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Gifted Students with Learning Difficulties Negotiating Identity and Capability in New Zealand Schools: A Theory of Conceptualising Difference

Susan Jane Ng

Abstract

Giftedness provides no assurances of protection from concomitant physical or psychosocial challenges (L. Silverman, 1989). Gifted students can be affected by learning difficulties that impact upon their academic capabilities in schooling contexts. Individuals who possess domains of high ability alongside learning difficulties are often referred to in education literature as twice-exceptional, dual-exceptional, multi-exceptional or gifted-plus. The nature and extent of individual learning strengths and impairments can make identification and diagnosis challenging. As a result, many students with such learning differences are often not recognised, nor appropriately provided for in New Zealand schools. This typically results in underachievement when compared to potential, which has serious implications for future life prospects and personal well-being.

This research examined multiple perspectives in the education of gifted students with learning difficulties in New Zealand schools, specifically in reference to the almost incongruous phenomenon of underachievement of this gifted student subgroup. Different intervening conditions in an individual’s learning environment, including personal circumstances and broader contextual spheres of influence that impact upon student capabilities, were explored. In investigating the conditions of a learning setting, the research considered barriers and facilitators that impeded or enhanced achievement, via the negotiation of student identity and capability, within the bounds of existing school structures and arrangements.

The research employed constructivist grounded theory methodology combined with the theoretical framework of the capability approach to generate explanatory theory. Embedded mixed methods were adopted as an appropriate means through which to investigate the capacity of gifted students with learning difficulties to achieve academic success and socio-emotional well-being. Three distinct school climates were identified from the data. Each learning climate was shown to influence the negotiation of identity, development of agency, perceptions of capability, and realisation of achievement, of the twice-exceptional students. The findings suggest that for this student group, relationally inclusive practices that enhance understandings about dual exceptionality as a construct, would help to promote success in schools. Such practices importantly included recognition of learning strengths, alongside
provision for learning difficulties, that were beneficial for individuals not only academically, but also cognitively and psychosocially.

Unfortunately, the current focus on learning difficulties in New Zealand schools, complicated by a lack of policy specifically aimed at addressing twice-exceptional students’ complex learning needs, worked against the reported preferences of the student participants. Neglecting domains of high ability left these students and their families feeling frustrated by the process of schooling. This affected the development of personal well-being and a sense of belonging in the New Zealand school system. The thesis concludes by proposing a new model to assist with reconceptualising individuals with gifts and talents in association with learning difficulties. A new term, *diff-capable*, is offered to help transcend issues created by current (unhelpful) polar constructions of ability and (dis)ability as separate entities. The term diff-capable thus aims to help teachers/special education needs coordinators (SENCos) to more appropriately recognise and cater for the learning needs of this unique student group. In light of the findings, recommendations are made for transformational change utilising a capability approach.
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I would like to acknowledge the significant, unwavering, and always encouraging, contributions of Associate Professor Mary Hill and Dr Catherine Rawlinson in the completion of this thesis, as well as those of my husband Jason, my four wonderful children, and extended family, for supporting me throughout.

This thesis is dedicated to the loving memory of my mother, Yvonne Swan (1943–1990)

and to Mexha Sane (1999–2015)—one of the hidden and the lost.
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Chapter 1: Introduction to the Research

Gifted and talented students are found in all communities of learners, irrespective of cultural, ethnic, or socioeconomic status, or of any concomitant physical impairment or learning difference (Bianco, 2005; Kearney, Bevan-Brown, Haworth & Riley, 2008). Therefore, those working in the school system need to be conversant with, and skilled in providing for, gifted students in reflection of their diversity of forms. This is especially critical for twice-exceptional (2E) individuals who possess areas of high ability alongside domains of learning difficulty, and depend upon supportive and knowledgeable adults to recognise and assist them in acquiring the necessary proficiencies to help them reach their potential in life. These students are currently recognised internationally as being particularly at risk of underachievement in the school system (Assouline, Foley-Niepon, & Whiteman, 2010; Kalbfleisch, 2009, 2014; Reis, Baum, & Burke, 2014) and need appropriate support and encouragement to enable the development of gifts into talents in inclusive, well-resourced education settings.

There is currently no universally agreed-upon definition of twice-exceptionality. This is due to ongoing debate concerning the meaning of the key terms, gifted and learning (dis)abled, that determine who is counted as such (Bianco, 2005; Foley-Niepon, Assouline, & Colangelo, 2013). Due to the vagaries in definition, gifted students with learning difficulties are often overlooked or misidentified, with research showing that they comprise an underserved student group within the wider school population (Bianco, 2005; Brody & Mills, 1997; Davis & Rimm, 2004; Dole, 2001; Karnes, Shaunessy, & Bisland, 2004). Consequently, the prevalence of 2E individuals is currently unknown as there is no formal system for identifying or evaluating individuals with neurophysiological differences (neurodiversities; Barnard-Brak, Johnsen, Hannig, & Wei, 2015). However, research by L.
Silverman (2012) at the Gifted Development Centre (Denver, Colorado) found that one fifth of gifted individuals tested had a learning difficulty of some sort. Other studies estimate prevalence as lying between 2–5% of the total student population (Whitmore & Maker, 1985). Applying these estimates to the New Zealand (NZ) context suggests that of the approximately 750,000 children currently attending NZ schools (Ministry of Education [MoE], 2014), between 15,000–37,500 individuals could be 2E. The lower value is considered conservative as it is based solely on studies of identified gifted students. Many 2E students are not identified as gifted, as they typically appear average on standardised tests, or may only be identified as having a learning difficulty, rather than coexistent dual exceptionalities (Barnard-Brak et al., 2015). Complicating these issues is the fact that at present there is very little original empirical research in the NZ context specifically concerning 2E students and their achievement in the school system. The situation faced by 2E students in NZ schools is therefore veiled in misconceptions about the condition and its occurrence, and clouded by uncertainty in how to approach identification and appropriate provision.

The research undertaken in this thesis employs constructivist grounded theory methodology (Charmaz, 2006, 2014), combined with the theoretical framework of the capability approach (Sen, 1985), to develop nascent theory concerning the phenomenon of underachievement of 2E students in the NZ school system. In doing so, the study examines the process of negotiating student identity and capability relative to the surrounding education landscape. The education landscape is identified as including the personal circumstances of 2E students, that form an immediate sphere of influence, alongside wider contextual conditions. Such conditions include family (proximal sphere) and school (distal sphere) factors of influence. Multiple perspectives are gathered from 2E students, their parent(s)/caregiver(s), and
teachers/special education needs coordinators (SENCos) to generate a holistic picture regarding current beliefs, provisions and challenges facing 2E students in NZ schools.

This chapter introduces the reader to the difficulties currently facing 2E students in the NZ school system. It begins with a discussion of the changing conceptions of giftedness and talent. Definitions of giftedness and talent will then be discussed and connections to 2E individuals made explicit. The NZ school setting, including inclusive education policy and practice, will then be examined, as this embodies the socio-political climate within which 2E students currently learn. Defining characteristics of 2E individuals that impact upon achievements in schooling contexts will then be discussed, with special consideration of learning differences that mediate achievement outcomes. An overview of special education in NZ is then followed by an examination of the impacts of special-education labels on students, including the phenomenon of social exclusion. The thesis is then outlined, with a summary completing the chapter.

1.1 Changing Conceptions of Giftedness and Talent

Giftedness is a label attributed to individuals of high ability, typically determined by criteria established via normative sociocultural interpretations of the construct in a time and place. It is a term that can be applied broadly to refer to individuals who demonstrate high ability across a wide range of domains, or, alternatively, applied narrowly, to refer to high ability in specific, localised domains (Kaufman & Sternberg, 2008). Conceptions of giftedness are variously interpreted by different sociocultural groups in particular settings, based on either explicit (researched) or implicit (personal) understandings of the construct (Miller, 2008).

During the 20th and into the 21st centuries there has been much interest in, and theorising about, the nature of giftedness and talent that has seen an evolution in thinking about its nature and effects. Early 20th-century domain-general models of intelligence like those
proposed by Binet and Simon (1916), Spearman (1927) and Terman (1916), considered that intelligence was predetermined and therefore able to be measured by an intelligence quotient (IQ), calculated by performance in tests of general ability. These tests were subsequently criticised as being socio-culturally biased and as favouring traditional academic forms of intelligence such as logical-mathematical or verbal-linguistic domains (Shuttleworth-Edwards et al., 2004). A second wave of domain-specific theorists that included Thurstone (1938), Horn and Cattell (1966), and Carroll (1993), followed on from these first-generation theorists, to highlight the different ways individuals could be gifted. Such understandings influenced the construction of later forms of intelligence tests such as the Stanford-Binet (5th edition). The idea of multidimensional aspects of intelligence led to the development of H. Gardner’s (1983, 1993) theory of multiple intelligences, which reconceives intelligence as the expression of ability to solve problems or create products as influenced by a particular cultural setting. However, this conception of intelligence is criticised for a lack of empirical research to validate the theory as a whole (Kauffman & Sternberg, 2008), and domain-specific models in general were critiqued as lacking consideration of individual psychological processes on expressions of giftedness.

A third evolution in thinking about giftedness gave rise to systems models, in which the nature and extent of giftedness was dependent on many different psychological variables acting together. Systems theorists included Renzulli (1978, 1986, 2005) and his Three Ring conception of giftedness, whereby above average ability (either domain-general or specific, placing the individual in the top 15–20%) combined with creativity and task commitment, interacted to provide evidence of giftedness. This was a radical departure from more traditional conceptions of giftedness where individuals needed to score in the top 3–5% in a domain (Kauffman & Sternberg, 2008). Renzulli (2005) argues that history shows that it is “the creative and productive individuals throughout time” (p. 256) who are now considered
truly gifted, rather than those who scored highly on IQ tests. However, Renzulli’s model has been criticised for a lack of research evidence and for including task commitment and creativity as primary considerations of giftedness, rather than as products of the talent-development process itself (Jarrell & Borland, 1990). Sternberg (2003, 2005) also proposed a systems model of giftedness, where wisdom, intelligence and creativity combine to affect the expression of talent in individuals. This occurs via a process of capitalising on strengths and compensating for weaknesses, in order to adapt to, and shape, the surrounding world. Sternberg’s model has also been criticised for, amongst other things, failing to provide a means by which to assess, or provide for, gifted individuals (Feldhusen, 2003). However, Kauffman and Sternberg (2008) note that these criticisms can be applied to many existing conceptions of giftedness.

Fourth-wave theorists embraced developmental models that emphasise the changing nature of gifts. Development of talents is considered as occurring in response to contextual factors, influenced by personal traits, to affect the expression of gifted behaviours. Gagné (1985) developed a differentiated model of giftedness and talent (DMGT) that made a definitive distinction between giftedness (the possession of outstanding natural abilities or aptitudes in at least one domain), and talent (outstanding mastery of systematically developed abilities or competencies, in at least one domain). According to Gagné, performance of ability in either field had to place an individual amongst the top 10% of their same-age peers. The DMGT (Gagné, 1985) recognised natural potential and catalytic factors that influenced an individual’s development of talent (T), and factored in the role of chance (C), recognised as a “qualifier” over natural ability (G), environmental influences (E), intrapersonal characteristics (I) and the developmental process (D). More recently, the DMGT has been revised to include “biological underpinnings” that recognise the effect of non-behavioural influences (such as neurophysiological and neurochemical structures and activities) on the
expansion and expression of an individual’s natural abilities and intrapersonal catalysts (Gagné, 2013; Luders, Narr, Thompson, & Toga, 2009). This “expanded model of talent development” (Gagné, 2013) directly references an individual’s genetic make-up and suggests how this might “code” for gifts and influence the developmental process (via E and I catalysts) to affect the development of talents. However, contextual catalysts such as the school environment, local curriculum and teacher pedagogical styles (A. Robinson, 2014) are still recognised as critical modifiers in the development of gifts to talents, irrespective of a biological basis for exceptionality.

Other developmental theorists, such as Tannenbaum (1986) and Feldman (1999), put forward their own developmental models that linked various personal and social factors considered to influence the expression of giftedness. Feldhusen (1998) attempts to synthesise various developmental models to expose the connections between heredity, the environment, and the expression of specific talents (Kaufman & Sternberg, 2008). In doing so, he notes the importance of personal attributes for developing giftedness and talent, including having an internal locus of control and possessing intrinsic motivation and a sense of self-efficacy (Feldhusen, 1998).

More recent conceptions of giftedness have evolved from, incorporate, and build upon, ideas from previous theories, with researchers currently favouring the influence of contextual over personal factors. The development and expression of gifted behaviours is thus considered as malleable by conditions found in the surrounding learning environment (Kaufman & Sternberg, 2008). However, there are still many areas of contention, especially regarding the influence of personality traits, the role of creativity, and, importantly, in the fundamental idea of conceptualising giftedness in terms of either individual potential or as achievement (Kaufman & Sternberg, 2008). Lovecky (2004), for example, suggests that even though early advancement in a domain is often a predictor of giftedness, more average achievement is not
necessarily indicative of a lack of exceptional ability because performance is dependent on many elements, including context and time (Renzulli & D’Souza, 2014). Indeed, failure to demonstrate advanced traits may be indicative of a reflective child or of 2E characteristics associated with difficulties in expressing ideas, rather than lack of giftedness or talent (Lovecky, 2004).

The conception of giftedness adopted by a society, school or individual has implications for the education sector and the process of schooling (Miller, 2008). Every conception infers different methods and practices of identification and provision for those deemed gifted. Those favouring developmental models, for example, highlight the changing nature of giftedness in response to environmental influences, and argue for assessment as an ongoing process utilising a variety of formats at different stages of an individual’s schooling. However, many schools continue to favour domain-general measures of intelligence (a score on an IQ or ability test) as they are easy to administer, valid for what they set out to measure, readily available, match the format of the gifted programmes available, and are therefore justifiable to the general public (Kaufman & Sternberg, 2008). This presents challenges to modern theorists who are tasked with advancing more complex multidimensional conceptions of giftedness in schools, that emphasise the identification and nurturing of specific rather than general abilities. Kaufman and Sternberg (2008) suggest that any adopted model should employ multiple methods of assessment, take into account personal attributes such as motivation, creativity, wisdom, resilience and initiative, and consider the effects of contextual factors such as socialisation and cultural capital.

1.2 Definitions of Giftedness and Talent

Underpinning the difficulties in conceptualising giftedness is the problem of defining the term in the first instance. An articulated evidence-based definition of giftedness is important
for educational practice as it guides identification, evaluation and programming at the state and school levels via its inferred meaning (Sternberg, Jarvin, & Grigorenko, 2011). However, as there is no internationally agreed-upon definition of giftedness, developing valid and reliable methods of assessment on which to base the identification of neurophysiological differences (neurodiversities) in individuals/groups is challenging (Coleman, Gallagher, & Job, 2012; Missett & McCormick, 2014). Most international research studies conceptualise giftedness as being associated with individuals who score at or above 120 points on IQ tests such as the Wechsler Intelligence Scales for Children–4th Edition (WISC-IV) or the Stanford-Binet Intelligence Scales (Assouline, Foley-Nicpon, & Dockery, 2012; Foley-Nicpon, Assouline, & Stinson, 2012; Huber, 2007; Nielsen, 2002). This IQ-based definition has, however, been criticised for its focus on early understandings of domain-general academic intelligence. Such understandings typically fail to identify individuals with gifts and talents in creative or practical domain(s), those from minority cultures, rural communities, socio-economically disadvantaged groups, or those who are 2E (Missett & McCormick, 2014). Due to these acknowledged limitations, an alternative definition promoted by the National Association for Gifted Children (NAGC) will be used in this thesis. NAGC (2011) considers giftedness as belonging to individuals:

who demonstrate outstanding levels of aptitude (defined as an exceptional ability to reason and learn) or competence (documented performance or achievement in the top 10% or rarer) in one or more domains. Domains include any structured area of activity with its own symbol system (e.g., mathematics, music, language) and/or set of sensorimotor skills (e.g., painting, dance, sports).

