assessment of reading and learning disabilities: A research-based intervention-oriented approach. *Journal of School Psychology, 40*(1), 27-63. https://doi.org/10.1016/S0022-4405(01)00093-0

Flyvberg, B. (2006). Five misunderstandings about case study research. *Qualitative Inquiry,* 12(2), 219-245. https://doi.org/10.1177/1077800405284363

Foa, E. B., & Andrews, L. W. (2006). *If your adolescent has an anxiety disorder: An essential resource for parents.* New York, NY: Oxford University Press.

Foley-Nicpon, M. (2015). Voices from the field: The higher education community. *Gifted Child Today, 38*(4), 249-251. https://doi.org/10.1177/1076217515597288

Foley-Nicpon, M., Allmon, A., Sieck, B., & Stinson, R. D. (2011). Empirical investigation of twice-exceptionality: Where have we been and where are we going? *Gifted Child Quarterly, 55*(1), 3-17. https://doi.org/10.1177/0016986210382575

Foley-Nicpon, M., & Assouline, S. G. (2015). Counseling considerations for the twice-exceptional client. *Journal of Counseling & Development, 93*(2), 202-211. https://doi.org/10.1002/j.1556-6676.2015.00196.x

Foley-Nicpon, M., Assouline, S. G., & Colangelo, N. (2013). Twice-exceptional learners: Who needs to know what? *Gifted Child Quarterly, 57*(3), 169-180. https://doi.org/10.1177/0016986213490021

Foley-Nicpon, M., & Candler, M. M. (2018). Psychological interventions for twice-exceptional youth. In S. I. Pfeiffer, E. Shaunessy-Dedrick, & M. Foley-Nicpon (Eds.) *APA handbook of giftedness and talent* (pp. 545-558). Washington, DC: American Psychological Society.

Foley-Nicpon, M., Doobay, A. F., & Assouline, S. G. (2010). Parent, teacher, and self perceptions of psychosocial functioning in intellectually gifted children and adolescents with autism spectrum disorder. *Journal of Autism and Developmental Disorders, 40*(8), 1028-1038. https://doi.org/10.1007/s10803-010-0952-8

Foley-Nicpon, M., Rickels, H., Assouline, S. G., & Richards, A. (2012). Self-esteem and self-concept examination among gifted students with ADHD. *Journal for the Education of the Gifted, 35*(3), 220-240. https://doi.org/10.1177/0162353212451735

Gallagher, J. J. (1966). *Research summary on gifted child education.* Springfield, IL: Office of the Illinois Superintendent of Public Instruction.

Gagné, F. (1991). Toward a differentiated model of giftedness and talent. In N. Colangelo & G. A. Davis (Eds.) *Handbook of gifted education* (pp. 65-80). Boston, MA: Allyn and Bacon.

Gagné, F. (2009). Building gifts into talents: Detailed overview of the DMGT 2.0. In B. MacFarlane, & T. Stambaugh, (Eds.)*, Leading change in gifted education: The Festschrift of Dr Joyce VanTassel Baska* (pp. 61-81). Waco, TX: Prufrock Press.

Gagné, F. (2011). Academic talent development and the equity issue in gifted education. *Talent Development & Excellence, 3*(1), 3-22. Retrieved from

http://eds.a.ebscohost.com.ezproxy.massey.ac.nz/eds/pdfviewer/pdfviewer?vid=2&sid=1122bbec-979b-4f95-b645-120bb78f4f69%40sessionmgr4010

Gagné, F. (2018). Academic talent development: Theory and best practices. In S. I. Pfeiffer, E. Shaunessy-Dedrick, & M. Foley-Nicpon (Eds.) *APA Handbook of Giftedness and Talent* (pp. 163-184). Washington, DC: American Psychological Society.

Garcia-Delgar, B., de la Serna, E., Lera, S., Varela, E., Andrés-Perpiñá, S., & Lázaro, L. (2018). Neuropsychological functioning in pediatric obsessive-compulsive disorder: One size does not fit all. *Journal of Obsessive-Compulsive and Related Disorders, 16*, 36-42. https://doi.org/10.1016/j.jocrd.2017.12.005

Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences.* New York, NY: Basic Books.

Gardner, H. (1999). Intelligence reframed: Multiple intelligences for the 21st Century. New York, NY: Basic Books.

Gasson, S. (2004). Rigor in grounded theory research: An interpretive perspective on generating theory from qualitative field studies. In M. E. Whitman & A. B. Woszczynski (Eds.), *The handbook of information systems research* (pp. 79–102). Hershey, PA: Idea Group.

Geller, D. A., & March, J. (2012). Practice parameter for the assessment and treatment of children and adolescents with obsessive-compulsive disorder (The AACAP Committee on Quality Issues) (CQI). *Journal of the American Academy of Child and Adolescent Psychiatry, 51*(1), 98–113. https://doi.org/10.1016/j.jaac.2011.09.019

Ghazvini, S. D. (2011). Relationships between academic self-concept and academic performance in high school students. *Procedia - Social and Behavioral Sciences, 15*, 1034-1039. https://doi.org/10.1016/j.sbspro.2011.03.235

Gillham, B. (2000). *Case study research methods*. London, England: Continuum.

Gilman, B. J., Lovecky, D. V. Kearney, K., Peters, D.B., Wasserman, J. D. Silverman, L. K, . . . Rimm, S. B. (2013). Critical issues in the identification of gifted students with co-existing disabilities. *SAGE Open, 3*(3), 1-16. https://doi.org/10.1177/2158244013505855

Gilman, B. J. & Peters, D. (2018). Finding and serving twice-exceptional students. In S. B. Kaufman (Ed.), *Twice-exceptional: Supporting and educating bright and creative students with learning disabilities* (pp. 19-47). New York, NY: Oxford University Press.

Gindy, M. (n.d.). *Breaking the boundaries.* Retrieved from https://nzcge.co.nz/breaking+boundaries

Grollier, M., Leblanc, M., & Michel, S. (2016). Severe autism, Asperger' syndrome, differences and similarities. *L'Évolution Psychiatrique, 81*(2), e37-e51. https://doi.org.10.1016/j.evopsy.2015.07.007

Guba, E. G., & Lincoln, Y. S. (1998). Competing paradigms in qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *The landscape of qualitative research: Theories and issues* (pp. 195-220). Thousand Oaks, CA: Sage

Guest, G., MacQueen, K. M., & Namey, E. E. (2012). *Applied thematic analysis.* Thousand Oaks, CA: Sage.

Hammer, A.L., & Marting, M.S. (1988). *Coping resources inventory manual.* Palo Alto, CA: Consulting Psychologist Press.

Hancock, D. R., & Algozzine, R. (2017). *Doing case study research: A practical guide for beginning researchers* (3rd ed.). New York, NY: Teachers College Press.

Hansen, R. (2009). Hollingworth's studies of highly gifted students. In B. Kerr (Ed.), *Encyclopedia of giftedness, creativity, and talent* (pp. 431-432). Thousand Oaks, CA: Sage. https://doi.org/10.4135/9781412971959.n190

Happé, F. (1995). *Autism: An introduction to psychological theory*: Cambridge, MA: Harvard University Press.

Harris, K.M., Halpern, C.T., Whitsel, E., Hussey, J., Tabor, J., Entzel, P. & and Udry, J. R. (2009). *The national longitudinal study of adolescent to adult health: Research design* [WWW document]. Retrieved from http://www.cpc.unc.edu/projects/addhealth/design

Hayes, M. J. (2014). *Experiences in parenting 2e children: A participatory action research approach.* (Doctoral Thesis, Saint Mary's College, California). Retrieved from https://pqdtopen.proquest.com/doc/1785853076.html?FMT=ABS

Hearn, C., Donovan, C., Spence, S., March, S., Holmes, M., Hearn, C. S., . . . Holmes, M. C. (2017). What's the worry with social anxiety? Comparing cognitive processes in children with generalized anxiety disorder and social anxiety disorder. *Child Psychiatry & Human Development, 48*(5), 786-795. https://doi.org/10.1007/s10578-016-0703-y

Hébert, T. P. (2011). *Understanding the social and emotional lives of gifted students*. Waco, TX: Prufrock Press.

Hollingworth, L. (1923). *Special talents and defects: Their significance for education.* Ithaca, NY: Cornell University Library.

Hudson, M., Milne, M., Reynolds, P., Russell, K., & Smith, B. (2010). *Te ara tika*. *Guidelines* for *Māori research ethics*: *A framework for researchers and ethics committee members.* Auckland, New Zealand: Health Research Council of New Zealand.

Hughes, C. E. (2017). Focusing on strengths: Twice-exceptional students. In W. W. Murawski & K. L. Scott (Eds.), *What really works with exceptional learners* (pp. 302-318). Thousand Oaks, CA: Corwin.

Johnco, C., & Storch, E. A. (2018). Understanding and managing obsessive-compulsive disorder in children and adolescents. In J. N. Butcher & P. C. Kendall (Eds.), *APA handbook of psychopathology: Child and adolescent psychopathology., Vol. 2.* (pp. 231-252). Washington, DC: American Psychological Association. https://doi.org/10.1037/0000065-012

Johnson, B., & Christensen, L. (2014). *Educational research: Quantitative, qualitative, and mixed approaches* (5th ed.). Thousand Oaks, CA: Sage.