The development of ability or talent is a lifelong process. It can be evident in young children as exceptional performance on tests and/or other measures of ability or as a rapid rate of learning, compared to other students of the same age, or in actual
achievement in a domain. As individuals mature through childhood to adolescence, however, achievement and high levels of motivation in the domain become the primary characteristics of their giftedness. Various factors can either enhance or inhibit the development and expression of abilities. (paras 1–2)

Reflecting upon this definition and on the developmental conceptions discussed above, the term gifted will be used in this thesis to refer to the possession of potential to perform highly in one or more domains when compared with same-aged peers, whereas talent will refer to actual performance (Gagné, 1985; Renzulli, 1986, 2005). Performance requires interaction between an individual’s thoughts and actions to demonstrate skill, commitment and creativity toward an endeavour (Renzulli, 2005). Individuals who are gifted therefore require differentiation of educational opportunities, resources, and support, to be able to express talented behaviours. Whilst this definition is inclusive, as it allows for multiple domains of intelligence to be recognised, it is also centred on exceptionality in one or more areas so as not to become so broad that it becomes unmanageable. This consideration aligns with concerns of NZ researchers such as Moltzen (2004, 2011) and Tapper (2012, 2014) who argue against too general a definition, as this works against the principle of equitable provision for gifted and talented students in respect of their advanced cognitive abilities.

1.3 Giftedness and the New Zealand School System

The MoE (2008) promotes giftedness and talent as being multidimensional but does not provide a national definition. Understandings about giftedness in NZ are further restrained by the limited (but increasing) research conducted within the country (Tapper, 2012). This is important because, as Meuli (2006) points out, what a society believes giftedness and talent to be, ultimately determines what individuals are alert to look out for. McAlpine (2004) similarly argues that the parameters of giftedness are built on our understandings of what
giftedness is and are central in determining who is identified and what programmes will be developed to cater for specific learning requirements. In 2008, the Education Review Office (ERO) found that only 5% of NZ schools were using “highly inclusive and appropriate” conceptualisations of giftedness and talent (ERO, 2008a, p. 17) indicating that there is still confusion in defining the terms. Tapper (2012) suggests that NZ schools may still be favouring an essentialist (measurable performance) rather than developmentalist (changing potential) approach for identification purposes.

Inclusivity is the standard educational approach to catering for all students in NZ schools, including those with learning exceptionalities. However, there is currently no universally agreed-upon definition of inclusive education, although it is a concept alluded to in education policies (Dunne, 2009; Norwich, 2000). As a philosophical approach, inclusivity responds to and celebrates individual differences regardless of cultural or religious affiliation, academic ability or socioeconomic status (Bevan-Brown, 2006; Kearney et al., 2008; Montgomery, 2006). It requires educators cater for a diverse array of learner dissimilarities by using a variety of teaching and learning strategies to increase participation in, and avoid exclusion from, educational opportunities (Banks, 2008). Whilst, initially, inclusivity was proposed as a counter-reaction to historical exclusionary practices that saw children segregated from mainstream schools based on (dis)ability, current interpretations of practice are contested (Selvaraj, 2016) but favour accommodation of diversity by recognising that different student groups require differentiated learning opportunities (Kearney et al., 2008). However, as there are varying understandings about what inclusive education actually means conceptually and in practice (Hegarty, 2001), for many 2E students this theoretical ideal is currently not matched to classroom experiences.

Inclusive education as a policy objective seeks to address issues of social justice in respect of marginalised groups, including those with special-education needs, to help them to reach
their full potential (Selvaraj, 2016). Research contracted by the MoE and conducted by Riley, Bevan-Brown, Bicknell, Carroll-Lind, and Kearney (2004) found that whilst there was increased awareness of the need to identify and provide for gifted and talented individuals through programmes of professional learning and development, limited funding, resources and support meant that curriculum delivery was still highly reliant on individual teachers or small teams within schools who were knowledgeable about, and committed to, providing for gifted students. Specifically, the research notes that limited resources needed for identification and provision potentially excluded underrepresented groups within the gifted and talented student population (Riley et al., 2004). Subsequently, there was a change to the MoE (2007) National Administrative Guideline (NAG) 1(c) iii, to specifically include gifted and talented students under special-needs groups, and targeted professional learning and development was made available (MoE, 2008, 2012; Riley & Moltzen, 2010). ERO (2008a, 2008b) also released reports summarising what it considered “best practice” for schools, to help guide the future design of programmes for students with high ability. Unfortunately, since 2008, there has been a noticeable decline in funding and support for gifted and talented programmes in NZ (Riley & Bicknell, 2013). However, in 2017 the NZ government signalled an intention to address these issues as an education priority.

1.4 Twice-Exceptional Students: Defining Characteristics

Twice-exceptional students are a heterogeneous group within the wider school population. They possess gifts and talents that coexist with learning difficulties (often categorised as socio-emotional/behavioural and/or specific learning disorders and/or physical impairments), that combine to influence the acquisition and processing of information (Trail, 2011). For clarity within this thesis, the National Twice-Exceptional Community of Practice (2014) agreed-upon definition will be used; it states:
Twice-exceptional individuals evidence exceptional ability and disability, which results in a unique set of circumstances. Their exceptional ability may dominate, hiding their disability; their disability may dominate, hiding their exceptional ability; each may mask the other so that neither is recognized or addressed. 2e students, who may perform below, at, or above grade level, require the following:

- Specialized methods of identification that considers the possible interaction of the exceptionalities,
- Enriched/advanced educational opportunities that develop the child’s interests, gifts, and talents while also meeting the child’s learning needs,
- Simultaneous supports that ensure the child’s academic success and socio-emotional well-being, such as accommodations, therapeutic interventions, and specialised instruction. (cited in Baldwin, Baum, Pereles, & Hughes, 2015, pp. 212–213)

Furthermore, the National Twice-Exceptional Community of Practice suggests that “working successfully with this unique population requires specialized academic training and ongoing professional development” (p. 213).

Twice-exceptionality arises because specific neurophysiological differences impact upon the cognitive, metacognitive and affective learning pathways to influence individual achievement (Stewart, 2003). The complex interplay between the domains of exceptionality make the detection and evaluation of areas of giftedness and learning impairment challenging, as one may mask expression of the other, complicating accurate assessment and appropriate provision (Hendrickx, 2010; Reis et al., 2014). Comprehensive screening by experts is therefore recommended to assist with accurately determining the nature and extent of the dual exceptionalities (Assouline et al., 2010; Foley-Nicpon, Allmon, Sieck, & Stinson, 2011; Neihart, 2008; Reis et al., 2014).
Differences in basic sensori-motor processes typically limit the ability of 2E individuals to achieve to a level commensurate with their actual ability. This places them at risk of underachievement at school, negatively affecting their self-efficacy as learners (Assouline et al., 2010; Dole, 2000; Kalbfleisch, 2009, 2014). The literature classifies and distinguishes gifted students with learning difficulties in different ways; however, there are some characteristics common to 2E individuals. These include learning weaknesses affecting domains such as literacy and/or mathematics, difficulties with performance in timed tests, poor organisational and personal management skills, difficulty with fine motor control, lack of focus and self-control, and poor social interactions with peers and/or adults (Kalbfleisch, 2014; Stewart, 2003). In respect of learning strengths, 2E learners can exhibit high scores in vocabulary, block design, and/or abstract and spatial reasoning in IQ tests; possess an intense focus and knowledge about subjects of interest; are often creative, divergent thinkers with active imaginations; and can demonstrate excellent visual memories and possess a sophisticated sense of humour (Stewart, 2003).

Typically, cognitive weaknesses affect overall intellectual performance, especially in timed tests where both the level of accuracy and the quality of the work produced detracts from assessing the actual level of knowledge of 2E students. For example, dyslexic students may limit themselves, as a compensatory strategy, to basic word selection, sentence structure and punctuation in tests or assignments, so they can confidently spell and format their written text (Montgomery, 2003). This impacts upon performance as the complexity of learning tasks increase with progression through the school system. Metacognitive weaknesses such as those affecting organisational skills, concentration, goal setting or study planning also impact upon work production, meaning 2E individuals are often behind with their schoolwork (Lovecky, 2004; Stewart, 2003). Negativity toward academic endeavours can result from the totality of the school experience that leaves 2E students frustrated and confused by their
apparent inability to produce work commensurate with their intellectual ability. Defensive responses such as criticism of teachers and/or the school, and disruptive behaviours whilst in class, can lead to visits to senior school management for disciplinary infractions, further undermining the individual’s self-esteem and self-efficacy. Consequently, 2E students are often considered eccentric, idiosyncratic or socio-emotionally debilitated in their approach to their studies. Thus, it is often easier to exclude rather than include them. Unfortunately, this approach may set such students on a pathway more likely to end in academic failure than success, unless appropriate personalised interventions are planned and enacted in the school setting.

One of the defining traits of twice-exceptionality is asynchrony (L. Silverman, 2013). All gifted students, especially those who are 2E, are asynchronous in some way. This means that different domains of functioning develop at different rates in relation to one another (Lovecky, 2004). For example, what a young gifted student can conceptualise about topics such as politics or death, may not be what they can comprehend socio-emotionally. This means that the quality of their responses may be quite different to older students, even though they show good cognitive understanding of advanced ideas (L. Silverman, 2013). Teachers, counsellors and parents/caregivers need to be aware of the concept and characteristics of asynchrony, especially when gifted students demonstrate disparity between developing cognitive, academic and socio-emotional/behavioural skills. Adults should be alert to the fact that gifted students’ lived experiences are often qualitatively different to those of same-aged non-gifted peers, which can impact upon their achievements (Lovecky, 2004; Trail, 2011).

1.5 Twice-Exceptionality and Conceptions of Underachievement

Underachievement is a complex phenomenon influenced by factors including cultural context, parental expectations, individual learning differences and the nature of the
educational opportunities available to students. Statistics show that half of all gifted and talented students underachieve in school (Reis & McCoach, 2000, 2002), with 2E students accepted as being an especially at-risk group (Assouline et al., 2010; Reis et al., 2014; Kalbfleisch, 2009, 2014; Siegle, 2012). Defining educational underachievement is a contentious issue and, as for giftedness, no internationally agreed-upon definition exists. However, it is most commonly considered a discrepancy between a student’s capability and their realised achievement in a learning domain (B. Clark, 2002; Reis & McCoach, 2000). This definition presents challenges in concisely determining what is meant by ability and potential in order to establish parameters for the identification of students most at risk of underachievement. The process of identifying underachievement is further complicated when individuals possess a combination of learning exceptionalities (such as gifts and learning difficulties) that interact in complex ways to affect achievement, positioning them outside of social norms. Given that realisation of personal capabilities depends on an individual being able to recognise and then capitalise on their learning strengths, 2E individuals are at risk of underachievement if society places no value or obligation on a community to make provision for learning diversities. In addition, if judgement of underachievement is being made by an outside observer, then the observer cannot help but be personally influenced by sociocultural expectations of what it means to successfully achieve in the first instance (Reis & McCoach, 2000). This further complicates the phenomenon in marginalised groups.

The consequences of being judged as an underachiever are far-reaching, ranging from immediate negative coping or disruptive behaviours at home and/or school, problems with engagement in learning as a process, and poor academic self-efficacy, to longer term issues with motivation to achieve that influence future life opportunities (Cathcart, 2005; Sturgess, 2011). Such consequences could arguably be considered more significant for gifted students
with learning difficulties, who possess high cognitive ability but are often unable to demonstrate their capabilities in schooling contexts.

1.6 Mediating Factors on Expressions of Achievement

The influence of mediating factors on the expression of achievement in part determines the provision of opportunities needed to develop gifts into talents. Mediating factors can be individually and/or contextually derived. Individual mediating factors, such as difficulties with attention or social relationships, will be discussed in Section 1.8. Contextual factors may be local or global in influence. For instance, with respect to global influences, gifted girls are still affected by social discourse that often values women’s achievements as less than that of their male counterparts (Lovecky, 2004). This means that they are often not identified or put forward for inclusion in gifted programmes, placing them at greater risk of underachievement (Bianco, Harris, Garrison-Wade, & Leech, 2011; Heller, 2013).

With respect to contextual factors at the local level, parents/caregivers often become aware of the gifted traits of their children when they enter preschool or primary school, as differences become more obvious in the larger peer-group setting. Identifying characteristics typically include early walking and talking, advanced reasoning and complexity in thinking, and greater curiosity, creativity and perseverance in investigating concepts (Lovecky, 2004; L. Silverman, 2013). Gifted children also often demonstrate greater emotional sensitivity and intensity, as well as strong perfectionist tendencies and metacognitive awareness, which can make them more vulnerable in terms of their social and personal well-being (Wormald & Vialle, 2011). Some of the current literature in the field of gifted education ignores or negates the effects of these traits, which are often found to be heightened in 2E individuals meaning that they may be overlooked for enrichment opportunities. This is because 2E students do not fit the stereotypical model of what it is to be gifted that permeates school definitions,
identification systems and access to gifted programmes (Montgomery, 2003). Consequently, teachers and parents/caregivers may be unaware of the capabilities of 2E children (Trail, 2011), which impacts upon their selection and placement in specialised learning programmes (Bloom, 1985; Huber, 2007).

Subsequently, some parents/caregivers report that their 2E children begin to lose their passion for learning as it becomes something expected, rather than to be enjoyed. As the schooling years progress, learning becomes increasingly prescribed by the need to pass assessments, which dictates content as well as the processes and products of learning. Lack of appropriate provision for dual exceptionalities can result in disengagement, or in externalised disruptive behaviours (Trail, 2011). This can have serious consequences for the socio-emotional, cognitive and academic development of 2E individuals, as it impacts upon realised achievements (Lovecky, 2004; Newman, 2004; Yssel, Prater, & Smith, 2010). Heightened asynchrony in performance between these three different domains of functioning further complicates the issue. Provision of alternative outlets for the expression of learning strengths is needed if 2E students are to thrive, rather than just survive the school system.

Differentiating teaching–learning experiences to meet individual diverse needs would facilitate the development of the capabilities of all students, to help address these concerns.

1.7 Twice-Exceptional Student-Learning Differences

All gifted children demonstrate advanced abstract reasoning ability that leads to the formation of new concepts in different learning domains (Lovecky, 2004). Most gifted students also exhibit an ability to pose complex questions about topics, to help them advance their understandings, when compared with non-gifted peers. In addition, neurodiverse individuals may display different degrees of abstraction depending on the task, their motivation, and mood, representing a form of learning asynchrony (L. Silverman, 2013).
Teachers and parents should therefore be aware of learning differences before forming opinions about a child’s cognitive abilities (Assouline et al., 2010). In 2E individuals, such differences are centred upon the nature and extent of the combination of gifts and talents that occur alongside learning impairments. Learning impairments include differences in executive functioning, socio-emotional understandings, and social relationships. Each of these factors will now be considered.

**1.7.1 Difficulties in executive functioning.**

Whilst gifted students in general do well academically, 2E individuals tend to struggle with aspects of schooling, which can be in part be due to deficits in executive functioning (Trail, 2011). Executive functions are important to learning as they direct attention and effort, engage working memory, promote internalisation of speech and sequence activities involved with the holistic performance of a task (Lovecky, 2004). The resultant problems with focusing on, or getting distracted by, aspects of an activity; listening comprehension and recall of information to direct tasks; prioritising and timing activities; and the application of rules to direct behaviour, impact upon work quality and production. Difficulties with planning, correction, problem solving and goal setting to self-direct and critique learning activities also affect academic achievements (Trail, 2011). Procrastination, lack of effort, or loss of interest, impedes success, as does difficulty in understanding the development of ideas into a whole, especially in written work.

The ability to attend to a situation is influenced by an individual’s capacity to organise, focus and sustain interest, whilst concentrating and avoiding distractions. It involves management of emotions and an ability to engage, attend to, and use working memory to acquire and process new information (Lovecky, 2004). Many 2E students, including those with specific learning difficulties (SLD) such as dyslexia, dyspraxia, and/or dyscalculia, attention deficit/hyperactivity disorder (AD/HD) and autistic spectrum disorder (ASD), have difficulty
directing and sustaining attention to a task, these difficulties being context and time sensitive. A study by Berninger and Abbott (2013) found that gifted-SLD (dyslexia) students have difficulties with working memory, writing and supervisory attention (involving measures of focusing, switching, sustaining and self-monitoring), affecting the quality and quantity of work produced. Individuals with AD/HD also have trouble organising, processing and producing information, leading to problems with academic and socio-emotional functioning, including complying with the cognitive, interpersonal and organisational demands of school (Lovecky, 2004). Gifted individuals with ASD characteristically exhibit narrow fields of interest that may be developed into talents (Webb et al., 2005). However, their problems with executive functioning can result in a lack of mental flexibility affecting speed and accuracy in problem solving, as well as difficulties in attending to, planning, organising and executing tasks (Wade & Reeve, 2014). Additionally, the social impairments and repetitive behaviours (including restricted interests) associated with ASD can result in problems with relationships in the school context (American Psychiatric Association, 2013).

1.7.2 Creative differences.
Creativity, or the innovation of original ideas, has been studied extensively by Torrance (1974) who created the Torrance Tests of Creative Thinking as a measure of an individual’s divergent thinking ability, mental flexibility, and originality of, and elaboration on, ideas. Gifted individuals are often creative within their realm of interest(s), which can see novel processes or products being developed in reflection of specific skills and talents, and in particular contexts. As such, creativity is a key element of many constructs of giftedness and talent (Renzulli, 1978, Sternberg, 1985). However, asynchrony can occur when the gifted student is unable to reconcile creative thoughts with their current skill level to express/perform a novel idea as a tangible product, resulting in frustration (Lovecky, 2004; Nielsen & Higgins, 2005).
Highly creative individuals are often non-conformers, meaning that they typically complete work that interests them in their own time and at their own pace. Consequently, they may miss out on being considered for enrichment programmes as they do not fit stereotypical conceptions of what a gifted and talented individual should be (Davis & Rimm, 2004; Trail, 2011). For example, some gifted students with AD/HD possess characteristics that favour high creativity, including flexible, divergent, and/or visual-spatial thinking, alongside impulsivity and the ability to hyper-focus, meaning that they are less conformist and more imaginative in the way they consider ideas (Lovecky, 2004). Similarly, gifted individuals with ASD can also be highly creative with respect to innovation of new products from existing ones, with many advances in the fields of science and technology attributed to their unique worldviews (Attwood, 2007). However, social pressures in settings such as schools may act to discourage such creativity from being expressed, stifling originality and individualism.

1.7.3 Socio-emotional/behavioural differences.

Socio-emotional differences include the ability to accurately perceive, appraise, regulate and express feelings and emotions in reflection of intra- and interpersonal characteristics and experiences (Lovecky, 2004). Executive functions are involved in the regulation of these complex actions, which can be problematic for gifted students with socio-emotional/behavioural difficulties (Assouline et al., 2010; Wade & Reeve, 2014). Conversely, some 2E individuals are gifted socio-emotionally and have heightened awareness of their thoughts, often displaying great empathy and compassion towards others. Such individuals can also demonstrate advanced understanding of philosophical ethical concepts such as justice, fairness, and honesty (Lovecky, 2004).

Emotional asynchrony can arise when gifted students demonstrate differences in their readiness to engage with issues cognitively and affectively (L. Silverman, 2013). For
example, gifted students with AD/HD and/or ASD are more varied in their emotional responses and may struggle in their development of socio-emotional intelligence because of difficulties with understanding feelings, reading social cues, and in selecting and modulating appropriate behaviours (Attwood, 2005, 2007). Research by Assouline et al. (2010) shows that gifted students with SLD can also have socio-emotional/behavioural difficulties that require individualised interventions. In this respect, emotional asynchrony is important to consider when planning education programmes such as acceleration of a 2E student, as emotional reactivity and lack of resilience (Luthar, Sawyer, & Brown, 2006; Werner, 2000) may impact upon successful achievement. Some 2E students may need help in developing self-regulatory behaviours (including tolerance and regulation of impulsivity) to improve emotional intelligence, so that they become more aware of how actions contribute to outcomes (Lovecky, 2004). A study by Dole (2001) found that gifted college students with SLD could develop positive identity formation via self-advocacy and self-determination if assisted. Teacher awareness of the socio-emotional/behavioural characteristics of 2E individuals is critical to understanding how they think, feel and learn in the classroom, so that conditions for academic success can be optimised.

### 1.7.4 Differences in social relationships.

Some 2E individuals can be acutely aware of their neuro-complexities as they impede social connectedness and the formation of meaningful relationships (Nielsen & Higgins, 2005). For example, gifted individuals with AD/HD can have difficulties with social interactions, as they often appear less emotionally mature and may display annoying behaviours that include initiating inappropriate interpersonal contact (Moon & Reis, 2004). Many of these students experience challenges in sustaining relationships, as they tend to overreact to situations, leading to social isolation or rejection (Lovecky, 2004). Gifted students with ASD can also appear less mature than same-age peers, displaying inappropriate behaviours and a lack of
understanding of social rules of reciprocation (Neihart, 2008). Some 2E students therefore face challenges in forging meaningful social connections, especially with respect to prosocial skills and perspective-taking, which impact upon interpersonal interactions.

Establishing and sustaining relationships with same-age peers can be difficult for many 2E students. This is because conforming to peer-group expectations necessitates giving up some aspect of themselves—the dilemma of fitting in (Lovecky, 2004). Whilst neurotypically gifted students can usually adjust to social expectations and be accepted, 2E students often cannot (Trail, 2011). The added challenge of negotiating relationships can mean they abandon academics in favour of pursuing social connections with more average, less demanding peers. As a result, they may underachieve for their potential, which can have life-long consequences, especially in respect of the negotiation of positive identity, perceptions of capability and the development of personal well-being. Variation in personal factors, such as the degree of intro- or extroversion, and contextual factors, such as experiences of bullying, also influence a 2E student’s capability to make and sustain meaningful relationships in the education setting.

1.8 Identity, Capability and Well-Being

Identity development is a dynamic process that influences how individuals perceive, and are simultaneously perceived by, others. Identity can be viewed as either a singular (I am) or collective (we are) construct (Schwartz, Donnellan, Ravert, Luyckx, & Zamboanga, 2012). The process of identity development helps to prepare individuals for active participation in adult society. Identity as a concept is contested in the literature; however, social-cognitive and sociological perspectives (Bandura, 1986, 1999; Tajfel, 1978; Tajfel & Turner, 1979; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) argue for the idea of individuals having simultaneous multiple identities that flexibly integrate to help define the self. Someone can,
for example, be female or male, of a specific ethnic profile and/or religious denomination and
operate at a level of ability based on personal attributes, all of which interact to help
determine capability and well-being relative to a setting.

Identity negotiation involves individuals questioning their purpose in life alongside their
ways of being and doing, which highlights similarities and differences to others. This
questioning is most prominent during the stages of adolescence and young adulthood due to
the onset of formal operational thought and the development of abstract thinking capacity,
when individuals start to ponder what they would like their lives to be (Erikson, 1968;
Marcia, 1980; Schwartz, Klimstra, Luyckx, Hale, & Meeus, 2012). As most careers now
require certification as a prerequisite for employment (Schwartz et al., 2012), education is the
main means of access to the workplace. This requires young people to stay in some form of
education for much longer than ever before, presenting challenges for those who do not “fit”
current schooling arrangements due to their unique learning diversities.

Identity is shaped by both intrapersonal factors, such as temperament and ability (Goldberg,
1990), and wider contextual factors, including sociocultural/political circumstances (Dole,
2001; Schwartz et al., 2012). As children age, they become increasingly independent; this
allows freedom of exploration in development of identity, mediated by dispositional
attributes such as emotional reactivity, approach to the social world, and degree of self-
control (McAdams & Olson, 2010). Individuals naturally seek out compatible social contexts
that promote consistency with their core personal dispositions as this promotes predictability
(Schwartz et al., 2012). These core dispositions also shape, in a reciprocal way, individual
perceptions of how social contexts influence identity development. Motivational constructs,
including personal cognitive-affective schemas, underpin identity development and reveal
characteristic traits of individuals (McAdams & Olson, 2010). McAdams and Olson (2010)
argue that overlaying the core dispositions and motivational constructs is the concept of the
narrative, which uniquely grounds individuals in a sociocultural context to provide cohesion and a sense of purpose to a life. The ability of individuals to construct a coherent identity narrative serves as a measure of the development of identity and is consistent with Erikson’s (1968) theory of identity synthesis.

Erikson (1968) argues that identity development is a self-directed process where individuals “transact with (i.e., purposefully act within the constraints of) the social environment if he or she is to create an identity that is strong and synthesised, yet flexible enough to respond to the rapidly changing nature of post-industrial society” (cited in Schwartz et al., 2012, p. 348). To achieve this, individuals must have a sense of agency, which Côté and Levine (2002) refer to as including personality characteristics incorporating self-esteem, life purpose, an internal locus of control, ego strength and resilience. Identity is negotiated through personal agency, with those possessing this attribute more able to adapt to changing demands, and therefore having greater success in attaining valued goals. In contrast, those who lack agency, and do not have a strong sense of who they are and what they can be (their developed identity), can experience frustration and may find life challenging, confusing, and at times distressing (Arnett, 2007).

In considering the process of identity negotiation, Marcia (1980), in extending Erikson’s (1968) dimensions of exploration and commitment in identity development, proposes four negotiated identity statuses: achievement (commitment following exploration of alternatives), moratorium (exploration with no firm commitment), foreclosure (commitment without extensive exploration) and diffusion (general apathy toward addressing identity issues). Each status has been associated with individual attributes that help determine personal outcomes and well-being. Achievement as an identity status has been linked to balanced thinking by Krettenauer (2005), and to successful interpersonal relationships by Beyers and Seiffge-Krenke (2010). Moratorium as a status has been associated with openness to experience by
Luyckx, Gooseens, Soenens, Beyers and Vansteenkiste (2005), but to low self-worth in research by Schwartz, Zamboanga, Weisskirch, and Rodriguez (2009). Marcia (1967) links the identity status of foreclosure to rigidity, however, Schwartz, Luyckx, and Vignoles (2011) also link it to high self-esteem and well-being, while Luyckx et al.’s (2005) research on identity diffusion associates it with poor life outcomes overall. Thus, the development of identity has important implications for capability and well-being.

Contextual factors mediate identity development. Sociocultural/political factors place constraints on individuals in the exercise of freedoms, which can include limitation of rights and discriminatory practices (Dole, 2001). Development of strong personal agency may overcome barriers in some cases; however, future life opportunities are limited for those who do not develop agentic selves and therefore lack capacity to challenge such constraints (Schwartz et al., 2012). In this regard, an individual’s social group identity is acknowledged as being influential in the development of personal identity and agency (Sam & Berry, 2010; Schwartz et al., 2010). Formulation of a social group identity links principles from Erikson’s theory of identity development (specifically, exploration) and Tajfel and Turner’s (1979) social identity theory (with respect to affirmation and belonging to in-groups or out-groups based upon social categorisation, identification and comparison), to explain how individuals from minority groups come to understand themselves in reflection of the society that they live in (Schwartz et al., 2012).

With respect to the development of a sociocultural group identity, researchers such as L. Strauss and Cross (2005) and Webber (2011) refer to five interrelated competencies. These identity competencies can be used to deal with the often-conflicting demands of differing social contexts. The first competency, buffering, refers to management of discriminatory encounters; the second, code-switching, to fluid movements in and out of mainstream cultural contexts; the third, bridging, to establishment and maintenance of social relationships.
between different social groups; the fourth, bonding, to experiences that determine affiliations to a group; and the fifth, individuality, to the sustenance of personal identity and related interests outside of differences, that define the minority group (L. Strauss & Cross, 2005). An individual’s identity development is therefore recognised as being influenced by a personal awareness of wider sociocultural/political forces, that can act to reinforce discriminatory practices, and reproduce stigmatising beliefs about minority groups in a society.

The five competencies are useful to consider in the negotiation of a 2E-student identity, as individuals with dual exceptionalities wear different identifying “hats” depending on the social context they are in. For example, in areas of learning strength not impacted by learning impairments, 2E students typically achieve highly, and may identify and socialise with others of high ability. However, in domains of learning difficulty, they typically struggle, often resulting in placement with others of low ability. Such differences are reinforced by the nature of surrounding contextual conditions, including schooling arrangements, that can result in difficulties in developing social networks/relationships in reflection of uneven learning profiles. Difficulties in locating and forging affiliation to a social group that welcomes individuals with dual exceptionalities may frustrate and confuse 2E individuals not supported to understand their unique learning differences.

Individual dual-learning exceptionalities may, therefore, present identity challenges in addition to those normally experienced by other children and adolescents. Such challenges could be heightened in relation to the context of a school system that currently appears to largely fail to adequately cater for 2E students’ complex learning needs. One example of this might be seen in situations where conditions in a school act to reinforce stereotypical beliefs about 2E individuals as having learning difficulties, rather than highlighting learning strengths. Such beliefs could result in a 2E student’s placement in a low-ability class,
precluding development of individual gifts into talents, and, thereby, their full participation in society. In this scenario, the student’s failure to thrive as a result of the class placement reinforces the low-ability social stereotype, despite the fact the student is gifted in one or more domains. Deficit-thinking thus produces a cycle of events that reproduces marginalising practices that initially arise from a lack of recognition of complex learning needs (Dole, 2001; Schwartz et al., 2012). Current difficulties in conceptualising learning differences can, therefore, constrain 2E individuals in their ability to realise their true potential. Constructions of different groups by a society may, consequently, act to reproduce and reinforce the social status quo, requiring transformational change in fundamental ideologies, and conceptions of difference, to promote equity and attend to matters of social justice for all members of a society.

1.9 Special-Education Needs in the New Zealand Context

Students with special-education needs (including gifted and talented individuals) require access to additional services and resources to enable them to learn and achieve to their potential in the classroom. The Success for All document (MoE, 2014), recently incorporated within National Education and Learning Priorities 2018 (MoE, 2017), promotes valuing all students, respect for diversity, and equity for all, to help equip New Zealanders with the knowledge, skills and values to be successful 21st-century citizens. It cites the 1989 Education Act (Part 8, 1) and NAG 1 (c) iii, which includes gifted and talented students under students with special needs, alongside the Human Rights Act (1993), in its promotion of inclusive practice for students with special needs in NZ schools. The wording of Success for All (MoE, 2014) implies a focus on social imperatives, including addressing issues of social justice in educational opportunity for all individuals. It promotes the use of inclusive practices, the personalisation of learning experiences for students with special needs, and equality in access to available resources; encourages home–school partnerships, and cultural
sensitivity; and promises a seamless education process. However, these values and principles are not reflected in reality for many 2E students in NZ schools, resulting in them currently underachieving when compared with their considerable potential (Bourne, 2005; Ng, Hill, & Rawlinson, 2016).

1.10 Special-Education Needs Labels

Assigning a label of gifted and/or learning (dis)abled to individuals has many ramifications. These include developmental, psychological and sociological effects on individual identity development and well-being. Labelling is, therefore, a contentious issue, often vigorously contested in education literature (Bianco, 2005; Bianco & Leech, 2010; J. Gallagher, 1972; Missett, Azano, Callahan, & Landrum, 2016). Labels are convenient in that they help direct educators in providing for the identified needs of a child as defined by current understandings of the assigned term. They can assist with effective communication and in providing a shared language with which to discuss and/or design social policy or provision. Labels are, therefore, symbolic, having attached to them meanings, assigned by society, that can be perceived as desirable or undesirable depending on a time and context (Lo, 2014). As a consequence, they may also be viewed with scepticism and mistrust by members of the public. This is because labels can act to stereotype and/or stigmatise individuals or groups, and many people therefore resist their use. For example, research has found that some parents/caregivers of gifted children prefer not to use the term gifted when discussing their child’s achievements with others not labelled as such, whilst those who do use the term frame discussions in respect of the need to educate others (Matthews, Ritchotte, & Jolly, 2014). A seminal study by J. Gallagher (1972) argues that the process of assigning labels has social implications that can be damaging to a child’s individuality, impacting upon personal perceptions of capability. J. Gallagher therefore believes that it is the social connotations associated with a label, rather than the label itself, that is harmful. In this regard, Dole (2001)
stresses the importance of individual agency, with self-awareness of the meaning of labels being imperative for psychological well-being.