Johnston, K., & Iarocci, G. (2017). Are generalized anxiety and depression symptoms associated with social competence in children with and without autism spectrum disorder? *Journal of Autism & Developmental Disorders, 47*(12), 3778-3788. https://doi.org/10.1007/s10803-017-3056-x

Josephson, J., Brawand, A., & Owiny, R. L. (2017). Addressing the "invisible disability": Supporting students with learning disabilities. In W. W. Murawski & K. L. Scott (Eds.), *What really works with exceptional learners* (pp. 188-206). Thousand Oaks, CA: Corwin.

Josephson, J., Wolfgang, C., & Mehrenberg, R. (2018). Strategies for supporting students who are twice-exceptional. *The Journal of Special Education*

Apprenticeship, 7(2), 1-10. Retrieved from https://files.eric.ed.gov/fulltext/EJ1185416.pdf

Josselson, R. (2013). *Interviewing for qualitative inquiry: A relational approach*. New York, NY: Guilford Press.

Kalbfleisch, L (2011). Twice-exceptional students: Gifted students with learning disabilities. In C. M. Callahan, & H. L. Hertberg-Davis (Eds.). *Fundamentals of gifted education: Considering multiple perspectives* (pp. 358-368). New York, NY: Routledge.

Kanner, L. (1943). Autistic disturbances of affective contact. *Nervous Child, 2,* 217-250. Retrieved from http://psycnet.apa.org/record/1943-03624-001

Kaufman, S. B., & Doutsiopoulos, G. (2013). *Ungifted: Intelligence redefined*. New York, NY: Basic Books.

Kaufman, S. B. (2018). Introduction. In S. B. Kaufman (Ed.), *Twice-exceptional: Supporting and educating bright and creative students with learning disabilities* (pp. 1-18). New York, NY: Oxford University Press.

Kennedy, D. M., Banks, R. S., & Grandin, T. (2011). *Bright not broken: Gifted kids, ADHD, and autism*. San Fransisco, CA: Jossey-Bass.

Kenny, L., Hattersley, C., Molins, B., Buckley, C., Povey, C., & Pellicano, E. (2016). Which terms should be used to describe autism? Perspectives from the UK autism community. *Autism: The International Journal of Research and Practice, 20*(4), 442-462. https://doi.org/10.1177/1362361315588200

Kim, J. H. (2016). *Understanding narrative inquiry: The crafting and analysis of stories as research.* Thousand Oaks, CA: Sage.

Kim, K. L., Christensen, R. E., Ruggieri, A., Schettini, E., Dickstein, D. P., Freeman, J. B., . . . Conelea, C. (2019). Cognitive performance of youth with primary

generalized anxiety disorder versus primary obsessive–compulsive disorder. *Depression and Anxiety, 36*(2), 130-140. https://doi.org/10.1002/da.22848

King, E. W. (2005). Addressing the social and emotional needs of twice-exceptional students. *Teaching Exceptional Children, 38*(1), 16-20. Retrieved from https://doi.org/10.1177/004005990503800103

Kirk, S., Gallagher, J., Coleman, M. R., & Anastasiow, N. (2012). *Educating exceptional children* (13th ed.). Stamford, CT: Cengage Learning.

Kite, D., Gullifer, J., & Tyson, G. (2013). Views on the diagnostic labels of autism and Asperger's disorder and the proposed changes in the DSM. *Journal of Autism and Developmental Disorders,* 43: 1692–1700. https://doi.org/10.1007/s10803-012-1718-2

Klingner, R. (2015). *Make them shine: Identification and understanding of gifted children under consideration of their social and emotional needs*. Zürich, Switzerland: Lit Verlag.

Knudson, D. (2006). Gifted education in New Zealand primary schools 1878-2005. Wellington, New Zealand: NZCER Press.

Krochak, L. A., & Ryan, T. G. (2007). The challenge of identifying gifted/learning disabled students. *International Journal of Special Education, 22*(3), 44-54. Retrieved from https://eric.ed.gov/?id=EJ814509

Kronborg, L. (2018). Gifted education in Australia and New Zealand. In S. I. Pfeiffer, E. Shaunessy-Dedrick, & M. Foley-Nicpon (Eds.) *APA handbook of giftedness and talent* (pp. 85-96). Washington, DC: American Psychological Society.

Kvale, S. (2007). *Doing interviews*. London, England: Sage Publications.

Kyung-won, J. (1990). *Gifted learning disabled and gifted underachievers: Similarities and differences* Retrieved from https://eric.ed.gov/?id=ED328050

Lee, C. W., & Ritchotte, J. A. (2018). Seeing and supporting twice-exceptional learners. *Educational Forum, 82*(1), 68-84. https://doi.org/10.1080/00131725.2018.1379580

Leggett, D. G., Shea, I., & Wilson, J. A. (2010). Advocating for twice-exceptional students: An ethical obligation. *Research in the Schools, 17*(2), 1-10. Retrieved from https://eric.ed.gov/?id=EJ942902

Levine, M. (2002). *A mind at a time.* New York, NY: Simon & Schuster.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic Inquiry.* Newbury Park, CA: Sage.

Lincoln, Y. S., Lynham, S. A., & Guba, E. G. (2011). Paradigmatic controversies, contradictions, and emerging confluences revisited. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (4th ed. pp. 97-128). Thousand Oaks, CA: Sage.

Löfgren, K. (2013, May 19). [Kent Löfgren]. *Qualitative analysis of interview data: A step-by-step guide* [Video file]. Retrieved from: https://www.youtube.com/watch?v=DRL4PF2u9XA

Louis, B., & Lewis, M. (1992). Parental beliefs about giftedness in young children and their relation to actual ability level. *Gifted Child Quarterly, 36*(1), 27-31. https://doi.org/10.1177/001698629203600107

Lovecky, D. V. (2018). Misconceptions about giftedness and the diagnosis of ADHD and other mental health disorders. In S. B. Kaufman (Ed.), *Twice-exceptional: Supporting and educating bright and creative students with learning disabilities* (pp. 83-103). New York, NY: Oxford University Press.

Lovett, B. J., & Sparks, R. L. (2013). The identification and performance of gifted students with learning disability diagnoses: a quantitative synthesis. *Journal of*

Learning Disabilities, 46(4), 304-316. https://doi.org/10.1177/0022219411421810

Macdonald, B. and Walker, R. (1975). Case-study and the social philosophy of educational research. *Cambridge Journal of Education, 5*(1), 2-11. https://doi.org/10.1080/0305764750050101

Macfarlane, S. (2000). *Gifted children with learning disabilities: A paradox for parents.* Retrieved from http://gifted.tki.org.nz/For-schools-and-teachers/Twice-exceptional-2E-students/Characteristics

Macfarlane, A. H., Christensen, J., & Mataiti, H. (2010). *Above the clouds: Identifying and nurturing Māori students of promise = Ka rewa ake ki ngā kapua*. Christchurch, New Zealand: University of Canterbury.

Macfarlane, A., & Moltzen, R. (2005). “Whiti ki runga! Gifted and talented māori learners”. *Kairaranga, 6*(2), 7–9. Retrieved from https://files.eric.ed.gov/fulltext/EJ914568.pdf

Maddocks, D. L. S. (2018). The Identification of students who are gifted and have a learning disability: A comparison of different diagnostic criteria. *Gifted Child Quarterly, 62*(2), 175-192. https://doi.org/10.1177/0016986217752096

Mahaki, P., & Mahaki, C. (2007). *Mana tu, mana ora - Identifying characteristics of Māori giftedness.* Proceedings of the National Gifted Education Advisor Hui. Auckland, New Zealand.

Mahuika, R. (2007). Māori gifted and talented education: A review of the literature. *MAI Review, 1*(5), 1-13. Retrieved from https://www.researchgate.net/publication/228380196_Maori_Gifted_and_Tale Tale_Education_a_review_of_the_literature

Maker, C. J. (1977). *Providing programs for the gifted handicapped.* Reston, VA: Council for Exceptional Children.

Maki, K. E., & Adams, S. R. (2019). A current landscape of specific learning disability identification: Training, practices, and implications. *Psychology in the Schools, 56*(1), 18-31. https://doi.org/10.1002/pits.22179

Mansfield, S. (2009). *Teachers as transformers: Within the differentiated model of giftedness and talent.* Retrieved from http://gifted.tki.org.nz/For-schools-and-teachers/Definitions

Margrain, V., & Farquhar, S. (2012). The education of gifted children in the early years: A first survey of views, teaching practices, resourcing and administration issues. *APEX: The New Zealand Journal of Gifted Education, 17*(1), 1-13. Retrieved from https://www.giftedchildren.org.nz/wp-content/uploads/2014/10/margrain.pdf

McCoach, D. B., Kehle, T. J., Bray, M. A., & Siegle, D. (2001). Best practices in the identification of gifted students with learning disabilities. *Psychology in the Schools, 38,* 403-411. https://doi.org/10.1002/pits.1029

McDowell, M. (2018). Specific learning disability. *Journal of Paediatrics and Child Health, 54*(10), 1077-1083. https://doi.org/10.1111/jpc.14168

Massey University (2015). *Code of ethical conduct for research, teaching and evaluations involving human participants.* Retrieved from http://www.massey.ac.nz/massey/fms/Human%20Ethics/Documents/MUHEC%20Code%202015.pdf?497309B983F78ECC2490A4A377F5CBAD

McEachern, A. G., & Bornot, J. (2001). Gifted students with learning disabilities: implications and strategies for school counselors. *Professional School Counseling, 5*(1), 34-41. https://doi.org/10.2307/42732312

Merriam, S. B. (1998). *Qualitative research and case study applications in education* (Rev. ed.). San Francisco, CA: Jossey-Bass.