Lo’s (2014) grounded theory study of the effect of labelling practices on 2E students found that individuals construct an implicit theory of their dual labels structured upon the “social context that carries an explicit theory about, and educational policies related to, the labels” (p. 286). The study findings show that an individual’s behaviour is affected by the 2E label, however this is not a consistent response, being connected to a sense of personal agency. Lo considers “the more an individual knows about him- or her-self, the more likely positive adjustments in behaviour will occur” (p. 287), including the use of goal setting, development of coping strategies, and self-discovery, that help develop a sense of capability, including realisation of learning strengths and weaknesses. This process is mediated by what Lo identifies as personal factors (including ability, prior knowledge and sensitivity to social norms) and access to supportive contextual networks, including immediate (e.g., teacher), proximal (e.g., school) and distal (e.g., sociocultural) factors. The consequences of assigning a label of twice-exceptional is thus determined by Lo to be multi-various, and could include: a sense of closure, which is more profound if the diagnosis of dual exceptionalities occurs later rather than earlier; identity redemption upon discovery of dual exceptionality; or denial of one or both of the labels.

The Pygmalion effect, where the expectations of others in response to assigned labels affect an individual’s behaviour, has been demonstrated in the school context, where teacher perceptions of student ability influence performance in a self-fulfilling prophecy (Matthew et al., 2014). Given that gifted students with learning difficulties are underrepresented in gifted programmes (Davis, Rimm, & Siegle, 2011), in part due to stereotypic teacher perceptions of the nature and incidence of giftedness, which influences willingness to refer those with dual exceptionalities for such programmes (Bianco, 2005), this effect is important. Research has
shown that the lack of willingness to refer 2E individuals arises from lowered teacher expectations of those with a coexistent (dis)abled label (Bianco, 2005; Bianco & Leech, 2010; Missett et al., 2016). The designation of labels, therefore, needs to be carefully considered, as the implications these have for students can be long-standing. Davis et al. (2011) state that the role of the special-education teacher is critical, in that they act as gatekeepers to accessing enriched learning opportunities that might otherwise be negated due to teacher bias or lack of understanding.

Other labelling theories (such as that proposed by Guskin, Okolo, Zimmerman, & Peng, 1986) argue that those identified as gifted may come to view themselves as different to non-gifted others, resulting in various behaviours including elitism or perfectionism, that may not have arisen if they were not considered as such (Matthew et al., 2014). Additionally, the gifted label has been used in the public arena to argue for non-provision, based on the erroneous assumption that “high-ability students do not face problems and challenges” (Moon, 2009, p. 247) that they cannot solve on their own (Matthews et al., 2014). This infers an air of ambivalence towards those considered gifted (McCoach & Siegle, 2003, 2007). As a consequence, some researchers now argue for replacement of the term gifted with the phrase “advanced academics” in reflection of the need to address provision, rather than label individuals (Peters, Matthews, McBee, & McCoach, 2014). However, regardless of the connotations and associated difficulties, labels are currently used to facilitate communication, access funding, and distribute learning opportunities for students with special-education needs in schools.

1.11 Social Exclusion

Social exclusion is an issue that often arises in discussion of marginalised groups in a society. Such groups are typically prevented full participation in social arrangements by mutually
reinforcing processes, including reduced influence and recognition by those in positions of power and authority (Taket et al., 2009). Excluded groups experience social inequities (including inequity in schooling systems) that have implications for their advancement and well-being. Theories of social exclusion recognise the significance of language and symbols (including labels) used by a society and their potential to be “marginalising, silencing, rejecting, isolating, segregating and disenfranchising” (Taket et al., 2009, p. 3) rather than accepting, validating, and socially just. The definition of social exclusion is contested, although Popay et al. (2008) define it as:

Dynamic, multidimensional processes driven by unequal power relationships interacting across four main dimensions—economic, political, social and cultural—and at different levels including individual, household, group, community, country and global levels. It results in a continuum of inclusion/exclusion characterised by unequal access to resources, capabilities and rights which lead to… inequalities. (p. 2)

Regardless of how social exclusion is defined, the concept is often associated with discussion of stigmatised groups as being “deviant or nonconformist” (Taket et al., 2009, p. 8). Such language perpetuates existing disparities and undermines attempts at empowerment by marginalised groups. People make sense of the world and their place in it by the language and symbols used in everyday life. The use of language creates, reproduces and maintains authority and legitimation for those who hold power in a society (Taket et al., 2009). Its construction and use in a context is therefore important to consider when examining issues of social exclusion.

Social exclusion can be investigated at the level of the individual, community, and/or society, as it is founded on labour and economic imperatives which judge individuals or groups as either deserving or undeserving when compared with the social norm (Taket et al., 2009). Individual exclusion arises from a lack of social capital that determines access to
opportunities and resources. Individuals are often excluded because they are perceived by others as having aberrant behaviours and/or psychosociological attributes, which traditionally includes those who are poorly educated, and/or have mental and/or physical (dis)abilities (Taket et al., 2009), thus encompassing many individuals with dual exceptionalities. Such individual attributes are important to consider as they help to determine degrees of social connectedness and inclusion in social settings (Burchardt, Le Grand, & Piachaud, 1999). An individual’s social positioning and access to opportunities that determine capacity for action, reflect operating socio-political exclusionary or inclusionary mechanisms. Structural constraints that limit capacity result in exclusionary disadvantage that may take the form of victim blaming and/or reveal society failures to provide for its citizens (Bhalla & Lapeyre, 1997). Research by Hall (2004) explores social exclusion of individuals with learning (dis)abilities and finds that despite being physically included in society, participants perceive themselves as being rejected both socially and culturally, leading them to restrict participation in certain mainstream (normative) contexts.

In any community, individuals who perceive themselves as lying outside mainstream norms can feel alienated from wider social life (Taket et al., 2009). Specific groups, such as 2E individuals, who are currently largely overlooked in existing social arrangements, are particularly susceptible to exclusion. Whilst exclusion may be maintained by government legislation and policies, the way in which individuals experience exclusion may not be overt, with exclusion at the community level sometimes occurring in spite of accommodations aimed at facilitating inclusion (Taket et al., 2009). One example of this is when schools remediate for areas of learning (dis)ability but fail to acknowledge and provide for area(s) of learning strength. In this instance, perceptions of being excluded can lead to the situation whereby “much effort will be expended not to be among the losers” (Alison, 2003, p. 29), resulting in rejection of the intervention for the area of learning impairment.
At the societal level, exclusion is often considered a dynamic process rather than a state of being (Taket et al., 2009). To understand how exclusion arises, factors affecting the processes of exclusion, as well as specifics of individuals/groups experiencing it, need to be investigated holistically. Barriers and opportunities are not evenly distributed throughout society and there are challenges for particular groups. Three foundational principles of social justice reinforce the need for action to be taken to alleviate/remove such barriers. These principles are: equal rights to basic liberties; equality of opportunity; and the balance of inequalities to favour the least advantaged (Taket et al., 2009). It is important to acknowledge here key differences between conceptions of educational equality (sameness in provision) and equity (just provision in consideration of personal or social circumstances; Cochran-Smith, Ell, Grudnoff, Haigh, & Hill, 2016) that complicate discourse concerning issues of inclusion/exclusion. Equality of opportunity, one of the three foundational principles, is interpreted in this thesis as representing equity (just provision) in schooling arrangements for 2E students, when based upon sound understandings of dual-exceptional learner difference.

Whilst being 2E does not always result in social exclusion, it does not ensure inclusion. Individual behaviours tend to be judged by societal norms, with those operating outside these perceived as deviant rather than casualties of political, socioeconomic and/or cultural structures that create inequalities (Taket et al., 2009). Social discourse and stereotypes attached to individuals and groups influence the nature and extent of opportunities afforded to them. Social welfare and political discourses can act to provoke a victim-blaming approach for difference, by labelling individuals in reference to personal circumstances or traits (Taket et al., 2009). The implied meanings of socially assigned labels may exclude individuals/groups that diverge from the social norm, if they fail to consider wider socio-political factors that determine conditions under which the marginalisation of such groups arises.
1.12 Thesis Outlined

The phenomenon underpinning this research is the underachievement of 2E students in the NZ school system. Currently, there is little original empirical research in the NZ setting concerning this phenomenon. The study therefore aims to examine why this gifted-student subgroup typically underachieves in NZ schools when compared with their potential. Different factors are considered as possibly contributing to this phenomenon. These include issues of 2E-student identity, agency, and capability relative to a learning setting. Wider socio-political forces that direct schooling arrangements are also considered influential, as they help determine student capacity to achieve. The research thus seeks to examine multiple factors considered as potentially contributing to the phenomenon of 2E student underachievement in NZ schools.

1.13 Chapter Summary

This chapter sought to introduce the reader to the concept of twice-exceptionality and the current issues that impact upon the achievements of this diverse student population in NZ schools. Beginning with an historical overview of the changing conceptions of giftedness and talent, it outlined current challenges in defining giftedness as a construct. It then considered issues concerning the assignation of special-needs labels, alongside socio-political factors that influence the provision of gifted education in NZ schools. Twice-exceptionality was discussed in relation to its influence on learning in schooling contexts, with special consideration of the phenomenon of underachievement. Mediating factors and learning differences that impact upon academic achievement were outlined and located within the space of special-education needs in NZ schools. Theories concerning the development of student identity and capability were also explored. Lastly, social mechanisms of exclusion at the individual, community and society level were examined.
This research developed from the author’s informal and formal observations, conversations, and interactions with 2E students, parents/caregivers, teachers, and school leadership. It was driven by realisation of a lack of understanding and effective support for 2E learners in NZ schools. It aims to reveal the current conceptions of twice-exceptionality that underpin school identification systems and provision for gifted students with learning difficulties. As such, it is inspired by a need to seek equity for those underserved by current schooling systems and arrangements.
Chapter 2: Literature Review

Review of the literature is important in grounded theory (GT) research as it enhances theoretical sensitivity, may be used as data during analysis, and can aid in the generation of theoretical codes (Birk & Mills, 2015). However, when to engage with the literature is a point of contention amongst grounded theorists. Formal review of existing literature is discouraged in the early stages of the research process, as it is argued that it may influence the researcher in analysis and thereby in the generation of new theory, which, in GT studies, emerges from the data. Glaser and Strauss (1967), A. Strauss and Corbin (1994) and Corbin and Strauss (2015), however, acknowledge that past exposure to literature is unavoidable and naturally influences researcher interpretations of the data. Birks and Mills (2015) take the position that a “limited and purposive” (p. 23) literature review can enhance theoretical sensitivity and direct researcher attention to areas requiring study, whilst simultaneously informing formal research proposals. This chapter presents a review of literature relevant to the development of the explanatory theory, to help situate the findings in the international and NZ contexts.

Whilst some aspects of the review represent prior knowledge, most of the literature included here emerged as pertinent to the study following analysis of the research data. The discussion begins with an overview of socio-political factors that influence education provision for 2E students, then focuses on studies related to the phenomenon of gifted-student underachievement. It concludes with a review of the literature that examines the development of student identity and capability in the schooling context.

The literature review was conducted via the University of Auckland’s libraries website using advanced search engines. Multiple search engines were used to ensure academic thoroughness in the literature review process. The key search terms used for both the international and national literature reviews were: gifted students, twice-exceptional, gifted...
learning-difficulties and gifted learning-disabled, teamed with the terms identity, capability and well-being. Search parameters were placed around the suitability and quality of the reviewed literature, including its relevance to the research, its authority (only peer-reviewed journals were included) and currency. Regarding currency, only literature between the years 1999–2017 was reviewed, although older key writings from well-known researchers in the field of twice-exceptionality are also included. A review of literature related to the theoretical framework adopted as a result of the analysis of the findings, as discussed in Chapter 3, was conducted in the same manner. The key search terms for this framework were: identity, agency, inclusion and the capability approach, all referenced in relation to the field of education with a focus on students with special-education needs.

2.1 International Perspectives on Twice-Exceptionality

This section of the literature review examines international conceptions of twice-exceptionality as a construct. Additionally, it explores international literature pertaining to issues of social justice and the phenomenon of underachievement in the education of 2E students.

2.1.1 Conceptions of twice-exceptionality.

Internationally, there is a growing body of research relating to the phenomenon of twice-exceptionality and the effects it has on individuals and their life opportunities. A quantitative synthesis of such studies by Lovett and Sparks (2013) shows that much of this research was conducted using small purposive samples. Twice-exceptionality as a construct is well established in this literature, used broadly in reference to individuals who possess gifts and talents alongside learning impairments (including SLD, physical, sensory or socio-emotional/behavioural difficulties) that impact upon their ability to perform to their potential whilst at school (Assouline et al., 2010; Baum, 1990; Foley-Nicpon et al., 2011; Kalbfleisch,
2014; Moon & Reis, 2004; Olenchak & Reis, 2002; Trail, 2011). As difficulties in sensory-processing systems, such as those involved with spelling, writing and numeracy for example, undermine an individual’s ability to perform highly in other academic domains, 2E students are accepted as being at risk of underachievement in schooling contexts (Assouline et al., 2010; Kalbfleisch, 2009, 2014; Reis et al., 2014). Furthermore, research by McCoach, Kehle, Bray, and Siegle (2001), and Brody and Mills (1997), has shown that they are more likely to suffer from low self-concept if not identified at an early age and appropriate teaching and learning accommodations made available to assist them.

As previously discussed, there is currently no concise, universally agreed-upon definition of twice-exceptionality, as the research field is still relatively new and there is ongoing debate, especially in the education arena, concerning the key terms, gifted and learning disabled (Bianco, 2005; Foley-Nicpon et al., 2013). Due to vagaries in defining twice-exceptionality as a construct, gifted students with learning difficulties are often overlooked or misidentified, with research showing that they comprise an underserved community within the wider school population (Bianco, 2005; Brody & Mills, 1997; Davis & Rimm, 2004; Dole, 2001; Karnes et al., 2004). Worldwide variances in the socio-political, medical and educational definitions of giftedness and talent, special needs, and the various impairments that influence the expression of twice-exceptionality, mean that the actual prevalence of such individuals in the population is unknown, hindering research into the phenomenon (Assouline et al., 2010; Foley-Nicpon et al., 2011; Foley-Nicpon, Assouline, & Stinson, 2012; Kalbfleisch, 2012; McCoach et al., 2001; Moon & Reis, 2004).

Multi-various combinations of high ability and learning difficulty can also confuse identification, in that one may mask the other, complicating accurate diagnosis (McCoach et al., 2001). Research has shown that separate protocols currently used to identify students as either gifted or having learning difficulties typically do not consider the interaction of one
exceptionality on the other, and therefore fail in effectively detecting 2E individuals (Reis et al., 2014; Trail, 2011). This difficulty in concisely conceptualising twice-exceptionality leaves education professionals with inadequate understandings of what gifted students with learning difficulties look like, impeding appropriate provision (Krochak & Ryan, 2007; Montgomery, 2003; Winebrenner, 2003). Consequently, 2E learners often fail to be nominated for specialist programmes or other learning opportunities (Schultz, 2012; Trail, 2011).

As twice-exceptionality is a complex phenomenon currently incompletely conceptualised, many researchers (such as Baum & Owen, 2004; Baum, Schader, & Hébert, 2014; Neihart, 2008) advocate for the use of comprehensive education plans for 2E students. These plans help to ensure that appropriate and effective processes and procedures are enacted and evaluated, to enable the development of individual talents alongside the provision of accommodations for learning difficulties. A study by Baum and Owen (2004) found that when education plans are implemented for 2E students, the students are better able to “emulate the social, emotional, and academic characteristics of gifted students without disabilities rather than non-gifted students with learning disabilities” (p. 226). They conclude that when teachers focus on the learning strengths/gifts and talents of 2E students the latter become more engaged with the schooling process, especially if given the opportunity to creatively explore areas of interest (Baum & Owen, 2004). Subsequent studies of the use of education plans employing strength-based approaches to provision, have similarly found positive effects on academic achievement and development of self-concept (Baum et al., 2014; Olenchak, 2009).