Mertens, D. M. (2015). *Research and evaluation in education and psychology: Integrating diversity with quantitative, qualitative, and mixed methods* (4th ed.). Thousand Oaks, CA: Sage.

Miles, M. B., Huberman, A. M., Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed.). Thousand Oaks, CA: Sage.

Miller, G. (2005). Exploring perceptions of giftedness in the Cook Islands Maori community. *International Education Journal, 6*(2), 240-246. Retrieved from https://files-eric-ed-gov.ezproxy.massey.ac.nz/fulltext/EJ854976.pdf

Ministry of Education. (n.d.-a). *Characteristics of the gifted - Ngā pūmanawa kia manawa tītī.* Retrieved from https://gifted.tki.org.nz/define-and-identify/characteristics-of-the-gifted-and-talented/

Ministry of Education. (n.d.-b). *Conceptualising giftedness and talent - Te hiringa i ngā pūmanawa.* Retrieved from https://gifted.tki.org.nz/define-and-identify/conceptualising-giftedness/

Ministry of Education. (n.d.-c). *Twice-multi exceptional learners*. Retrieved from https://gifted.tki.org.nz/define-and-identify/identification/twice-multi-exceptional-learners/

Ministry of Education. (2004). *The extent, nature, and effectiveness of planned approaches in New Zealand schools for identifying and providing for gifted and talented students*. Wellington, New Zealand: Author. Retrieved from https://gifted.tki.org.nz/assets/Uploads/files/The-Extent-Nature-and-Effectiveness-of-Planned-Approaches-in-New-Zealand-Schools-for-Providing-for-Gifted-and-Talented-Students.pdf

Ministry of Education. (2010). *Fact sheet: Success for all – every school, every child.* Retrieved from https://www.parliament.nz/resource/en-nz/49SCES_EVI_00DBSCH_INQ_9975_1_A147433/8a9fb77778f8192ba495fa74edd5b1bebafd57b0

Ministry of Education. (2012). *Gifted and talented students: Meeting their needs in New Zealand schools.* Wellington, New Zealand: Author. Retrieved from https://gifted.tki.org.nz/assets/Gifted-and-talented-students-meeting-their-needs-in-New-Zealand-Schools.pdf

Ministry of Education. (2014). *Success for all: Special education briefing to incoming Minister.* Retrieved from https://www.education.govt.nz/assets/Documents/Ministry/Publications/Briefings-to-Incoming-Ministers/SuccessForAllSpecialEducation.pdf

Ministry of Education. (2017). *Te whāriki: He whāriki mātauranga mō ngā mokopuna o Aotearoa: Early childhood curriculum*. Wellington, New Zealand: Author.

Ministry of Education. (2018). *The extent, nature and effectiveness of planned approaches in New Zealand schools for identifying and providing for gifted and talented students*. *Executive Summary.* Retrieved from https://www.educationcounts.govt.nz/publications/schooling/5451

Ministries of Health and Education (2016). New Zealand autism spectrum disorder guideline (2nd ed.). Wellington, New Zealand: Ministry of Health. Retrieved from https://www.health.govt.nz/system/files/documents/publications/nz-asd-guideline-aug16v2_0.pdf

Moltzen, R. (1999) Young, gifted and living in New Zealand. *Proceedings of Inside–Out*: *Understanding the needs of the gifted conference.* Christchurch, New

Zealand: Christchurch Association for Gifted Children and North Canterbury Support for Gifted and Talented Children.

Moltzen, R. (2011). Historical perspectives. In R. Moltzen (Ed.), *Gifted and talented: New Zealand perspectives* (3rd ed., pp. 1-30). Auckland, New Zealand: Pearson.

Montgomery, D. (2003). *Gifted & talented children with special educational needs: Double exceptionality*. London, England: David Fulton.

Montgomery, D. (2009). Gifted and talented children with special educational needs – Underachievement in dual and multiple exceptionality. In D. Montgomery (Ed.), *Able, gifted and talented underachievers* (2nd ed., pp. 265-302). Chichester, England: Wiley-Blackwell.

Morrow, S. L. (2005). Quality and trustworthiness in qualitative research in counseling psychology. *Journal of Counseling Psychology, 52*(2), 250-260. https://doi.org/10.1037/0022-0167.52.2.250

Munn, I. (2016). *Teachers and twice-exceptional students in New Zealand: The search for a teacher who "gets it"*. (Master's dissertation, University of Auckland, Auckland, New Zealand). Retrieved from https://researchspace.auckland.ac.nz/handle/2292/32171

National Education Association. (2006). *The twice-exceptional dilemma.* Retrieved from http://www.nea.org/assets/docs/twiceexceptional.pdf

Nielsen, M. E. (2002). Gifted students with learning disabilities: Recommendations for identification and programming. *Exceptionality, 10*(2), 93-111. https://doi.org/10.1207/S15327035EX1002_4

Nielsen, M. E., & Higgins, L. D. (2005). The eye of the storm services and programs for twice-exceptional learners. *TEACHING Exceptional Children, 38*(1), 8-15. https://doi.org/10.1177/004005990503800102

Neumann, L., & Bade, M. (2009). *What is twice-exceptional?* Retrieved from http://www.2enewsletter.com/topic_2e_what_is.htmlm

Neumeister, K. S., Yssel, N., & Burney, V. H. (2013). The influence of primary caregivers in fostering success in twice-exceptional children. *Gifted Child Quarterly, 57*(4), 263-274. https://doi.org/10.1177/0016986213500068

Ng, S. J., Hill, M. F., & Rawlinson, C. (2016). Hidden in plain sight: The experiences of three twice-exceptional students during their transfer to high school. *Gifted Child Quarterly, 60*(4), 296-311. https://doi.org/10.1177/0016986216656257

O'Brien, J. (2014). *How do interprofessional practice teams work together to identify and provide for gifted students with multiple exceptionalities?* (Master's thesis, Massey University, Palmerston North, New Zealand). Retrieved from https://mro.massey.ac.nz/bitstream/handle/10179/6317/02_whole.pdf?sequence=2&isAllowed=y

Olenchak, F. R. (2009). Effects of talents unlimited counseling on gifted/learning disabled students. *Gifted Education International,* 25(2), 144-164. https://doi.org/10.1177/026142940902500205

Olszewski-Kubilius, P., Subotnik, R. F., & Worrell, F. C. (2015). Conceptualizations of giftedness and the development of talent: Implications for counselors. *Journal of Counseling & Development, 93*(2), 143-152. https://doi.org/10.1002/j.1556-6676.2015.00190.x

Onwuegbuzie, A. J., & Leech, N. L. (2007). Validity and qualitative research: An oxymoron? *Quality and Quantity, 41*(2),233–249. https://doi.org/10.1007/s11135-006-9000-3

Ottone-Cross, K. L., Dulong-Langley, S., Root, M. M., Gelbar, N., Bray, M. A., Luria, S. R., . . . Pan, X. (2017). Beyond the mask: Analysis of error patterns on the KTEA-3 for students with giftedness and learning disabilities. *Journal of Psychoeducational Assessment, 35*(1), 74-93. https://doi.org/10.1177/0734282916669910

Page, A. (2006). Three models for understanding gifted education. *Kairaranga, 7*(2), 11-15. Retrieved from https://files-eric-ed-gov.ezproxy.massey.ac.nz/fulltext/EJ914587.pdf

Panganiban, M., Yeow, M., Zugibe, K., & Geisler, S. L. (2019). Recognizing, diagnosing, and treating pediatric generalized anxiety disorder. *JAAPA: Journal of the American Academy of Physician Assistants, 32*(2), 17-21. https://doi.org/10.1097/01.JAA.0000552719.98489.75

Patton, M. Q. (1990). *Qualitative evaluation methods* (2nd ed.). Thousand Oaks, CA: Sage.

Pearce, J. M. S. (2005). Kanner's infantile autism and Asperger's syndrome. *Journal of Neurology, Neurosurgery & Psychiatry, 76*(2), 205. https://doi.org/10.1136/jnnp.2004.042820

Pfeiffer, S. I., & Foley-Nicpon, M. (2018). Known and unknowns about students with disabilities who also happen to be intellectually gifted. In S. B. Kaufman (Ed.), *Twice-exceptional: Supporting and educating bright and creative students with learning disabilities* (pp. 104-122). New York, NY: Oxford University Press.

Ponterotto, J. G. (2005). Qualitative research in counselling psychology: A primer on research paradigms and philosophy of science. *Journal of Counseling Psychology, 52*(2), 126-136. https://doi.org/10.1037/0022-0167.52.2.126

Prior, S. (2013). Transition and students with twice exceptionality. *Australasian Journal of Special Education, 37*(1), 19-27. Retrieved from https://epubs.scu.edu.au/cgi/viewcontent.cgi?article=1131&context=ccyp_pubs

Probst, B. & Piechowski, M. (2011). Overexcitabilities and temperament. In T.L. Cross & J.R. Cross (Eds.). *Handbook for counsellors serving students with gifts and talents* (pp. 53 – 73). Waco, TX: Prufrock Press.

Punch, K. F. (2014). *Introduction to social research: Quantitative and qualitative approaches* (3rd ed.). London, England: Sage.

Punch, K. (2016). *Developing effective research proposals* (3rd ed.). London, England: Sage.

Punch, K. F., & Oancea, A. (2014). *Introduction to research methods in education* (2nd ed.). London, England: Sage.

Reis, S. M. (2009). Turning points and future directions in gifted education and talent development. In T. Balchin, B. Hymer, & D. J. Matthews (Eds.), *The Routledge international companion to gifted education* (pp. 317-324). London, England: Routledge.

Reis, S. M., Baum, S. M., & Burke, E. (2014). An operational definition of twice-exceptional learners: Implications and applications. *Gifted Child Quarterly, 58*(3), 217-230. https://doi.org/10.1177/0016986214534976

Reis, S. M., & Colbert, R. (2004). Counseling needs of academically talented students with learning disabilities. *Professional School Counseling, 8*(2), 156-167. Retrieved from

https://www.researchgate.net/publication/234566093_Counseling_Needs_of_Academically_Talented_Students_with_Learning_Disabilities

Reis, S. M., & McCoach, D. B. (2002). Underachievement in gifted and talented students with special needs. *Exceptionality*, *10*, 113–125. https://doi.org/10.1207/S15327035EX1002_5

Reis, S. M., McGuire, J. M., & Neu, T. W. (2000). Compensation strategies used by high-ability students with learning disabilities who succeed in college. *Gifted Child Quarterly*, *44*, 123-134. https://doi.org/10.1177/001698620004400205

Reis, S. M., & Neu, T. W. (1997). Case studies of high-ability students with learning disabilities who have achieved. *Exceptional Children, 63*(4), 463-479. https://doi.org/10.1177/001440299706300403

Reis, S. M., Neu, T.W., & McGuire, J. M. (1997). Case studies of high-ability students with learning disabilities who have achieved. *Exceptional Children, 63*(4), 463–479. https://doi.org/10.1177/001440299706300403

Renzulli, J. S. (n.d.) *A practical system for identifying gifted and talented students.* Retrieved from https://gifted.uconn.edu/schoolwide-enrichment-model/identifygt/

Renzulli, J. S. (1977). *The enrichment triad model: A guide for developing defensible programs for the gifted and talented.* Wethersfield, CT: Creative Learning Press.

Renzulli, J. S. (2005). The three-ring conception of giftedness. A developmental model for promoting creative productivity. In R. J. Sternberg & J. E. Davidson (Eds.), *Conceptions of giftedness* (2nd ed., pp. 246–279). New York, NY: Cambridge University Press.

Renzulli, J. S. (2011). A New Zealand perspective on the importance of talent development in a great society. In R. Moltzen (Ed.), *Gifted and talented: New Zealand perspectives* (3rd ed., pp. viii-xii). Auckland, New Zealand: Pearson.

Renzulli, J. S., Koehler, J., & Fogarty, E. (2006). Operation Houndstooth intervention theory: Social capital in today's schools. *Gifted Child Today, 29*(1), 14-24. Retrieved from https://files.eric.ed.gov/fulltext/EJ746293.pdf

Renzulli, J. S., & Reis, S. M. (2018). The three-ring conception of giftedness: A developmental approach for promoting creative productivity in young people. In S. I. Pfeiffer, E. Shaunessy-Dedrick, & M. Foley-Nicpon (Eds.) *APA handbook of giftedness and talent* (pp. 85-96). Washington, DC: American Psychological Society.

Riley, T. L. (2011). Teaching gifted students in the inclusive classroom. Waco, TX: Prufrock Press.

Riley, T. L., Bevan-Brown, J., Bicknell, B, Carroll-Lind, J., & Kearney, A. (2004). *The extent, nature and effectiveness of planned approaches in New Zealand schools for identifying and providing for gifted and talented students*. Palmerston North, New Zealand: Institute for Professional Development and Educational Research, Massey University. Retrieved from https://www.educationcounts.govt.nz/__data/assets/pdf_file/0020/7580/gifted.ppd

Riley, T., & Bicknell, B. (2013). Gifted and talented education in New Zealand schools: A decade later. *APEX: The New Zealand Journal of Gifted Education, 18*(1), 1-16. Retrieved from http://www.giftedchildren.org.nz/wp-content/uploads/2014/10/Riley-Bicknell.pdf

Rivera, D. B., Murdock, J., & Sexton, D. (1995). Serving the gifted/learning disabled. *Gifted Child Today, 18*(6), 34-37. https://doi.org/10.1177/107621759501800611

Robertson, S. M. (2010). Neurodiversity, quality of life, and autistic adults: Shifting research and professional focuses onto real-life challenges. *Disability Studies Quarterly, 30*(1), 27-27. https://doi.org/10.18061/dsq.v30i1.1069

Robertson, S. G., Pfeiffer, S. I., & Taylor, N. (2011). Serving the gifted: A national survey of school psychologists. *Psychology in the Schools, 48*(8), 786-799. https://doi.org/10.1002/pits.20590

Robinson, A., Shore, B. M., & Enersen, D. L. (2007). *Best practices in gifted education: An evidence-based guide*. Waco, TX: Prufrock Press.

Ronksley-Pavia, M. (2015). A model of twice-exceptionality: Explaining and defining the apparent paradoxical combination of disability and giftedness in childhood. *Journal for the Education of the Gifted, 38*(3), 318-340. https://doi.org/10.1177/0162353215592499

Ronksley-Pavia, M., Grootenboer, P., & Pendergast, D. (2019a). Bullying and the unique experiences of twice exceptional learners: Student perspective narratives. *Gifted Child Today, 42*(1), 19-35. https://doi.org/10.1177/1076217518804856

Ronksley-Pavia, M., Grootenboer, P., & Pendergast, D. (2019b). Privileging the voices of twice-exceptional children: An exploration of lived experiences and stigma narratives. *Journal for the Education of the Gifted, 42*(1), 4-34. https://doi.org/10.1177/0162353218816384

Ruban, L. M., & Reis, S. M. (2005). Identification and assessment of gifted students with learning disabilities. *Gifted Education, 44*(2), 115-124. https://doi.org/10.1207/s15430421tip4402_6

Rubie-Davies, C. M. (2018). *Teacher expectations in education*: Abingdon, England: Routledge, Taylor & Francis Group.

Rubin, H. J., & Rubin, I. S. (2012). *Qualitative interviewing: The art of hearing data* (3rd ed.). Thousand Oaks, CA: Sage.

Rynn, A. A., & Franklin, M. (2002). Generalized anxiety disorder in children and adolescents. In D. J. Nutt, K. Rickels, & D. J. Stein (Eds.), *Generalised anxiety disorder: Symptomatology, pathogenesis and management* (155-170). London, England: Martin Dunitz.

Sampson, C. (2013). Social and emotional issues of gifted young children. *APEX: The New Zealand Journal of Gifted Education, 18(1).* Retrieved from http://www.giftedchildren.org.nz/wp-content/uploads/2014/10/Sampson.pdf

Scanlon, D. (2013). Specific learning disability and its newest definition: Which is comprehensive? and which is insufficient? *Journal of Learning Disabilities 46*(1), 26-33. https://doi.org/10.1177/0022219412464342

Schrank, F. A., McGrew, K. S., & Mather, N. (2014). *Woodcock-Johnson IV tests of cognitive abilities.* Rolling Meadows, IL: Riverside.

Schuler., P. & Peters, D. (2008). *Anxiety and 2e kids.* Retrieved from https://www.2enewsletter.com/article_anxiety_2008_07.html

Schultz, S. (2012). Twice-exceptional students enrolled in advanced placement classes. *Gifted Child Quarterly*, *56*, 119-133. https://doi.org/10.1177/0016986212444605

Schwandt, T. A. (2000). Three epistemological stances for qualitative inquiry: Interpretivism, hermeneutics, and social constructivism. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (2nd ed. pp. 189-214). Thousand Oaks, CA: Sage.

Schwandt, T. A., & Denzin, N. K. (1994). Constructivist, interpretivist approaches to human inquiry. In Y. S. Lincoln (Ed.), *Handbook of qualitative research* (pp. 118–137). Thousand Oaks, CA: Sage.

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information, 22*(2), 63-75. https://doi.org/10.3233/EFI-2004-22201

Simons, H. (2009). *Case study research in practice*. London, England: Sage.

Silverman, D. (2000). *Doing qualitative research: A practice handbook.* London, England: Sage.

Silverman, L. K. (1989). Invisible gifts, invisible handicaps. *Roeper Review, 12*(1), 37-42. https://doi.org/10.1080/02783198909553228

Silverman, L. K. (1990). Social and emotional education of the gifted: The discoveries of Leta Hollingworth. *Roeper Review, 12*(3), 171-178. https://doi.org/10.1080/02783199009553265

Silverman, L. K. (1993). *Characteristics of giftedness scale.* Retrieved from http://www.gifteddevelopment.com/sites/default/files/Characteristics%20of%22Giftedness%20Scale%202014.pdf

Silverman, L. K. (2009). The two-edged sword of compensation: How the gifted cope with learning disabilities. *Gifted Education International, 25*(2), 115-130. https://doi.org/10.1177/026142940902500203

Silverman, L. K. (2013). *Giftedness 101*. New York, NY: Springer.