**2.1.2 Issues of social justice in the education of twice-exceptional students.**

Ford (2012) observes that the field of gifted education is interfused with accusations of elitism and inequality that hinder its advancement. Issues of social justice and fairness
concerning the education of gifted students have been examined by many researchers. Recent research by Kraeger (2015), concerning issues of equity in gifted education, concludes that components of equity, which involve consideration of access, participation and benefit (Sapon-Shevin, 2003), interact and build upon essential supportive elements, including quality leadership, appropriate funding and belief in excellence, these being needed to help address issues of social justice in the development of gifted education programmes. Government policies, programmes and legislation concerning gifted students and their learning needs have been studied by researchers such as J. Gallagher (2006) and Roberts, Pereira, and Dusteen Knotts (2015), and are widely accepted as lagging behind those developed to address the needs of students with (dis)abilities. Roberts et al. (2015) argue that “legislation and policy lead to action” (p. 215), without which minority groups are typically marginalised and ignored. Many researchers therefore adopt the position that, as for students with learning (dis)abilities, a team approach is required to effectively cater for the learning needs of 2E students in schools (Coleman & Gallagher, 2015; Trail, 2011). Such an approach should be led by changes in legislation and policy that specifically recognise and resource 2E students at both the national and school levels (Roberts et al., 2015).

Whilst early researchers of intelligence, such as Terman, did not consider issues of social justice as important to conceptions and provisions for gifted individuals, more recently, principles of fairness and equity have been investigated by researchers such as Gagné (2011), Ford (2003) and Borland (2003, 2005, 2007), especially in consideration of underrepresented groups of gifted students. Gagné (2011), for example, argues that gifted education holds a marginal position with respect to general education services and that it is often inspired by meritocratic ideologies (based on advancement through demonstration of ability in a field, usually by the use of tests), rather than by talent-development approaches that determine inclusion and outcomes for programmes. Studies by Ford (2012) and Borland (2003) also
highlight inequities in identification procedures for gifted students that, they argue, favour mainstream, economically advantaged groups. In this respect, Ford (2012) considers that education systems (and wider society) adopt deficit orientations towards non-mainstream groups, resulting in low-referral rates for diverse students. This problem is grounded upon a reliance on modes of assessment that fail to identify such students, based on a lack of understanding and inclusive practices (Ford, 2012). Trail (2011) adds to this debate by noting that many 2E students have unique creative strengths in higher level thinking and problem solving, so the need to provide for these diverse students becomes not just a matter of social justice, but also a matter of potential social advancement.

Studies by researchers such as Kalbfleisch (2009, 2012, 2014), Brody and Mills (1997), and Moon and Reis (2004) suggest that current problems concerning educational inequities facing 2E students emanate from difficulties in conceptualising the construct itself. A lack of shared vision and common language by which to meaningfully discuss and research the phenomenon of twice-exceptionality underpins this issue (Baldwin, Omdal, & Pereles, 2015). Although broad definitions have been proposed that refer to individuals with gifts that coexist alongside learning deficits (Baum & Owen, 1988, 2004; Foley-Nicpon et al., 2011), setting criteria for categorising 2E students for research purposes, or for qualifying for special accommodations, is more challenging, leading to criticisms from some sectors. For example, Sternberg and Grigorenko (2004), Lovett (2013) and Lovett and Sparks (2013) argue that the current means of classifying gifted students with learning (dis)abilities is inadequate and open to exploitation by interested stakeholders who are aware of the benefits of being included as such. Lovett (2013) also contends that 2E students often do not meet the criteria as being either learning (dis)abled (academic skills placing them in the average range) or gifted (using IQ scores), a process complicated by the absence of reliable assessments that are able to counter the effects of the masking of one exceptionality on the other.
Additionally, variability in identification methods between schools (and states) complicates the issue of trustworthiness in identification of 2E students as a group (Lovett & Lewandowski, 2006; Lovett & Sparks, 2013). The category of twice-exceptional, therefore, is open to interpretation, which in itself is socially unjust. Lovett (2013) therefore promotes the development of either more careful identification methods, or the adoption of inclusive curriculum models, to help close the loophole that attenuates this source of inequality in the gifted education sector. Irrespective of these criticisms, twice-exceptionality is accepted as a condition that impacts upon the lives of those individuals affected by it, and, as such, demands further attention and investigation by experts in the field to address current inequities in educational provision at both the state and school levels.

2.1.3 International perspectives on the underachievement of gifted students.

Underachievement is a complex phenomenon that is difficult to define, especially in reference to 2E individuals who may underachieve due to a unique combination of factors. The adoption of a particular conceptualisation of underachievement, in a specific setting, helps to determine who is considered as underachieving, and thus deserving of additional support and provision. As discussed in Section 2.1.2, traditionally the term underachievement is used to describe the difference between an individual’s potential to achieve and their realised achievement (B. Clark, 2002; Siegle & McCoach, 2009). A review of the research on underachievement highlights the difficulties of conceptualising discrepancies between ability and performance in gifted students, especially in light of the fact there is currently no way to measure capability for achievement in individuals.

An alternative way of viewing underachievement is by examining individual talent and potential to contribute to society; however, this infers a subjective measure of disappointment or disapproval by others and typically fails to consider different cultural constructs of what constitutes valued achievement (Reis & McCoach, 2000). Sternberg’s (1985) triarchic theory
of successful intelligence views achievement in terms of personal capability, where individuals capitalise on their strengths, whilst compensating for weaknesses, to successfully adapt and interact in an environment. However, this perspective places the onus on the individual to succeed, with no expectation from society to intervene, and has serious implications for those who lack personal agency (B. Clark, 2002). A final interpretation considered here, views underachievement in terms of a failure to self-actualise, recognising the influence of socio-emotional development, especially resilience, on cognitive ability (Reis & McCoach, 2000). This is an important consideration for gifted individuals affected by perfectionist tendencies or other socio-emotional/behavioural difficulties. This is because such attributes impact upon the development of positive self-esteem, self-efficacy, and ultimately, self-concept (Siegle, 2012), all of which influence perceptions of capability in a setting.

Reis and McCoach (2002) list three reasons to help explain the phenomenon of underachievement of gifted students. These are: the effect of personal traits of individuals, including physical, cognitive and socio-emotional factors (these being especially influential in 2E students); the personal learning attributes of individuals, including motivation, self-regulation and self-efficacy that can interfere with the learning process; and the influence of the school context that may act as a barrier to learning (Reis & McCoach, 2000, 2002; Siegle, 2012). Each underlying cause requires a different approach, as mismatching cause with an inappropriate intervention can have serious consequences for individuals (Reis & McCoach, 2002).

In considering cause, asynchrony, in respect to chronological age, giftedness and learning differences, is noted in research by Hands (2011) as a pervasive cause of underachievement in 2E students. Hands identifies other factors that impact upon this phenomenon, including age of identification, frequency of contact with intellectual peers, hope as a cognitive
construct, and the attitudes and practices of teachers. Regarding contextual influences, a study by Davis and Rimm (1998) found that the school environment influences individual achievement by modelling normative social expectations, regulating competitive practices, setting the curriculum, and determining the degree of acceptance and flexibility toward those with learning differences. Another study by Hyman (1989) examines the influence of parents/caregivers on student achievement and finds that those adults who do not share their personal struggles with achievement often lead their children to believe such struggles are a sign of weakness or personal failure, which has serious consequences for the development of self-concept. J. Gallagher (2006) comments that because contextual influences can act as barriers, educators should always be alert to individual potential in respect to hidden gifts and talents. Cumulatively, contextual and personal factors help to determine achievement (or lack thereof) in a given time and place.

2.1.4 Student identity negotiation in gifted and twice-exceptional students.

Identity, or who one is (also referred to as self-concept), should not be considered an achieved product, but rather an ongoing, developmental process influenced by personal characteristics and wider contextual factors (Schwartz et al., 2012). Identity development occurs in reflection of the personal circumstances of individuals, as well as in reference to the social networks or groups individuals affiliate with, which, in turn, are impacted by the socio-political structures and practices of a society (Howard, 2000). Moon (2009) argues that the presence of gifts and talents presents a challenge that adds to the complexity of the process of identity negotiation for some individuals, especially when considering external influences such as anti-intellectual sentiments, that can result in perceptions of social exclusion. Arguably, the addition of a coexistent learning difficulty further complicates the process of identity negotiation.
In the context of schooling, self-concept can be divided into social self-concept (personal perceptions of self in relation to others) and academic self-concept (personal perceptions of academic achievements), the latter being especially important for academic success, as it influences learning interests and aspirations, and thereby life success and personal well-being (Davis et al., 2011; Townend, Pendergast, & Garvis, 2014). Research literature indicates a relationship between academic self-concept and psychosocial well-being, although this has not been well studied in 2E students (Townend & Pendergast, 2015).

Existing research indicates that the consequences of low achievement include: low self-concept, frustration, negative perfectionist tendencies, unsatisfactory relationships, and negative school attitudes, including lack of motivation, feelings of inadequacy and disengagement from school, which can be especially prominent if dual exceptionalities are undiagnosed or not provided for (Assouline et al., 2010; Townend et al., 2014). A study by Barber and Mueller (2011) examines the social and self-perceptions of 2E students and finds that they closely resemble those of non-gifted students with learning difficulties, rather than their gifted but non-learning (dis)abled peers. The research also highlights the influence of mothers, which is observed as being different between the two groups. 2E students report more negative maternal relationships, theorised as emanating from the frustrations felt in response to maternal judgements of disappointment at not living up to individual potential (Barber & Mueller, 2011). A supportive home environment is determined to be critical in developing social and self-perceptions, however, as this relationship is not easily modifiable by outside agencies, Barber and Mueller’s (2011) study concludes that teachers and counsellors should consider the need for psychosocial support when designing education plans for 2E students. A study by Townend and Pendergast (2015) also highlights connections between 2E students’ academic self-concept and achievement, where supportive
teacher-student relationships, alongside opportunities to attend gifted-enrichment programmes, are found to mediate the development of positive self-concept in schools.

Dole’s (2001) study of social identity in 2E students finds that two categories (contextual and personal) emerge that have implications for identity negotiation. Negotiation is considered to take place within a contextual support network that includes family, peers, teachers and mentors, and typically involves extracurricular activities that help encourage the development of the strengths and self-esteem of the student participants (Dole, 2001). In investigating personal factors, Dole (2001) finds that self-knowledge of gifts and talents, alongside understanding of learning difficulties, lead to self-acceptance and self-advocacy, and ultimately self-determination. This process is influenced by the conditions of a setting, with Dole finding that 2E individuals have difficulty in explaining hidden learning (dis)abilities to others, and once shared, this impacts upon judgements of competency and capability.

The possession of dual exceptionalities is, therefore, found to have psychological implications for the negotiation of identity, including the development of poor self-esteem, feelings of failure, frustration and humiliation, poor self-efficacy, alongside emotional-behavioural problems such as eating disorders and drug and alcohol abuse (Dole, 2001). These findings concur with those from other studies, including those by Baum, Cooper, and Neu (2001), Baum and Olenchak (2002), Foley-Nicpon, Rickels, Assouline, and Richards (2012), Moon and Reis (2004), and Reis and Colbert (2004), that highlight the psychosocial and academic vulnerabilities of 2E individuals. The conclusions of Dole’s (2001) study underscore the critical role of teachers and counsellors in recognising and providing for students with dual exceptionalities, to help them “survive and be successful emotionally, not just academically” (p. 131). Recent research by Colangelo and Wood (2015) and Foley-Nicpon and Assouline (2015) confirm this, with findings indicating that the provision of learning accommodations that address cognitive and/or academic factors are, in themselves,
not enough, and that comprehensive assessments that include evaluation of psychosocial domains, should be included.

Wang and Neihart (2015) conducted a small-scale investigation into the effects of academic self-beliefs (including self-concept and self-efficacy) on the academic achievements of six 2E students. The findings show that in contrast to the research above, the students report positive academic self-efficacy and self-concept. As this contradicts other studies, Wang and Neihart (2015) reason that this is due to the particular supportive contextual factors that surround the participants, including the influence of parents/caregivers, teacher empathy, respect and concern, and the presence of encouraging peers.

2.1.5 Twice-exceptionality and student capability.

Studies on 2E student capability typically focus on contextual factors that influence academic achievement, such as identification practices and remediation tools (Barnard-Brak et al., 2015; Brody & Mills, 1997; Foley-Nicpon et al., 2011), and the development of appropriate policies (Long, Barnett, & Rogers, 2015), some of which have previously been discussed. Teacher preparation has been studied by researchers such as Bianco (2005) and Rowan and Townend (2016) who conclude that teachers often feel unprepared to teach students with diverse abilities, especially in regard to effectively supporting such students and communicating in appropriate and empathetic ways with parents/caregivers. Studies by Olthouse (2014) and Troxclair (2013) found that preservice teachers often hold unsupportive attitudes toward gifted students, which limit opportunities to develop areas of learning strength. These findings complement Bianco’s (2005) research on the effect of (dis)ability labels on teacher perceptions that result in them being less likely to refer 2E students for gifted programmes, presenting a barrier to the development of gifted capability. As teachers are acknowledged as having great influence on the educational achievements and psychosocial well-being of neurodiverse students, this is of concern, requiring attention
through the provision of targeted professional learning and development (Foley-Nicpon et al., 2013).

Schultz (2012) and Assouline and Whiteman (2011) examine the existing literature on twice-exceptionality and discover that few research studies have investigated the combined effects of gifts and learning difficulties, with most instead examining the two exceptionalities separately. Schultz (2012) concludes that 2E students typically do not receive appropriate interventions to fully develop learning strengths. Research by Crim, Hawkins, Ruban, and Johnson (2008) found that because interventions for students with special-education needs focus on learning (dis)abilities, students with dual exceptionalities typically only receive accommodations for areas of learning weakness, representing a deficit-based approach to provision. Adopting a strengths-based approach that attends to the social and psychosocial challenges faced by many 2E students is therefore indicated (Baum & Novak, 2010; Foley-Nicpon et al., 2017; Ruban & Reis, 2005). Studies by Baum et al. (2014) highlight the need to provide talent-development opportunities that benefit students by providing the chance to develop social, cognitive and emotional skill sets that foster relationships and the development of gifts into talents. Baum et al. (2014) conclude that to enhance 2E student capability, “purposeful collection of data to gain knowledge of students’ strengths, interests and talents” (p. 323) is needed. This enables the development of education plans that address learning strengths foremost, alongside strategies that help remediate for learning weaknesses, via the provision of an enriched curriculum. These personalised plans allow for evaluation of progress over time, which is especially important for 2E students who demonstrate asynchronous development resulting in uneven “growth” in the cognitive, academic, socio-emotional and chronological domains (Baum et al., 2014). The adoption of education plans also encourages a team approach to provision, which research shows is beneficial for meeting the learning needs of 2E students (Coleman & Gallagher, 2015).
In addition to academic supports, 2E individuals also depend on the support their families, especially parents/caregivers. In many cases, this support takes the form of advocacy and seeking assistance from knowledgeable experts, especially because current inadequacies in identification present significant challenges to appropriate provision (Neumeister, Yssel, & Burney, 2013). A study by Besnoy et al. (2015) found that many parents/caregivers are only able to advocate after they acquire professional knowledge about the language and policies related to the field of 2E education, this being inhibited by a lack of available resources focused on twice-exceptionality. This concurs with research by Dare and Nowicki (2015) who also found that parents/caregivers require support and resources to fulfil an advocacy role, especially as schools typically focus on remediation for learning weaknesses, meaning that 2E students often fail to thrive academically, cognitively or socio-emotionally under such contextual constraints.

2.2 New Zealand Literature Relevant to the Education of Twice-Exceptional Students

There is very little original, empirical NZ-based education research focused on the field of twice-exceptionality. A search of the national literature located only six research studies pertaining to this specialised area in the years 1999–2017. Therefore, NZ research and peer-reviewed journal articles on gifted students and the development of student identity and/or capability and/or the phenomenon of underachievement, were also reviewed for relevancy. The following section presents the findings from the review of the national literature, beginning with a historical overview of socio-political influences on gifted education in NZ, then progressing to literature related to conceptions of underachievement, identity and capability of gifted students in NZ schools. It concludes by reviewing NZ original empirical research and peer-reviewed articles specifically concerning 2E students.
2.2.1 Socio-political considerations in gifted education provision.

Prior to the year 2000, gifted and talented education in NZ was not considered a high priority by the MoE. However, between 2000 and 2005 a number of initiatives were established including publication of an MoE handbook (2000), publication of the findings of a ministerial working party (2001) and the development of a policy statement (2002) with a change to NAGs to explicitly acknowledge gifted and talented students as students with special needs. In addition to these initiatives, commissioned research by Riley et al. (2004) was conducted to investigate the needs of high-ability learners in NZ schools. This research project was necessary, as the MoE acknowledged that there was little research on gifted and talented students to guide policy and best practice in the NZ setting.

Riley (2005) subsequently reviewed the findings of the 2002 MoE study investigating identification of, and provisions for, gifted students in NZ schools. The review notes that the conceptualisation and provision of gifted and talented education in the NZ context is unique when compared with other countries. Differences in conceptualising giftedness and talent, with variation in meanings between different local communities and cultural groups (significantly including Māori learners), necessitates a diverse approach to provision through differentiated learning opportunities. Riley’s (2005) review notes that there is little empirical research on the effectiveness of identification or provisions for gifted and talented students, either nationally or internationally, and that most of the available research has been conducted in the United States, thus highlighting a critical gap in the NZ research literature.

In NZ, individual schools are accountable for defining giftedness and talent and developing appropriate policies and procedures in reflection of their local community, with the MoE (2002) stating: “schools need to develop multi-categorical approaches to giftedness that are flexible enough to include the many different characteristics that are typical of gifted and talented learners” (p. 2). The MoE (2002) provides a vague definition that includes the
phrases “special abilities relative to most other people,” “certain learning characteristics that give them the potential to achieve outstanding performance” and “giftedness and talent mean different things to different people and require a range of approaches” (p. 2), which can be interpreted differently, by different people, in different times and places (Riley, 2005). Such conceptions are important as they guide the identification and provision of specialised opportunities for gifted and talented individuals, thus variation in interpretation between NZ schools is socio-politically and ethically problematic (Tapper, 2012). Riley (2005) also notes that many of the school definitions of giftedness and talent reviewed in the study use normative (comparisons to same-age peers) references, which “may potentially overlook gifted and talented students who are underachieving” (p. 42), including 2E individuals. More recent research indicates that few NZ school definitions specifically include 2E students (Riley & Bicknell, 2013).

Unsurprisingly, the MoE (2002) study found identification of gifted and talented students to be an area of concern for schools, in part due to difficulties in adequately conceptualising giftedness and talent. The MoE currently promotes collection of a wide range of information including student-learning interests, abilities and attributes (including strengths and weaknesses) to help with identification, noting that this process is the “mediating link” between conceptualisation and provision. The MoE (2012) handbook recommends triangulation of many sources of data, including: teacher observation and nomination, rating scales, standardised testing (including IQ and ability tests), portfolios and performances, alongside nomination by peers, parents/caregivers and self, to promote identification of gifted students. Riley’s (2005) review notes that teacher observation is the most commonly used method in NZ schools for identifying gifted students (97%), although literature suggests it is the most variable, with IQ tests being the least commonly employed approach (14%).
raises questions concerning the level of teacher skill and preparedness with respect to identification and provision for gifted and talented students in NZ schools.

School-team approaches that emphasise the sharing of information concerning provision (including differentiated opportunities for both enrichment and acceleration) are found in the MoE (2002) study to be the most effective means to appropriately cater for the learning needs of gifted and talented students. Riley’s (2005) review identifies barriers and facilitators to the development of effective school programmes for gifted and talented students, including the provision of suitable professional learning and development opportunities, funding, time constraints, and access to appropriate resources. Participants in the MoE (2002) study recommend creating a shared vision and philosophy for providing for gifted and talented students, improving access to professional learning as well as to expert support personnel, and creating better parent/community support resources. Additionally, the findings identify the need for the establishment of better communication pathways within and between schools, and flexibility in decision making and programming for gifted students, to assist them in realising their potential in the NZ school system (MoE, 2002).

The commissioned research by Riley et al. (2004) shows that gifted and talented students in many NZ schools are not being identified or provided with suitable accommodations. Some of the schools involved in this study have expressed concerns over the identification of, and provision for, gifted and talented students, acknowledging a lack of capacity to change current approaches. Other schools reportedly base their understandings of, and provision for, gifted and talented individuals on narrow, out-dated stereotypes that exclude gifted underachieving and 2E students. Riley et al.’s (2004) research concludes that obtaining a high-quality design for planned programmes for gifted students requires that all educators be knowledgeable about the different manifestations of giftedness and talent, and be skilled in the delivery of appropriate services to encompass such diversity. However, as previously
mentioned, since this time the MoE has limited funding and support for the development of gifted and talented research and programmes (Riley & Bicknell, 2013), directing attention instead to the reported “tail” of underachieving students in NZ schools.

The MoE is responsible for advising the NZ government on policy to ensure funding, infrastructure and systems are in place to achieve certain strategic goals. The MoE’s (2014) Statement of Intent 2014–2018 lists its first four strategic intentions as being to raise teaching quality and leadership, use information more effectively to lift achievement, target resources to address disparity in achievement, and engage children and students, and their families and whanau, to sustain participation and transitions in education. With respect to targeting resources to address disparity, the focus is on provision of tools, knowledge and resources to meet the needs of those who are underachieving, including those with special-education needs. The document states that the MoE is “the steward of the education system, supporting families, whanau, iwi and communities, and the education system as a whole, to focus on lifting aspiration and raising educational achievement for every New Zealander” (p. 8). It considers that “making sure the people working in the education profession, at all levels, have the right resources and information to support them to apply their own knowledge and expertise to help children and students succeed” (p. 8) is at the heart of what it does. The vision is to see all students succeed personally and academically and to develop a strong national and cultural identity, so that they can be the best that they can be. However, there is a strong economic focus throughout the document, with reference to investment and the Government’s Business Growth Agenda that points to underlying financial imperatives, rather than being founded on principles of social justice and well-being.

Recognising the nature of the political imperatives that form a framework upon which schools operate is important, as schools are not socially neutral organisations, rather they are infused with the social ideologies of a time and place (J. Clark, 2005; Codd & Openshaw,
Such ideologies are influential as they establish the socio-political and cultural foundations upon which education objectives and practices are based, and in doing so replicate the ideas, beliefs and values of the dominant group in power in society (Bourdieu, 1986; J. Clark, 2005). From the time of the 1877 Education Act, up until 1987, NZ’s educational provisions were founded upon the principle of social equality, based on the ideals of egalitarianism (equal access to education, treatment, and results), justice (fairness in the treatment of all peoples) and partnership (between different cultural groups in society; Adams, Openshaw, & Hamer, 2005). However, after 1987 this ideology gave way to one of individual choice, where free-market policies provided options to consumers (parents/caregivers) who selected goods and services (educational provision) that they determined to be best value for their money (Adams et al., 2005). This has resulted in schools operating like businesses under competitive market conditions to meet the demands of commerce. Individuals and the freedom to choose are placed centrally in this model; however, this ideology increases differential outcomes and social inequalities as it is based on property rights—that is, how much property people have and what they can afford to spend. This results in disparity between groups that “have” and those who “have not” (O’Neill & Nash, 2005), especially when considering marginalised groups such as 2E individuals.

As this market-model approach is not concerned with moral affairs, it increases inequalities between those in power and those relegated by their position in society (Adams et al., 2005). As there is no intervention by the state in the day-to-day running of social facilities such as schools, people tend to be treated as commodities rather than individuals, with credentialing for future work assuming a central position (Codd & Openshaw, 2005). This sorting of the future workforce, by placing increasingly challenging obstacles (assessments) in the way of learners, further increases disparity in groups already stigmatised by difference. Educational
institutions therefore become organisations by which social and cultural inequalities can be reproduced and perpetuated (Codd & Openshaw, 2005). As Bourdieu (1986) reveals, the culture of the dominant group occupying positions of economic and political power in society is the culture of the school—those who do not possess the correct cultural capital become marginalised by their different ways of being. This is true of 2E students who have traditionally been underserved and underachieve in schooling systems that work within mainstream parameters, often with little reference to those who operate outside of the social norm.

2.2.2 Conceptions of underachievement in gifted students.
The MoE Te Kete Ipurangi (TKI) online portal defines underachievement as a difference between an individual’s capability (potential) and their realised achievement, noting that half of gifted students fail to reach their potential. Since positive academic self-concept is developed through successful achievement, the number of gifted students reportedly underachieving is of concern. TKI notes that there are many reasons why gifted students underachieve, including lack of challenge (motivation) and/or socio-emotional/behavioural issues. Cathcart (2005) remarks that students report being “frustrated, angry, helpless, resentful, and confused” (p. 36) when they are not provided with a stimulating learning environment. Parental pressure or unrealistic teacher expectations can also impact upon achievement, especially if individuals do not have coping strategies in place to assist with increasingly challenging academic tasks (G. Gallagher, 2005). A lack of appropriate coping strategies is a problem commonly associated with 2E individuals in the schooling context, who initially use their considerable cognitive ability to compensate for areas of learning difficulty. Consideration of multiple complex factors including personal and social expectations, individual ability, and the wider social environment is therefore required to ensure that dysfunctional behaviours, such as refusal to attend school, do not develop. G.
Gallagher (2005) highlights the application of a spotlight approach to assist in identifying the particular issues that underpin specific patterns of gifted-student underachievement. Such an analysis investigates individual, family and wider contextual influences that establish and sustain behaviours that lead to underachievement, so that they can be effectively addressed.

2.2.2.1 Issues of identification, provision, and underachievement.
Due to heightened awareness of the need to better provide for students with high ability in NZ, there have been an increasing number of studies on gifted and talented students over the last 18 years. Ferguson (2007) investigates how NZ schools provide for gifted students, focusing on the implementation of policy into practice. Using four case-study schools, she has found that whilst constrained by local circumstances, schools are progressing in their efforts to cater for gifted and talented primary-aged students, via the use of differentiated learning opportunities and the promotion of thinking skills. However, Ferguson concludes that teacher-time constraints and a lack of energy to sustain programmes act as a barrier to classroom provision for gifted and talented learners, and notes that changes need to be made to pre- and in-service education programmes to better cater for learning needs. She argues that more practical support for teachers is needed to assist with translating theory into practice to ensure differentiated gifted and talented opportunities are embedded in wider school programmes. Newton (2009) similarly has studied the influence of professional learning, knowledge and practice on the identification of gifted students in NZ primary schools and finds that that there is a lack of effective professional learning and a consequent gap between theory and practice that impacts detrimentally on the identification of gifted students in primary schools. Newton (2009) also argues for changes to both pre- and in-service education programmes to improve teacher understandings of giftedness and talent.

Bicknell (2009) studied multiple perspectives on the education of a group of 15 mathematically gifted and talented students in NZ, finding that “teachers did not have a
comprehensive, articulated concept of mathematical giftedness” (p. 236), suggesting many students remain unidentified as such. Parents, however, have greater awareness of the many and varied characteristics of gifted mathematicians, indicating that they can be a valuable source of information for teachers. The students themselves become aware of their learning differences on entering the schooling system when comparisons to peers inevitably occur (Bicknell, 2009). The study also reveals that whilst most of the primary schools involved in the research state they use a multi-method approach to identification, in reality most rely on testing, and not a single school has a process for identifying gifted students on entry to school. Parents also report that their children are not identified as being mathematically gifted until at least Year 2 or 3. Issues with identification raise concerns about exclusion of gifted students, and conversely the inclusion of non-gifted students, in gifted mathematics programmes, with Bicknell (2009) commenting that “teachers need to know not only what it is they are looking for, how to identify it, but what it is they are fostering” (p. 239) so that they can appropriately provide for gifted students. A lack of professional learning and development for teachers in the field of gifted education is noted as an influential factor in this regard. Provision is also found to be lacking in that there is a dearth of planned differentiation of content, process and product, no systematic evaluation of programmes, little individualisation for students to meet needs, and confusion over shared terminology used to discuss policy, practice and provision in schools (Bicknell, 2009).

In a case study, Bicknell (2014) also highlights the importance of parental roles in the education of mathematically gifted and talented children. She found that many parents are early recognisers of their child’s advanced mathematics ability, and therefore are important sources of information for teachers. Parents are also found to be key motivators, resource providers, monitors and advisors to their children. The findings also show some parents to be
active advocators for their children in schools, although home–school partnerships are not found to be particularly strong, presenting a pathway for improvement in provision.

Research by Horsley (2010) examines how high-ability (scholarship) students perceive the practice of influential teachers. She found that effective teacher characteristics include an articulated belief in student capability to achieve, strong content and assessment-systems knowledge, the ability to facilitate discussions using humour and higher order thinking strategies, the ability to link content to authentic contexts, and devotion of time and effort to assist students to achieve success (Horsley, 2010). This study reiterates the influential mediating effect teachers have on gifted-student achievement.

**2.2.3 Giftedness and the development of student identity and capability.**

Gifted-student identity development has been studied in the NZ context by researchers such as Rawlinson (1998), Ballam (2013), and Tapper (2014). Rawlinson’s (1998) research examines the link between academic self-concept, self-efficacy and demonstration of special abilities in 200 Year 4, 5 and 6 children and seven teachers in an Auckland school. The findings show when teachers employ an inclusive-enrichment teaching programme based on a thematic approach, not only do their understanding and recognition of children with special abilities improve, but also students who participate in the programme show significant improvements in their academic self-concept (Rawlinson, 1998). The focus of the planned intervention was whole-school, thus avoiding issues of identification that can result in some gifted students missing out on enrichment opportunities. This can occur because of the presence of socio-emotional/behavioural problems, or other non-stereotypical gifted behaviours, not found on rigidly structured gifted and talented checklists. The school-wide enrichment programme meant that identification was embedded in the classroom, shifting the focus from a need to identify then provide for gifted individuals, to identifying through
provision, thus improving conditions for inclusion of typically underrepresented gifted and talented students.

Ballam (2013) investigates the learning experiences of gifted and talented young people from low socioeconomic backgrounds using interpretive phenomenological analysis of qualitative data. She specifically examines issues pertaining to self-concept, risk and resilience, and protective mechanisms that impact upon student achievement. Ballam finds that there is a need for NZ schools to nurture enriching relationships between teachers and gifted students based on informed understandings of the concept, this process being currently affected by a lapse in focus on gifted education at the MoE level. Therefore, there is a need for government commitment to specific resourcing for identification and provision for gifted students. Such recognition of need is linked to a strong sense of student identity and self-worth.

Tapper’s (2014) qualitative phenomenological study highlights the complexities and tensions of the identity-negotiation process for gifted and talented student participants over an 18-month period as they transferred from intermediate to high school. The findings of Tapper’s (2014) research reveal that teachers and other supportive adults need to understand differences in the diverse presentations of giftedness and talent, as well as in the process of identity negotiation for gifted and talented adolescents, to better assist them in achieving psychological well-being. The findings suggest that some gifted and talented students require nuanced assistance as they navigate the process of identity construction, especially as such negotiations can impact upon individual achievements. Tapper (2014) outlines four identity profiles of gifted and talented students: the conformist (fits to the social norms/ expectations of others); the rebel (non-conformity to expectations of others); the nerd (stigmatised identity attributed by others); and the all-rounder (competent in all domains). Identity negotiation is perceived as an ongoing process of finding a fit in the sociocultural milieu of the school, this being qualitatively different for gifted and talented students who often encounter an anti-
arrogance discourse towards academic giftedness in NZ schools (Tapper, 2014). The school setting is therefore considered a crucial mediating factor in successful negotiation of a gifted identity.