Silverman, L. K., Chitwood, D. G., & Waters, J. L. (1986). Young gifted children: Can parents identify giftedness? *Topics in Early Childhood Special Education, 6*(1), 23-38. https://doi.org/10.1177/027112148600600106

Sousa, D. (2014). Validation in qualitative research: General aspects and specificities of the descriptive phenomenological method. *Qualitative Research in Psychology, 11*(2), 211-227. https://doi.org/10.1080/14780887.2013.853855

Stake, R. E. (1995). *The art of case study research.* Thousand Oaks, CA: Sage.

Stark, S., & Torrance, H. (2011). In B. Somekh & C. Lewin, C. (Eds.), *Theory and methods in social research* (2nd ed., pp. 33-40). London, England: Sage.

Starman, A. B. (2013). The case study as a type of qualitative research. *Journal of Contemporary Educational Studies, 64*(1), 28-43. Retrieved from https://pdfs.semanticscholar.org/1cc2/7a1b28050194da8bef5b2ab807386baa286e.pdf

Sternberg, R. J. (1986). A triarchic theory of intellectual giftedness. In R. J. Sternberg & J. E. Davidson (Eds.), *Conceptions of giftedness* (pp. 223–243). New York, NY: Cambridge University Press.

Sternberg, R J. (1996). *Successful intelligence: How practical and creative intelligence determine success in life.* New York, NY: Simon & Schuster.

Stewart, S. E., Hu, Y. P., Leung, A., Chan, E., Hezel, D. M., Lin, S. Y.,…Pauls, D. L. (2017). A multisite study of family functioning impairment in pediatric obsessive-compulsive disorder. *Journal of the American Academy of Child and Adolescent Psychiatry, 56*(3), 241–249. https://doi.org/10.1016/j.jaac.2016.12.012

Strop, J. & D. Goldman (2011). *The Affective Side: Emotional Issues of Twice Exceptional Students.* Retrieved from https://www.sengifted.org/post/the-affective-side-emotional-issues-of-twice-exceptional-students

Sturgess, A. (1999a). An enigma in our schools – students who are academically talented and learning disabled. *SET 1999*(1), 1-9. Retrieved from http://www.nzcer.org.nz/nzcerpress/set/articles/enigma-our-schools-students-who-are-academically-talented-and-learning

Sturgess, A. (1999b). *Strategy instruction and attribution retraining for gifted learning disabled students.* (Master's thesis, Massey University, Palmerston North, New Zealand). Retrieved from https://mro.massey.ac.nz/handle/10179/6127

Sturgess, A. (2011). Celebrating the square peg: Twice-exceptional learners. In R. Moltzen (Ed.), *Gifted and talented: New Zealand perspectives* (3rd ed., pp. 379-403). Auckland, New Zealand: Pearson.

Tapper, L. (2012). Conceptions of giftedness in a global, modern world: Where are we at in Aotearoa New Zealand 2012? *APEX: The New Zealand Journal of Gifted Education, 17*(1). Retrieved from http://www.giftedchildren.org.nz/wp-content/uploads/2014/10/tapper.pdf

Tannenbaum, A. J. (1983). Gifted children: Psychological and educational perspectives. New York, NY: Macmillan.

Tannenbaum, A.J., & Baldwin, L.J. (1983). Giftedness and learning disability: A paradoxical combination. In L. H. Fox, L. Brody, & D. Tobin (Eds.), *Learning disabled/gifted children: Identification and programming* (pp. 11—36). Baltimore, MA: University Park Press

Terman, L. M. (1925). *Genetic studies of genius: Vol. 1. Mental and physical traits of a thousand gifted children.* Stanford, CA: Stanford University Press.

Tobin, V. (2018). Obsessive-compulsive disorder in children and adolescents. *Journal of Psychosocial Nursing and Mental Health Services, 56*(3), 15-18. https://doi.org/10.3928/02793695-20180219-02

Townend, G. (2015). *Academic self-concept in twice-exceptional students: An exploratory investigation* (Doctoral thesis, Griffith University, Queensland, Australia). Retrieved from https://research-repository.griffith.edu.au/handle/10072/365355

Townend, G., & Pendergast, D. (2015). Student voice: What can we learn from twice-exceptional students about the teacher's role in enhancing or inhibiting academic self-concept. *Australasian Journal of Gifted Education*, *24*(1), 37–51. Retrieved from http://search.informit.com.au.ezproxy.massey.ac.nz/fullText;dn=209705;res=AAEIP

Townend, G., Pendergast, D., & Garvis, S. (2014). Academic self-concept in twice-exceptional students: What the literature tells us. *TalentEd, 28*(1/2), 75-89. Retrieved from http://www.talented.org.au/academic-self-concept-in-twice-exceptional-students-what-the-literature-tells-us/

Trail, B. A. (2011). *Twice-exceptional gifted children: Understanding, teaching, and counseling gifted students*. Waco, TX: Prufrock Press.

2e Center (2015). *2e twice exceptional: A viewer's guide.* Studio City, CA: Author.

VanWynsberghe, R., & Khan, S. (2007). Redefining case study. *International Journal of Qualitative Methods*, *6*(2), Article 6. Retrieved from http://www.ualberta.ca/~iiqm/backissues/6_2/vanwynsberghe.htm

Vespi, L., & Yewchuk, C. (1992). A phenomenological study of the social/emotional characteristics of gifted learning disabled children. *Journal for the Education of the Gifted, 16,* 55-72. https://doi.org/10.1177/016235329201600107

Wasserman, L. H. (2013). The twice-exceptional young learner. In L. H. Wasserman, & D. Zambo (Eds.), *Early childhood and neuroscience: Links to development and learning* (pp. 141-155). New York, NY: Springer.

Webb, J. T., Amend, E. R., Webb, N. E., Goerss, J., Beljan, P., & Olenchak, F. R. (2005). *Misdiagnosis and dual diagnoses of gifted children and adults: ADHD, bipolar, OCD, Asperger's, depression, and other disorders*. Scottsdale, AZ: Great Potential Press.

Webber, M. (n.d.). *Identity and whakapapa: A curriculum for the Maori child.* [PowerPoint slides]. Retrieved from http://www.confer.co.nz/gnt/Thursday/webber.pdf

Webber, M. (2011). Gifted and proud: On being exceptional and Māori. In P. Whitinui (Ed.), *Kia tangi te tītī: Permission to speak. Successful schooling for Māori students in the 21st century: Issues, challenges and alternatives* (pp. 227-241). Wellington, NZ: NZCER Press.

Wechsler, D. (2003). *Wechsler intelligence scale for children-fourth edition*. San Antonio, TX: The Psychological Corporation.

Wechsler D. (2016). *Wechsler intelligence scale for children-fifth edition: Australian and New Zealand (WISC-VA&NZ).* Bloomington MN: Pearson,

Weinfeld, R., Barnes-Robinson, L., Jeweler, S., & Roffman Shevitz, B. (2013). *Smart kids with learning difficulties: Overcoming obstacles and realising potential* (2nd ed.). Waco, TX: Prufrock Press.

Weiss, J. A., Baker, J. K, & Butter, E. M. (2016). Mental health treatment for people with autism spectrum disorder (ASD). *Spotlight on Disability Newsletter, 8*(2). Retrieved from https://www.apa.org/pi/disability/resources/publications/newsletter/2016/09/autism-spectrum-disorder

Wellisch, M. (2016). Gagné 's DMGT and underachievers: The need for an alternative inclusive gifted model. *Australasian Journal of Gifted Education* (1), 18. https://doi.org/10.21505/ajge.2016.0003

Wellisch, M., & Brown, J. (2011). Where are the underachievers in the DMTG's academic talent development? *Talent Development & Excellence, 3*(1), 115-117. Retrieved from http://eds.a.ebscohost.com.ezproxy.massey.ac.nz/eds/pdfviewer/pdfviewer?vid=3&sid=a31d94ee-7220-462c-9598-ba762afcd943%40sessionmgr4006

Wen Wang, C. W., & Neihart, M. (2015). How do supports from parents, teachers, and peers influence academic achievement of twice-exceptional students. *Gifted Child Today, 38*(3), 148-159. https://doi.org/10.1177/1076217515583742

White, V. (2014) *Giftedness and talent - Pasifika Styles!* [PowerPoint slides]. Retrieved from http://liftingthelid.weebly.com/pasifika-community-consultation-meeting-resources.html

Whitmore, J. R. (1980). *Giftedness, conflict, and underachievement*. Boston, MA: Allyn & Bacon.

Whitmore, J. R., & Maker, C. J. (1985). *Intellectual giftedness in disabled persons.* Austin, TX: Pro-Ed.

Wilkinson, A., Freeston, M., & Meares, K. (2011). *CBT for worry and generalised anxiety disorder*. Thousand Oaks, CA: Sage.

Willard-Holt, C., Weber, J., Morrison, K. L., & Horgan, J. (2013). Twice-exceptional learners' perspectives on effective learning strategies. *Gifted Child Quarterly, 57*(4), 247-262. https://doi.org/10.1177/0016986213501076

Willis, J. (2011). Twice-exceptional children, exceptional challenges: A brain-based view. *2e: Twice Exceptional Newsletter, 45*. Retrieved from http://www.2enewsletter.com/article_willis_challenges.html

Wood, S., & Estrada-Hernández, N. (2009). Psychosocial characteristics of twice-exceptional individuals: Implications for rehabilitation practice. *Journal of Applied Rehabilitation Counseling*, *40*, 11–18. Retrieved from https://www.researchgate.net/publication/257638325_Psychosocial_characteris char_of_twice-exceptional_individuals_Implications_for_rehabilitation_practice

Woodcock, R. W., McGrew, K. S., & Mather, N. (2001). *Woodcock-Johnson III tests of cognitive abilities.* Itasca, IL: Riverside.

Wormald, C. (2011). What knowledge exists in NSW schools of students with learning difficulties who are also academically gifted? *Australasian Journal of Gifted Education, 20*(2), 5-9. Retrieved from https://ro.uow.edu.au/cgi/viewcontent.cgi?article=4537&context=sspapers

Wormald, C., & Vialle, W. (2011). *Dual exceptionality*. Wollongong, Australia: Australian Association For the Education of the Gifted and Talented Ltd. Retrieved from http://www.aaegt.net.au/DEEWR%20Books/DE%20Final%20Compile.pdf

Wormald, C., Vialle, W., & Rogers, K. (2014). Young and misunderstood in the education system: A case study of giftedness and specific learning disabilities. *Australasian Journal of Gifted Education, 23*(2), 16-28. Retrieved from https://ro.uow.edu.au/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=2697&context=sspapers

Yazan, B. (2015). Three approaches to case study methods in education: Yin, Merriam and Stake. *The Qualitative Report.* (20) 2. 135-152. Retrieved from http://www.nova.edu/ssss/QR/QR20/2/yazan1.pdf

Yin, R. K. (2018). *Case study research: Design and methods* (6th ed.). Thousand Oaks, CA: Sage.

Zentall, S. S. (2014). *Students with mild exceptionalities: Characteristics and applications*. Thousand Oaks, CA: Sage.

APPENDICES

Appendix A: Letter to New Zealand Association of Gifted Children

MASSEY UNIVERSITY
INSTITUTE OF EDUCATION
TE KURA O TE MĀTAURANGA

18 November 2017

Dear Brooke and Members of the Board for the New Zealand Association for Gifted Children,

Re: Master Thesis Research:

The Social-Emotional Needs of Twice-Exceptional Learners in Primary Schools: Perspectives of Children and Parents

My name is Trudy Bailey and I am a postgraduate student working towards my Master of Educational Psychology degree at Massey University. As part of my degree, I am undertaking research into the social-emotional needs of primary school age twice-exceptional children (6-12 years) and how these needs are being met in primary schools in Aotearoa, New Zealand. The purpose of this research is to give a much-needed voice to twice-exceptional learners and their parents about their lived experiences in the classroom with the aim of advancing our understanding of the social-emotional challenges they face. The research will help to bridge a gap in the research and offer additional knowledge and understanding to researchers and theorists currently working in the field of giftedness and twice-exceptionality. The research will take the format of six to eight individual case studies, involving semi-structured interviews with both the twice-exceptional child and his/her parent(s) or caregiver(s).

I am writing to seek approval from the New Zealand Association for Gifted Children (NZAGC) Board members for the information about this research project to be sent out to your database of members and invite them to take part in this research. We are hoping to reach the parents/caregivers of primary school age twice-exceptional children (gifted but with a co-occurring disability/disorder/condition that impedes their learning).

Please see the Information Sheet attached. I have also attached a copy of the Information Sheets for the Parents and Children for your information. Should you wish to discuss this request in further detail, please do not hesitate to contact me either by email: [redacted] or mobile: [redacted] Alternatively, you can contact my supervisors, Dr. Vijaya Dharan (Senior Lecturer) and Vanessa White (Senior Tutor) at Massey University.
Vijaya Dharan – v.m.dharan@massey.ac.nz or 06 356 9099 ext.: 84315
Vanessa White – v.white@massey.ac.nz or 07 829 5135.

Thank you for considering this request and I look forward to receiving your response.

Yours sincerely,

T. Bailey

Trudy Bailey
BSc (Hons), PGDipEd (Educational Psychology).

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern A, Application 17/44. If you have any concerns about the conduct of this research, please contact Dr. Lesley Batten, Chair, Massey University Human Ethics Committee: Southern A, telephone 06 356 9099 x 85094, email humanethicsoutha@massey.ac.nz

Te Kunenga ki Pūrehuroa | Institute of Education
Cnr Albany Drive & Collinson Road, Private Bag 11222, Palmerston North 4442, New Zealand T 06 356 9099 www.massey.ac.nz

Appendix B (i): Information Sheets for Organisation - NZAGC

MASSEY UNIVERSITY
INSTITUTE OF EDUCATION
TE KURA O TE MĀTAURANGA

The Social-Emotional Needs of Twice-Exceptional Learners in Primary Schools: Perspectives of Children and Parents

NATIONAL ORGANISATION INFORMATION SHEET

For the attention of Brooke Trenwith and the NZAGC Board members,

My name is Trudy Bailey and I am a postgraduate student working towards my Master of Educational Psychology degree at Massey University. As part of my degree, I am undertaking research into the social-emotional needs of twice-exceptional children and how these needs are being met in primary schools in Aotearoa, New Zealand.

What is twice-exceptionality?

For this study, the Ministry of Education (2014) definition of twice-exceptionality will be utilised. This describes twice-exceptional learners as gifted learners whose "performance is impaired, or high potential is masked, by a specific learning disability, physical impairment, disorder, or condition".

What is the purpose of this research?

The purpose of this research is to give primary school age twice-exceptional children (6-12 years) and their parents/caregivers a voice, offering them the opportunity to share their stories about the social-emotional challenges that twice-exceptional learners face in their everyday school life. The research aims to provide a better understanding of the type of social-emotional needs experienced by twice-exceptional learners, as well as exploring the perceptions of twice-exceptional learners and their parents about how these needs are currently being met in the school setting, and what they would like to see happen in the future. The information from this study will not be used to evaluate the child or their school, rather it is to increase our understanding of twice-exceptionality and help to bridge a gap in the existing research.

What type of participants does this research need?

Through your database of members, we are hoping to reach the parents/caregivers of primary school age (6-12 years) twice-exceptional children, who are gifted but with a co-occurring disability/disorder/condition that impedes their learning, and invite them to take part in this research. To be eligible for this research, the child's giftedness may be in any area of performance, for example math, reading, memory, art, music, or cultural giftedness/leadership. Likewise, their co-existing disorders/disabilities can include any condition that negatively effects the child's learning capabilities, such as specific learning disabilities, physical disabilities, speech and language disorders, behavioural disorders, attention-deficit/hyperactivity disorders, Asperger's, or autism spectrum disorders. I am hoping to explore six to eight cases in this study, made up of one twice-exceptional child and their parent(s)/caregiver(s). My aim is to recruit participants with diverse gifts and disabilities/disorders to achieve a broad understanding of the social-emotional needs of different types of twice exceptional learners. It would also be preferable to get a mix of male and female children, and from a variety of geographical locations around New Zealand. Should more participants be required, this information will also be sent to other organisations that may have members with twice-exceptional children.

What will the study involve?

Separate semi-structured interviews will be undertaken with both the twice-exceptional child and his/her parent(s) or caregiver(s). However, the child will be able to have a parent/caregiver in the interview with them if they prefer. During the interviews, participants can expect to discuss the types of social-emotional needs/challenges they/their child faces at school; how these needs are currently being met by their school, and changes that they would like to see happen in the future. Interviews with the parents/caregivers will take up to 45 minutes and interviews with the children will take up to 30 minutes. If potential participants live in the Upper North Island of New Zealand, it is likely that these interviews will be undertaken face-to-face, at a time and location convenient to family. However, for potential participants that live further afield in New Zealand, the interviews will take place over Zoom or Skype. I will record the interviews so that I can recall what is said and how the conversation went. Recordings will be sound only for the face-to-face interviews, however interviews via Skype/Zoom will record sound and image. Afterwards, these recordings will be written into a transcript which participants will be able to approve or amend. This transcript data will be securely stored on a password protected device for five years. The findings of each case study will be presented as a narrative story about each child, their social-emotional needs, and their experiences at school as a twice-exceptional learner. However, pseudonyms will be used and any information that identifies the child, their parents/caregivers, or their school will be excluded from this thesis and any subsequent publications or presentations to maintain anonymity. Comparisons will also be made across the cases in this study, to discuss any similarities/differences between them.

What are the rights for participants in this study?

If you allow the information about this research to be sent out to the members on your database, your members are under no obligation to participate in this research. If they decide to participate, they have the right to:

- decline to answer any particular question.
- withdraw from the study.
- ask any questions about the study at any time during participation.
- provide information on the understanding that their name, their child's name, or their school name will not be used.
- ask for the recording device to be turned off at any time during the interview.
- to be given access to a summary of the study findings once the research is concluded.

Furthermore, I would be happy to send you a summary of the findings once the research is complete.

Contact information

Should you have any questions, please feel free to contact me directly or one of my supervisors. I can be contacted by email: [redacted] or mobile: [redacted].