2.2.3.1 Related research on issues of capability.
An article by Delaune and Tapper (2015) considers the effects early childhood teacher (and wider society) beliefs and understandings about giftedness and talent have on the well-being of gifted young children in NZ. Sociocultural constructions of giftedness and talent can affect the development of self-concept from an early age, especially as schooling is an interdependent process with the reflections of others affecting socio-emotional well-being. Development of well-being can be promoted through trusted relationships with others (including whanau and educators), based upon informed understandings of the many facets and presentations of giftedness and talent. Delaune and Tapper (2015) argue that current educator understandings are hindered by a lack of information, especially at the preservice level, requiring changes in government support to ensure appropriate provision for gifted and talented students. This argument is supported by Tapper and Riley (2015) who believe that professional learning, support, and development for gifted and talented education at the pre- and in-service levels need to be improved.

Additionally, in considering the capacity of gifted students to achieve to their potential in NZ schools, a small-scale study by Riley and White (2016), conducted in an intermediate school that operates a gifted-1-day-withdrawal programme, investigates how gifted and talented students develop a sense of belonging through engagement with like-minded peers. It concludes that affording students the opportunity to connect with others of high ability allows them to develop identity congruence, and, subsequently, a sense of belonging in the school setting (through the sharing of interests and cognitive challenges), this being a matter of equity in provision (Riley & White, 2016).
2.2.4 Research involving twice-exceptional students in New Zealand schools.

As previously discussed, there is very little original empirical research concerning 2E students in the NZ setting. As such, only six empirical research studies investigating various aspects of 2E students’ experiences in NZ schools were located within the set timeframe.

2.2.4.1 Research concerning twice-exceptional student provision.

An investigation by Sturgess (1999) examines strategy instruction and attribution retraining for gifted students with learning (dis)abilities. The study explores the effectiveness of triple alliance theory (focused on the development of cognitive, metacognitive and motivational skills) for students of high ability who also have writing difficulties. Sturgess implements an intervention programme (involving both attribution retraining and strategy teaching) and investigates the effects this has on the attributions and writing skills of 15 gifted learning-(dis)abled students when compared with gifted non-learning (dis)abled peers. She found that there are no significant inter-group academic attribution differences; however, the writing skills of the research group did change significantly post-intervention, either equalling or exceeding those of the control group, except in number of words written. Sturgess concludes that the intervention programme had positive effects with respect to developing writing skills, as well as for self-efficacy, for gifted learning-(dis)abled students. A later review by Sturgess (2011) notes prevailing concerns regarding the lack of widespread knowledge about, and acceptance of, 2E students, resulting in the failure to appropriately identify and cater for their needs in NZ schools. The focus on learning accommodations that address remediation for learning deficits, coupled with inappropriate teaching strategies, often results in negative attributions and limited learning for such students. Sturgess comments on the need to develop empathetic and supportive relationship between 2E students and teachers, underpinned by informed teacher understandings that, in part, determine school success. Highlighted in the
study findings is the need to develop professional development opportunities that specifically address diverse learning needs (Sturgess, 2011).

A multiple-case study by O’Brien (2015) explores how 2E students are supported in NZ schools by interprofessional teams. Such teams include teachers; special needs coordinators and teachers with specialist qualifications in gifted and talented education; education psychologists; school counsellors; and resource teachers. O’Brien's findings show that the development and support provided by such teams is constrained by limited knowledge and expertise. Additionally, O’Brien notes with concern that the voices of students and their parent(s)/caregiver(s) are noticeably absent from the interprofessional team.

A more recent study by Munn (2016) looks at the attitudes and beliefs of teachers toward 2E students, and how these influenced identification and provision. She found that teachers who have responsibility for gifted students and/or students with learning disabilities, are key personnel in the provision of appropriate learning opportunities for 2E students. However, Munn argues that every teacher requires professional learning and development that extends them beyond a superficial understanding of how best to cater for complex dual-exceptional learning needs. Munn cites studies by Coleman and Gallagher (2015) and Townend and Pendergast (2015) that conclude that 2E students thrive if provided with a classroom climate that encourages autonomy in learning, where they feel “respected, supported and understood” (Munn, 2016, p. 61). Such contextual supports should focus, as a priority, on working with students to identify and provide suitable opportunities that develop areas of learning strength, rather than focus on remediation for learning difficulties.

2.2.4.2 Research on twice-exceptional student experiences of transfer.

Ng’s (2014) study investigates the transfer experiences of three 2E students as they moved from intermediate to secondary school using a capability approach framework (Ng et al.,
The hidden nature of many 2E students’ gifts and learning difficulties, combined with a lack of shared understanding about twice-exceptionality and asynchronous development, mean that students with dual exceptionalities are often considered an enigma in the classroom. The findings highlight difficulties with both the transfer of information, and the nature and extent of the data concerning the dual exceptionalities of the student participants, that impact upon their ability to achieve to a level commensurate with their potential in the new schooling context. The discussion raises questions regarding the depth of teacher understanding, and the nature and availability of opportunities for 2E students in NZ schools, that have implications for the development of personal capability and well-being.

2.2.4.3 Research on twice-exceptional student experiences of schooling.
Edwards (2008) conducted a qualitative study that examines the educational experiences of six primary-school-aged gifted students with AD/HD. She found that the students prefer to engage in tasks that align with their interests and utilise visual teaching media; like immediate rather than delayed rewards and the option to move freely around the classroom; favour clear explanations of a task purpose or the use of enrichment teaching, as well as the use of computers. Consequently, Edwards (2008) encourages the use of personalised learning plans to optimise the provision for, and achievements of, gifted-AD/HD students. Lewis (2015) also conducted an investigation into the classroom interactions of four 2E students and compared these to neurotypical peers. The findings suggest that whilst the four 2E student participants interact in a manner similar to their peers, they report lower self-esteem on an inventory. This is interpreted as implying that social challenges, often associated with learning difficulties, whilst potentially being mitigated by the use of superior cognitive skills, also appear to have an associated personal cost (Lewis, 2015).
2.2.5 Summary of the NZ twice-exceptional research situation.

Currently, 2E students represent one of the most underserved student groups in NZ schools (Sturgess, 2011). As it is the role of the education system to adapt curriculum and teaching strategies to optimise success for all students, further research is needed to examine ways in which provision for 2E students can be improved to achieve more successful and equitable outcomes. The above studies represent the beginnings of research into 2E students in NZ schools. There are many more areas that require investigation, including how 2E students currently navigate the schooling process to negotiate identity, capability and well-being as individuals. Conceptualising students with dual exceptionalities provides the foundation upon which systems of identification and provision are developed, and thus also needs to be examined in the NZ context. It is only by conducting research in the NZ setting that insights into, and development of skills concerning, the education of 2E students in NZ can occur.

2.3 Chapter Summary

This chapter reviewed existing literature on 2E students, especially pertaining to underachievement and the negotiation of identity and capability in the school context. International literature concerning conceptions of twice-exceptionality, issues of social justice and the phenomenon of underachievement were explored. Following this, NZ literature pertaining to the field of gifted education in general, and 2E students specifically, was examined. Within this literature, socio-political factors, underachievement, and issues of identity and capability were considered. The discussion then reviewed NZ research specifically concerning 2E students. The next chapter introduces the theoretical framework of the capability approach, focusing on how it relates to the education of students with learning differences.
Chapter 3: Theoretical Framework

Theoretical frameworks are often used in research to direct a study and provide a basis upon which to analyse findings. However, grounded theorists do not usually employ such structures, as the aim is to generate new theory grounded in the data. Corbin and Strauss (2008) argue, however, that theoretical frameworks have some use in interpreting grounded theory (GT) findings. Birks and Mills (2015) also encourage the application of frameworks to assist “in explaining your grounded theory and discussing the contribution it makes to knowledge in your professional area” (p. 120). In doing so, the new findings are supported by, as well as add to, knowledge of the existing theories related to a field. As all researchers possess knowledge about topics of interest, it is also important to acknowledge such influences as they guide the development, and influence the conclusions, of a study. In this chapter, the theoretical framework of the capability approach, representing a key foundational component of the emergent core category of the nascent theory, will be discussed, especially in reference to its significance in the school context, specifically in regard to the field of special education.

3.1 The Capability Approach

Originally constructed as a critique to mainstream welfare economics and utilitarianism, Sen’s (1985) capability approach proposes that a person’s well-being should not be evaluated just in terms of subjective measures such as happiness, or objective measures such as resources, but rather by the standard or type of life individuals could lead if provided with the right opportunities and freedoms to do so. Sen thus proposes that all people should have access to a range of options from which to choose in deciding what valued outcomes in life they wish to pursue.
The capability approach centres on the idea that people should not only function, but also be afforded opportunities in life to achieve outcomes they deem worthwhile (Nussbaum, 1992, 2003; Robeyns, 2005; Sen, 1985, 2005). As such, it provides a conceptual normative framework for the assessment of individual well-being, the design of social policies, and the analysis of social change proposals (Sen, 1985, 1992). The capability approach uses the dual concepts of functionings (realised achievement in contexts) and capabilities (opportunities to achieve desired functionings) to reveal the difference between outcome and potential (Watts & Bridges, 2006). In the analysis of well-being, the extent to which people have available to them opportunities and freedoms to live the life they wish to lead, establishes parameters for an individual’s capability set. Sen (1992) argues that the evaluation of such opportunities/freedoms accounts for not only the personal circumstance of individuals, but also socially constructed and reproduced norms, these being representative of the mainstream group. Such norms affect personal well-being by directing marginalised groups (such as 2E students, who have ways of being and doing that lie outside the norm), to adjust their aspirations and dispositions to adapt to the reality of limited possibilities and achievements in existing social arrangements (Watts & Bridges, 2006).

This distinction between capabilities and functionings (or potential and outcomes) is important, as considering only functionings in the evaluation of achievements does not provide all the information needed to determine whether outcomes were equitably achieved (Sen, 1992). For example, measuring academic achievement via standardised tests does not reveal the conditions (or capability sets) of individual students, which is an important consideration for students with special-education needs. These underlying differences are pivotal in considering issues of social justice and equitable provision in education. The capability approach thus provides a framework through which to evaluate educational advantage, inclusion, disadvantage, marginalisation and/or exclusion, by examining the
potential or ability of individuals or groups to pursue valued goals (Walker & Unterhalter, 2007).

Human diversity is acknowledged as a central tenet in the capability approach. Differences are considered in the evaluative space using a metric for comparison of relative advantage and disadvantage, this being vital to the assessment of equality of opportunity (Sen, 1992). Sen (1992) argues that individuals are diverse in four ways. Diversities exist in respect of: personal characteristics (including physical and mental abilities); external (sociocultural or environmental) circumstances; inter-individual differences (in their ability to convert resources into freedoms to achieve beings and doings); and in inter-end variations (or conceptions of the good, thought of as an intent to achieve different objectives), which serve as the basis for a metric for comparison (Sen, 1992). Thus, the capability approach acknowledges that human diversity impacts upon the evaluation of well-being and, therefore, on issues of equality of opportunity and entitlement (Sen, 1985). The approach therefore provides a framework for democratically theorising and evaluating context-specific social arrangements in consideration of both personal and sociocultural/political circumstances, that set conditions for individual freedoms (Sen, 1992).

The capability approach encompasses and celebrates all human diversity. It acknowledges that capabilities differ between people for various reasons and that inter-individual differences are of great significance in assessing whether an individual has been afforded conditions under which they can achieve valued outcomes (Sen, 1992). Such conditions are pertinent to debates on justice in the education of special-needs groups such as 2E students. Its focus on functioning and capabilities as evaluative tools for measuring well-being, as well as the influence of conversion factors on outcomes, allows assessment of both individual and contextual factors in investigation of a phenomenon. Every person possesses a unique combination of conversion factors (some of which may be shared with others with the same
group characteristics), which Sen (1992) defines as being features of a commodity or resource that contribute to a functioning. Conversion factors can be divided into three different branches: “personal,” representing internal characteristics of an individual such as a learning difficulty or physical condition; “social,” such school policies or operational norms that unfairly discriminate; and “environmental,” that emerge from the physical locale in which an individual resides. By adopting a capability framework, socio-political factors (such as the availability of opportunities and freedoms at school), as well as personal factors that influence academic success, can better be explored.

3.2 The Capability Approach, Education and Issues of Justice

Sen (1992, 2005) views education as having many benefits and therefore considers it a basic capability. With respect to education, Sen (1992, 2005) argues for the evaluation of well-being by considering the dynamic relationship between opportunities afforded to specific groups or individuals (their capabilities) and the outcomes that they achieve.

Education has the potential to improve personal socioeconomic positioning, whilst also increasing levels of non-economic well-being, which enable individuals to achieve desired outcomes (Watts & Bridges, 2006). Education is also perceived as contributing to the greater social good, as people can use the benefits of education to help not only themselves, but also others. However, the effects of the process of being educated can be twofold. It can either raise self-esteem in those who possess the socially valued attributes needed to achieve, or negatively influence the well-being of those who do not. Watts and Bridges (2006) argue that self-reflexive identification and understanding are key factors critical to debates on accessibility in education, as they influence the development of learner identities, which are grounded in wider social discourse. Social constructions surrounding learner identities and acceptance, as well as positioning in society, act to inform individual beliefs about ability,
performance and well-being, infusing ideas about who individuals are and their place in the world (Bourdieu, 1986, 1994; Nussbaum, 2003; O’Neill & Nash, 2005).

Schools, being organisations of the state, represent and reproduce valued social norms (Codd & Openshaw, 2005; Waitere-Ang, 2005), the effect of which is to embody a capability contraction rather than capability expansion for underrepresented groups (Devecchi, Rose, & Shevlin, 2014; Watts & Bridges, 2006). This comes about because the availability of meaningful learning opportunities is reduced by an uncompromising focus on assessment and accreditation. In most Western societies, including NZ, education provides a form of commodification through certification that shifts and sorts those with prized knowledge and skills, from those who do not. Individuals who do not possess or reflect celebrated social ideals are thus marginalised in society.

Equality is a concept central to the fundamental ideal of social justice in education; however, it is often poorly defined and theorised in government policies, affecting the enactment of just provision in educational practice (Terzi, 2008). Educational equality can be variously thought of as equality in entitlement, inferring sameness in provision for all, or as an equal opportunity in consideration of personal and social circumstances (equity) to achieve through differentiated teaching and learning programmes. The inferred meaning of equality in the education context has therefore wide-ranging implications for the design and implementation of school curricula, as well as the management and resourcing of school systems (Terzi, 2008). In NZ (as well as internationally in countries including the USA and England), vagaries in defining educational equality have influenced school policy and programming, resulting in wide practice variances between schools, especially with respect to the field of special education (Terzi, 2008). Confusion stems from what constitutes a just entitlement to, or distribution of, resources based on the assessment of individual educational needs. Government guidelines are flexibly interpreted at the local level of schools that draft
community-informed education policies and practices. This results in pervasive disparities between schools with respect to identification and provision for different student groups, including 2E students. More precisely defining what equality and equity mean in the education context, at the national level, would assist in providing a more consistent approach to the design and implementation of socially just educational policies (Terzi, 2008).

Equality is an important political ideal as it is both “intrinsically valuable and instrumentally necessary for political legitimacy” (Dworkian, 2000, p. 1). As alluded to previously, education acts in an instrumental way, affording individuals an opportunity to attain better life prospects, and in an intrinsic way, to enhance life experiences and therefore personal well-being (Sen, 1992). Brighouse (2000) argues that with respect to justice in education, individuals should not be advantaged nor disadvantaged by their life circumstances, and resources should be distributed and utilised effectively within the education system to optimise individual achievement. This conception of equality aligned with the principles of liberal egalitarianism, allows for the differential (and therefore equitable) allocation of resources to students with differing ability levels, based on social fairness (Terzi, 2008). This perspective views educational equality in terms of the measure of opportunities, rather than of outcomes (which underlie much educational theory), with an equitable distribution of appropriate provisions being fundamental to the principles of social justice.

3.3 Critiques of the Capability Approach

In his interpretation of the capability approach, Wilson (1991) argues against the ideal of educational equality, as he equates equality with sameness in opportunity and the distribution of resources. However, Brighouse (2000) counter-argues that Wilson’s interpretation of the capability approach’s conception of educational opportunity and resourcing is incorrect, as the approach does not refer to the provision of exactly the same opportunities, but rather
provision of a selection of differentiated opportunities tailored to individual needs. Terzi (2008) further argues against Wilson’s idea of only providing resources to those who can make best use of them, on the basis of this being inequitable and unjust.