My supervisors are Dr. Vijaya Dharan (Senior Lecturer) and Vanessa White (Senior Tutor) at Massey University.

Vijaya Dharan – v.m.dharan@massey.ac.nz or 06 356 9099 ext: 84315

Vanessa White – v.white@massey.ac.nz or 07 829 5135.

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern A, Application 17/44. If you have any concerns about the conduct of this research, please contact Dr. Lesley Batten, Chair, Massey University Human Ethics Committee: Southern A, telephone 06 356 9099 x 85094, email humanethicsoutha@massey.ac.nz

Appendix B (ii): Information Sheets for Parents

MASSEY UNIVERSITY
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TE KURA O TE MĀTAURANGA

The Social-Emotional Needs of Twice-Exceptional Learners in Primary Schools: Perspectives of Children and Parents

INFORMATION SHEET FOR PARENTS/CAREGIVERS

Dear Parents and Caregivers,

My name is Trudy Bailey and I am a postgraduate student working towards my Master of Educational Psychology degree at Massey University. As part of my degree, I am undertaking research into the social-emotional needs of twice-exceptional children and how these needs are being met in primary schools in Aotearoa, New Zealand.

What is twice-exceptionality?

For this study, twice-exceptional learners are gifted learners whose "performance is impaired, or high potential is masked, by a specific learning disability, physical impairment, disorder, or condition" (Ministry of Education, 2014).

What is the purpose of this research?

The purpose of this research is to give primary school age twice-exceptional children (6-12 years) and their parents/caregivers a voice, offering them the opportunity to share their views on the social-emotional challenges faced by twice-exceptional children and share their story of what school life is like for these learners. The research aims to provide a better understanding of the type of social-emotional needs that twice-exceptional learners experience, as well as explore the perceptions of twice-exceptional learners and their parents/caregivers about how these needs are currently being met in the school setting, and what they would like to see happen in the future. The information gleaned from this research will not be used to evaluate your child or their school, rather it is to increase our understanding of twice-exceptionality.

Who will be selected to participate?

Parents/caregivers with a primary school age twice-exceptional child (6-12 years) are invited to take part in this research. Your child's giftedness may be in any areas of performance, for example math, reading, memory, art, music, or cultural giftedness/leadership. The co-existing disorders/disabilities/conditions can be anything that impedes your child's learning, such as specific learning disabilities, physical disabilities, speech and language disorders, behavioural disorders, attention-deficit/hyperactivity disorders, Asperger's, or autism spectrum disorders. I am hoping to explore six to eight cases in this study, made up of one twice-exceptional child and their parent(s)/caregiver(s). I would like to get participants with diverse gifts and disabilities/disorders to achieve a broad understanding of the social-emotional needs of different types of twice exceptional learners. It would also be preferable to get a mix of male and female children, and from a variety of geographical locations around New Zealand.

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Cnr Albany Drive & Collinson Road, Private Bag 11222, Palmerston North 4442, New Zealand T 06 356 9099 www.massey.ac.nz

What will the study involve?

You and your child should be prepared to take part in separate interviews to discuss your child's experiences at school, their social-emotional needs, how these needs are currently being met at their school, and changes that you/they would like to see in the future. Your child will be able to have a parent/caregiver in the interview with them should they choose to do so. Interviews with the parents/caregivers will take up to 45 minutes and interviews with your children will take up to 30 minutes. If you live in the Upper North Island of New Zealand, it is likely that these interviews will be undertaken face-to-face, at a time and location convenient to you. However, for potential participants that live further afield in New Zealand, the interviews will take place over Zoom or Skype. I will record the interviews so that I can recall what is said and how the conversation went. Recordings will be sound only for the face-to-face interviews, however interviews via Skype or Zoom will record sound and image. Afterwards, these recordings will be written into a transcript which you will be able to approve or amend. This transcript data will be securely stored on a password protected device for five years. The findings of this case study will be presented as a narrative story about your child, their social-emotional needs, and their experiences at school as a twice-exceptional learner. However, pseudonyms will be used and any information that identifies you, your child, or the school they attend will be excluded from this thesis and any subsequent publications or presentations, to maintain anonymity. Additionally, there will be comparisons made across the six to eight cases in this study, to discuss any similarities or differences between them.

What are your rights, as participants?

An Information Sheet, written in an easy to understand format, will also be provided for your child. However, a podcast of the information can be sent if your child still has trouble reading this. You and your child are under no obligation to participate in this research. If you decide to participate, you and your child each have the right to:

- decline to answer any particular question.
- withdraw from the study no later than 1st June 2018.
- ask any questions about the study at any time during participation.
- provide information on the understanding that your name, your child's name, or the name of their school will not be used.
- ask for the recording device to be turned off at any time during the interview.
- to be given access to a summary of the study findings once the research is concluded.

Who do I contact for more information?

Should you have any questions, please feel free to contact me directly or one of my supervisors. I can be contacted by email: [redacted] or mobile: [redacted].
My supervisors are Dr. Vijaya Dharan (Senior Lecturer) and Vanessa White (Senior Tutor) at Massey University.
Vijaya Dharan – v.m.dharan@massey.ac.nz or 06 356 9099 ext.: 84315
Vanessa White – v.white@massey.ac.nz or 07 829 5135.

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern A, Application 17/44. If you have any concerns about the conduct of this research, please contact Dr. Lesley Batten, Chair, Massey University Human Ethics Committee: Southern A, telephone 06 356 9099 x 85094, email humanethicsoutha@massey.ac.nz

Appendix B (iii): Information Sheets for Children

MASSEY UNIVERSITY
INSTITUTE OF EDUCATION
TE KURA O TE MĀTAURANGA

INFORMATION SHEET FOR CHILDREN

Hello,

My name is Trudy Bailey and I am a student at Massey University. As part of my studies, I am researching children like you, who have gifts or talents (like being great at math, remembering things, music, art, or showing leadership skills) but who also find school difficult as they may struggle to read, be physically unable to do things at school, find it hard to focus on their work, or they struggle to talk with or understand their teachers and classmates. These children are sometimes called twice-exceptional learners as they are gifted but have problems that make it hard for them to learn.

I would like the chance to come and talk with you about what life is like at school; how you feel about your teachers and classmates; the things you like about school; and any things about school that you would change if you could. After talking to you, your parents, and some other families, I will write a thesis, which is like a book. This will be called:

The Social-Emotional Needs of Twice-Exceptional Learners in Primary Schools: Perspectives of Children and Parents.

It is important that you know:

- If you agree to take part in this research, we will be talking about your feelings at school and how you get on with your teachers and classmates. This will take no more than 30 minutes.
- Your parents/caregivers know about my research and have said they are happy for me to talk to you about school. However, you do not have to take part in this research if you do not want to.
- If you agree to take part but decide later that you do not want to, then you can ask to stop at any time.
- If you do not want to answer a question just let me know and we will move onto the next question.
- You can stop our talk at any time, if you do not wish to talk anymore.
- You can choose to have your parent/caregiver in the interview with you, if you prefer.
- I will record our chat so I can remember what we said but nobody, other than the person that types up our conversation, will hear the recording of us talking. This will be kept in a password protected computer.
- If you want me to stop the recording at any time, just let me know.
- I will use information from my interview with you and my interview with your parents to write a story about you. This will talk about your school life, things that work well, things that you find difficult, your feelings, and how you get on with your teacher and your classmates.
- I will not write down your real name, your parents real name, or the name of your school, so no-one other than your family will know that the story is about you. Instead, I will use pretend names for everyone.

If you have any questions, please ask your parents/caregivers to contact me.

Thank you so much,

Trudy

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern A, Application 17/44. If you have any concerns about the conduct of this research, please contact Dr. Lesley Batten, Chair, Massey University Human Ethics Committee: Southern A, telephone 06 356 9099 x 85094, email humanethicsoutha@massey.ac.nz

Appendix C (i): Parent Consent Form – Interview With an Adult

Print on Massey University departmental letterhead]
[Logo, name and address of Department/School/Institute/Section]

The Social-Emotional Needs of Twice-Exceptional Learners in Primary Schools: Perspectives of Children and Parents.

PARTICIPANT CONSENT FORM – INTERVIEW WITH ADULT

I have read the Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

☐ I agree/do not agree to the interview being sound recorded.

☐ I wish/do not wish to have the recording of my interview returned to me.

☐ I agree to participate in this study under the conditions set out in the Information Sheet.

Signature: .... **Date:** ....

Full Name - printed ....

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern A, Application 17/44. If you have any concerns about the conduct of this research, please contact Dr. Lesley Batten, Chair, Massey University Human Ethics Committee: Southern A, telephone 06 356 9099 x 85094, email humanethicsoutha@massey.ac.nz

Appendix C (ii): Parent Consent Form – Interview With a Child

Print on Massey University departmental letterhead]
[Logo, name and address of Department/School/Institute/Section]

The Social-Emotional Needs of Twice-Exceptional Learners in Primary Schools: Perspectives of Children and Parents.

PARENT CONSENT FORM – INTERVIEW WITH CHILD

I have read the Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

☐ I agree/do not agree to the interview with my child being sound recorded.

☐ I wish/do not wish to have the recording of my child's interview returned to me.

☐ I agree for my child to participate in this study under the conditions set out in the Information Sheet.

Signature: .... **Date:** ....

Full Name – printed: ....

Full Name of Child: ....

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern A, Application 17/44. If you have any concerns about the conduct of this research, please contact Dr. Lesley Batten, Chair, Massey University Human Ethics Committee: Southern A, telephone 06 356 9099 x 85094, email humanethicsoutha@massey.ac.nz

Appendix C (i): Consent Form for Child – Interview With a Child

Print on Massey University departmental letterhead]
[Logo, name and address of Department/School/Institute/Section]

The Social-Emotional Needs of Twice-Exceptional Learners in Primary Schools: Perspectives of Children and Parents.

ASSENT FORM FOR YOUNG CHILD – INTERVIEW WITH CHILD

I have read the Information Sheet about this research, or it has been read aloud to me. I understand that taking part in this study will involve answering some questions about my experiences at school.

Signing this form means that:

☐ I am happy to take part in this study.

☐ I understand that I can stop the conversation at any time or ask to move to the next question if I would prefer not to answer any questions.

☐ I am happy for this conversation will be recorded.

Signature: .... **Date:** ....

Full Name – printed: ....

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern A, Application 17/44. If you have any concerns about the conduct of this research, please contact Dr. Lesley Batten, Chair, Massey University Human Ethics Committee: Southern A, telephone 06 356 9099 x 85094, email humanethicsoutha@massey.ac.nz

Appendix D (i): Interview Schedule for Parents

The Social-Emotional Needs of Twice-Exceptional Learners in Primary Schools: Perspectives of Children and Parents.

INTERVIEW SCHEDULE

Interview with Parent

1. Can you tell me a little bit about (name of child)?
2. When did you become aware that (name of child) was gifted?
    a. Has your child been formally identified as gifted? If not, how did you identify it?
    b. Can you tell me a little more about their giftedness?
    c. Can you tell me about the positives/challenges that this giftedness brings?
3. What other exceptionalities does (child's name) have?
4. When did you become aware that (name of child) has (name of disability/disorder/condition)?
    a. Has your child been formally identified as having (name difficulty)? If not, how did you identify it?
    b. Can you tell me a little more about their (name of disability/disorder/condition)?
    c. Can you tell me about the challenges that (name of disability/disorder/condition) brings?
5. What are the challenges/opportunities of being a parent/caregiver of a twice-exceptional child?
    a. What support networks do you have?
    b. What extra support, if any, did you receive at school?
6. I am aware that you now home-school (Child's Name) but can I please talk about your experiences when they were at school?
7. Can you tell me about (child's name) experiences in the school setting?
    a. What school areas did he struggle with/do well at?

b. What challenges do you think they faced at school because of their twice-exceptionality?
c. What was (child's name) relationship like with his/her teachers?
d. Do you think (child's name) was well-supported at school?
e. Did the teacher provide specific support for (child's name) gifted qualities?
    i. In what ways? ii. What could they have done better?
f. Did the teacher provide specific support for your child's (disability/disorder/condition)?
    i. In what ways? ii. What could they have done better?

8. How did your child describe his experiences at school when talking to you at the time?
    a. What type of emotions did he describe?
    b. What type of behaviours did he describe?
    c. Did your child talk about what sorts of situations triggered these emotions and behaviours?
    d. How does he reflect back on school now that some time has passed?

9. How did the teachers describe (child's name) experiences at school when talking to you?
    a. What type of emotions did the teacher describe?
    b. What type of behaviours did the teacher describe?
    c. Did the teacher talk about what sorts of situations triggered these emotions/ behaviours?
    d. Did the school have any methods in place to support (child's name) emotional needs? Behavioral needs? What could they have done better?

10. Did your child find it easy or difficult to make friends at school?
    a. How did being twice-exceptional impact upon (child's name) social relationships at school?
    b. Do you think the school supported (name) with their social relationships/friendships at school?
        i. In what ways? ii. What could they do better?
11. How would you describe (child's name) behaviours/emotions/social ability since leaving school and being homeschooled?

12. Do you think that (child's name) go to school in the future? Can you tell me about that/reasons why?
13. Overall, did (child's name) enjoy school?
14. Overall, in what ways do you think that the school met (child's name) social-emotional needs?
15. Overall, what things could the school do better to support (child's name) social-emotional needs? What would you like to change for the future?

Appendix D (ii): Interview Schedule for Children

The Social-Emotional Needs of Twice-Exceptional Learners in Primary Schools: Perspectives of Children and Parents.

INTERVIEW SCHEDULE

Interview with Child

I just want to do a final check – are you still happy to talk to me today about your likes and dislikes, and your experiences when you were at school?

1. Can you tell me a little bit about yourself?
    a. What do you love to do?
    b. What do you dislike doing?
    c. Who lives with you at home?

2. You (or your parents/caregivers) told me that you are good at (describe giftedness). Can you tell me a little more about your (gift)?
    a. Can you tell me what is good about being good at (gift)?
    b. Can you tell me if there is anything bad about being good at (gift)?
    c. In what ways does your gift help you with your learning at home/when you were at school?

3. You (or your parents/caregivers) told me that you struggle with (name difficulties)?
    a. Can you tell me a little more about your (difficulty)?
    b. In what ways does your (difficulty) help you with your learning at home?
        i. What about when you were at school?
    c. In what ways does your (difficulty) cause problems with your learning at home?
        i. What about when you were at school?

4. Who are the main people that you go to for help?
    a. What about when you were at school? Who did you usually talk with if you want to share something good that happened? (E.g. good school work/fun in the playground/feeling proud etc.)
    b. Who did you usually go to if you wanted to share something bad that happened to you at school? (E.g. Problems with school work/classmates/teacher etc.)

5. Can you tell me about what it was like at school?
    a. What school areas did you do well at/struggle with?
    b. What challenges did you face at school because of your differences (gifts and deficits)?
    c. How did you get on with your teachers?
    d. Do you think you were well-supported at school?
    e. Did the teacher provide specific help for your gifted qualities?
        i. In what ways? ii. What could they have done better?
    f. Does the teacher provide specific help for your (name or describe difficulties)?
        i. In what ways? ii. What could they do better?

6. I just want to talk a bit about your feelings and behaviours when you were at school.
    a. What type of feelings/emotions do you feel at school?
        i. What happened to makes you feel this way?
        ii. How did it make you feel when…………?
        iii. Do you think your teacher understood your feelings?
    b. What type of behaviours did you show at school?
        i. What happened to make you act this way?
        ii. How did you feel about your behaviour at school?
        iii. How do you think your teachers felt about your behaviour at school?
        iv. How do you think your parents felt about your behaviour at school?
7. What type of fellings and emotsions/behaviours do you mainly show when learning at home?

8. I just want to talk a little about your friends. Who are your best friends?

9. Do you find it easy to make friends?

10. Did you find it easy or difficult to make friends at school?
    a. Were your classmates mostly nice to you?
    b. If your classmates were mean to you, how did that make you feel?
    c. In what ways did your teacher help if you were having problems with classmates?

d. How could your teacher have helped more with problems you had with your classmates?
e. If you could change three things about your old classmates, what would they be?

11. What things did your teachers do to help you when you felt like you are struggling with your feelings/friendships/behaviours? What could they have done do better?
12. Overall, how much do you enjoy school? Why?
13. If you could change three things about your teachers/school, what would they be?

Appendix E: Transcriber's Confidentiality Agreement

[Print on Massey University departmental letterhead]
[Logo, name and address of Department/School/Institute/Section]

The Social-Emotional Needs of Twice-Exceptional Learners in Primary Schools: Perspectives of Children and Parents

TRANSCRIBER'S CONFIDENTIALITY AGREEMENT

I .... (Full Name - printed) agree to transcribe the recordings provided to me.

I agree to keep confidential all the information provided to me.

I will not make any copies of the transcripts or keep any record of them, other than those required for the project.

Signature: .... **Date:** ....

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern A, Application 17/44. If you have any concerns about the conduct of this research, please contact Dr. Lesley Batten, Chair, Massey University Human Ethics Committee: Southern A, telephone 06 356 9099 x 85094, email humanethicsoutha@massey.ac.nz

Appendix F: Ethics Approval Email: 3rd October 2017

From: humanethics@massey.ac.nz
Sent: Tuesday, 3 October 2017 4:31 PM
To: Trudy.Bailey.1@uni.massey.ac.nz
Subject: Human Ethics Application SOA 17/44 Approved

HoU Review Group

ReviewerGroup
Dr Vijaya Muralidharan

Researcher: Trudy Bailey
Title:The Social-Emotional Needs of Twice-Exceptional Learners in Primary Schools: Perspectives of Children and Parents. (Working title.)

Dear Trudy

Thank you for the above application that was considered by the Massey University Human Ethics Committee: Human Ethics Southern A Committee at their meeting held on 03/10/2017.
On behalf of the Committee I am pleased to advise you that the ethics of your application are approved.

Approval is for three years. If this project has not been completed within three years from the date of this letter, reapproval must be requested.
If the nature, content, location, procedures or personnel of your approved application change, please advise the Secretary of the Committee.

If you wish to print an official copy of this letter, Please logon to RIMS ( ) , and under the Reporting section, View Reports you will find a link to run the Ethics Committee Report.

Yours sincerely
Dr Brian Finch, Chair
Massey University Human Ethics Committee