Tooley (2000) also argues against the egalitarian principles upon which the capability approach is based, believing that this justifies state interference in education. Tooley believes that a minimum adequate level of education for all is what is socially justified, and that government intervention does not result in greater equality, especially when comparing public and private institutions. However, Brighouse (2000) counters this argument utilising Rawls’ (2001) principles of social justice, which require educational opportunities to be made equally accessible to individuals, regardless of family or personal circumstance, thus justifying state intervention.

Fraser (1998), meanwhile, contends that there should not be a polarisation of perspectives between the need for redistribution and the recognition of marginalised groups in society, as social justice principles demand attention to both. However, she criticises many distributive theories of justice, including the capability approach, for concentrating on issues of economic and material equality. Terzi (2008) counter-argues that Fraser’s (1998) problem lies in critiquing too many normative theories together, resulting in a failure to distinguish between them, leading to misinterpretations of the specifics of the capability approach. The approach actually celebrates human diversity and promotes both redistribution of resources, and special recognition of marginalised groups, alongside developing egalitarian concerns (Terzi, 2008). This is evident when addressing the dilemma of difference (Warnock, 2005), which contextualises and evaluates difference in relation to sociocultural/political arrangements, thus expanding upon a conception of impairment and disability (discussed in Section 3.4) beyond being an individual responsibility. Additionally, the approach also celebrates the democratic inclusion of all voices in decision-making processes with regard to the selection
of valued capabilities. As Robeyns (2003) states, by using a capability approach “preference formation, socialization, subtle forms of discrimination and the impact of social and moral norms are not taken for granted or assumed away, but analysed upfront” (p. 547). The capability approach therefore emphasises the relational nature of special-education needs and works toward expanding individual capabilities within the school context. It thus legitimises the distribution of additional resources, as well as accommodations, in the design of social arrangements, countering Fraser’s arguments (Terzi, 2008).

3.4 Special Needs, Causality and Capability

Central to the issue of equity in education is the persistent controversy surrounding definitions and understandings about what constitutes, and who is eligible for, special-education provision (Terzi, 2008). A shared understanding of terms is central to discussions on inclusion and arguments of social fairness in respect of the distribution of education resources for individuals with exceptional needs.

3.4.1 Defining terms.

Perry, Macken, Scott, & McKinley (1996) define impairment as a “physiological disorder or injury,” which lies in contrast to (dis)ability, perceived as an inability to perform some significant functioning that individuals on average are normally able to do under favourable conditions. Using these definitions, impairment and (dis)ability are seen as two distinct concepts, where impairment may or may not result in a (dis)ability depending on context or existing social and physical arrangements, and “whether or not it is possible to overcome restrictions to functionings relating to impairment” (Terzi, 2008, p. 98). Thus, (dis)ability is visualised as relational, emanating from an interaction between the impairment (an individual trait), conversion factors, and broader social structures that enact the expression of the impairment in a setting. This conception of (dis)ability provides a basis on which to argue
that the specification of effective provisions earmarked to assist in overcoming impairments in particular settings, minimises the chance of that impairment being realised as a (dis)ability (Terzi, 2008), which again, is a matter of social justice. Reimagining impairment and (dis)ability within society in this manner, would help to overcome stigmatising attitudes and beliefs about the capabilities, and, thereby, the potential of 2E individuals to meaningfully contribute to, and fully participate in, society.

3.4.2 Issues of causality.
Theoretical frameworks used in the analysis of (dis)ability issues have historically been polarised by an unhelpful focus on either/or arguments of causality. For example, the medical model is based on individual responsibility for disorders or deficits, assigning classifications or labels to conditions as a means by which suitable interventions can be decided upon and provided. Alternatively, a social-perspective model, as seen in the social model of (dis)ability, advances a social cause for (dis)ability, arguing that it is discriminating social arrangements that construct barriers to people’s full participation in society (Terzi, 2008). Adopting a social-perspective model, impairment is used to describe a “lack of, or defect in a limb, organ or mechanism of the body,” whereas a (dis)ability is defined “as the disadvantage or restriction of activity caused by contemporary social organisation…which excludes people from participation in the mainstream of social activities” (Oliver, 1996, p. 22). Thus, the medical model views (dis)ability as arising from an impairment that is the responsibility of individuals, whereas social models re-examine causality to propose that (dis)ability is caused by social discriminatory policies and lack of provisions in a context (Terzi, 2008). As discussed in Chapter 1, conceptual models and language used to identify and discuss individuals with gifts and talents are also contentious and hotly debated. The models and terminology assigned to special-education groups thus belie the difficulties in accurately assigning causality for neurobiological differences. Such difficulties further infuse
discussions concerning equitable distribution of provisions to meet social obligations that address educational fairness. Reassessment of the approach to these issues is indicated if society is to move beyond the current stalemate as outlined in the discussion above. The capability approach, based on the ideals of liberal egalitarianism, offers an alternative, normative basis on which to re-conceptualise and redesign school systems and arrangements to become more socially just for individuals with special-education needs, including students with dual exceptionalities. This is because it encompasses both individual and sociological elements in the analysis of diverse individual/group needs.

The capability approach achieves this by providing a framework upon which to consider the evaluation of the relative positions of people in a society. It therefore directs the distribution of both benefits and burdens amongst all people without a need to designate causality. By evaluating capabilities in a context, rather than resources or outcomes, the conditions that afford individuals or groups opportunities to realise achievements are investigated, these being influential in the decisions and actions individuals take (Walker & Unterhalter, 2007). Physical and mental exceptionalities require provisions to be distributed to compensate for any vertical inequalities. Such inequalities are representative of the impacts on life functions and capabilities, these being of moral concern (Pogge, 2002). Pervasive, complex social arrangements that operate in developed societies place high demands on individuals who are required to be skilled, compliant and capable citizens. The dominant social framework thus selects, through its construction, who will be included or excluded (Terzi, 2008). Its design should therefore be guided by principles of social justice that seek to intervene on behalf of those who would otherwise be marginalised by the nature of its construction (Hicks & Gennerett, 2011; Kumashiro, 2002; Terzi, 2008). However, this is a complex discourse that requires attendance to the rights and sensitivities of groups that lie outside of the social norm, who may wish to celebrate their diversities by retaining their identifying characteristics,
rather than have interventions (such as correction of an impairment) foisted upon them in the name of social efficiency. Including different groups and voices in the discussion about inclusion, equality and social justice is therefore important in adopting a capability approach. This is because the approach prioritises democratic decision making in the design of social policies and arrangements.

3.4.3 Issues of capability.

Two important and interconnected elements need to be considered in addressing current shortcomings regarding equitable education provision for students with dual-exceptional learning needs. These are the theoretical domain, informed by models and frameworks based on ideological perspectives and understandings, and the practical domain, which directs policy and procedures for dealings with students with neurodiverse learning requirements (Terzi, 2008). In NZ, students with special-education needs are usually mainstreamed in regular schools, as directed by inclusive education policies. However, differences in the practical implementation of this policy have seen variations and inconsistencies between schools in the way in which inclusive practices are applied, and provisions are distributed, to such students.

In this regard, issues of capability to realise valued achievements can be traced to existing difficulties in defining and classifying students with special needs (using existing models and frameworks), as this process determines access to learning opportunities. There are also problems with how to respond to the demands of neurodiverse students who lie outside the mainstream norm, but occupy the same traditional learning space constructed for, and attended by, neurotypical students. This reflects what Warnock (2005) refers to as the “dilemma of difference” in respect of inclusive education practice (Terzi, 2008). Norwich (2014) argues that dilemmas exist because of tensions in conceptualising and identifying individuals with special-education needs, which make the operationalisation of effective
provisions difficult. Additionally, with respect to perceptions of capability, special-education needs, as a construct, can be construed either positively, resulting in appropriate identification and provision for individuals with special learning requirements, or negatively, being discriminating and/or stigmatising, with an associated risk of inadequately responding to needs. The particular conception of special-education needs adopted at the individual or school level, influences the capacity of dual-exceptional students to realise achievements, by determining access to appropriate learning opportunities.

It is the current absence of a coherent and principled framework upon which to base educational policies for students with dual-exceptional learning needs that has led to the situation of widespread inequities in provision. In NZ, varying policies and practices devised at the local-school level result in widespread and pervasive inequalities in the identification of, and provision for, exceptional learners between schools. Additionally, competition for funding of specialist programmes in NZ schools, directed by market-oriented government policies (focused on competition for students at the local level of schools) have negatively impacted upon this situation. This complex interplay of factors means that it is possible that a child will be identified as having exceptional needs, and have them catered for at one school, and yet not be recognised, nor have them catered for, at another. The consequence of a lack of specificity at both the theoretical and practical levels needed to appropriately address dual-exceptional learning needs is an unjust state of affairs. It thus prompts reconsideration of current thinking based on a new unified approach to the education of 2E individuals.

3.5 Special-Education Needs and the Capability Approach

As discussed in Section 3.2, current tensions infusing debates about just provision for exceptional students stem from the ideological conflict of either treating individuals equally (that is, the same) or responding equitably to various needs arising from learner differences.
What counts as special education is contentious; however, debates are unified by the issue of causality and the relationship between an individual’s special learning needs and school systems (Terzi, 2008). As previously alluded to, arguments are typically polarised around the individual (the medical model) and sociological perspectives (social (dis)ability model). However, in reality, both individual and contextual factors are involved in the expression of, and need for provision for, exceptional learning needs. One aspect cannot be viewed independently from the other and so the polarisation of debates structured upon these two models represents an incomplete conceptualisation of the issue. A new theoretical framework through which to view this “dilemma of difference” is therefore required.

The capability approach assumes a unique perspective in this discourse, addressing both the theoretical (level of definition and cause) and political (issues of social justice with respect to equality and entitlement) levels of analysis. Sen (1992) identifies an evaluative space in which socially just arrangements should be considered, whilst also advancing a metric on which to compare individual relative advantage or disadvantage (Terzi, 2008). This evaluative space encompasses the opportunities and freedoms of people to achieve valued outcomes (their capabilities). Sen (1992) argues that it is within this space that equality should be evaluated rather than in the space of resources or welfare. Capabilities are therefore important to consider as they influence the number of real alternatives a person has to achieve well-being, both instrumentally (in respect of individual agency) and intrinsically (Sen, 1992).

Individual exceptionalities are considered part of the spectrum of human diversity and, therefore, as a component of the metric used for the assessment of well-being. However, equally important is the assessment of ability to actively participate, and be heard, in political discourse referencing the design of social policies aimed at inclusion (Dalkilic & Vadeboncoeur, 2016; Nussbaum, 2003; Terzi, 2008). The capability approach thus considers
individual and contextual factors in relation to one another, thereby overcoming either/or arguments of causality. Entitlement is not solely linked to cause in terms of biological or social origins, but rather included in the wider set of capabilities available to individuals. Cause is therefore evaluated in terms of the role it has in impairment, and on the exercise of freedoms to achieve valued beings and doings (Terzi, 2008). The capability approach thereby provides a basis on which, in a multidimensional and relational way, to consider individual difference and special-education needs in a manner that is sensitive to, and reflective of, the complexity of human diversity and social arrangements that exist.

The capability approach argues for a threshold level of fundamental educational entitlements that allow people to achieve the levels of functioning necessary for effective participation in society (Nussbaum, 2000). This is a matter of justice for all individuals; however, dual-exceptional students have different capabilities as well as learning limitations, which result in difficulties in achieving fundamental levels of functionings in mainstream school settings. It therefore follows that these individuals require additional and differentiated opportunities and resources to achieve to a level commensurate with groups representative of the dominant social framework. In adopting a capability positioning, the levels of fundamental provision required to equalise opportunities to develop the learning capabilities of 2E students, are evaluated using a comparative normative framework. This framework helps address issues of educational equality, whilst also avoiding the problem of infinite demand, by establishing a minimum level that determines the distribution of provisions required to achieve basic functioning in society (Terzi, 2008). A criterion for the distribution of resources has to be applied, as a society cannot be expected to fund all the possible capabilities that people have reason to value. In equalising opportunities, rather than resources or outcomes, the capability approach aims to fairly and effectively distribute benefits and burdens amongst all individuals in society (Terzi, 2008). This approach thus justifies the provision of
differentiated and targeted provisions to 2E students in order for them to achieve well-being, in reflection of the opportunities made available to develop their full set of capabilities.

Having stated that there is a threshold minimum for the provision of opportunities for effective functioning in society, it should be noted that this does not mean that high achievement from those with gifts and talents is not celebrated. Indeed, promotion of such capabilities is necessary, both intrinsically, for personal well-being, and instrumentally, for the benefit of society (Terzi, 2008). It is also a matter of social justice. This again addresses the issue of the dilemma of difference where, in education, inequalities in the distribution of resources and opportunities for those with high ability is justified as long as these inequalities serve, or will serve, those who are disadvantaged by personal circumstance or social arrangements (Terzi, 2008). Thus, those who are capable of achieving highly in education should have access to the necessary differentiated resources to support their endeavours. This is because the achievements of individuals with high ability can provide society with long-term benefits, thus improving both individual and social well-being for those least advantaged.

3.6 The Capability Approach and Issues of Inclusion

The capability approach also evokes, through its fundamental principle of democratic participation, full inclusion of individuals and groups in the determination of relevant capabilities, as well as in the development of social policies and arrangements that affect them (Terzi, 2008, 2014). Sen (1992) argues that those individuals most affected by specific social policies should be actively involved in the policy-making process, as they will be the ones largely affected by the decisions made. However, Sen is vague as to how this process of democratic consultation would occur. In an attempt to overcome some of these issues, Nussbaum (2000), in expanding upon aspects of the capability approach, develops a list of
central capabilities, as well as a threshold of adequacy, in the possession of capabilities. The list includes elements such as life, bodily health, practical reason and affiliation, all of which are representative of some combination of internal capabilities and external influences (Terzi, 2008).

Nussbaum’s (2000) list of basic human capabilities is structured upon the Aristotelian concept of the dignity of human life and its moral worth. As such, it is central to evaluating what individuals, as ends in themselves, are actually in a position to achieve in consideration of the freedoms and opportunities available to them. Nussbaum (2000) recognises that a universal set of capabilities requires the establishment of a threshold below which human life loses dignity and worth. This threshold is used as a basis for a minimum upon which social policies and government provision are determined. This political aspect of the capability approach provides a philosophical basis for the advancement of social principles of justice and human rights. Nussbaum (2000) also argues that in developing standards on which to base an egalitarian distribution of resources for different groups in society, the analysis of capabilities, rather than economic or material goods, justifies unequal (but equitable) spending on those who are disadvantaged in a context. This means that individuals with dual exceptionalities should be able to claim political guarantees for full participatory inclusion in social institutions such as schools, as a matter of social justice. Thus, starting with the question of what an individual is able to be and do in the context of what special-education needs they have, and the environmental conditions present, necessitates reconsideration and reassessment of both personal and contextual factors in evaluating individual/group capabilities in a setting (Terzi, 2008).
3.7 The Capability Approach and Issues of Identity and Agency

In adopting a capability approach, people are considered to be active agents in their own development and therefore have an individual responsibility in shaping their lives in a manner that reflects valued life goals (Walker & Unterhalter, 2007). In the education setting, this means individuals have control over chosen learning pathways, this being reflective of personal agency, a key dimension of well-being (Alkire, 2002). Sen considers agency as intrinsically important not only in respect to the exercise of individual freedoms but also as a component of collective action (Walker & Unterhalter, 2007). The development of agency, in contexts such as schools, allows for the possibility of challenging the status quo that typically reproduces social inequalities through the linking of personal circumstances to student outcomes. However, in considering the agency of individuals or groups, the question of equality, in respect of access to opportunities and resources, needs to be examined.

Lack of opportunity or claims to appropriate resources present barriers that act to limit choice, and thereby individual capacity, which “affect the inner lives of people: what they hope for, what they love, what they fear, as well as what they are able to do” (Nussbaum, 2000, p. 31). Thus, personal choice is affected by the nature and extent of the opportunities available in a setting, that can act to reinforce the disadvantaged status of minority groups in a society. With respect to education, evaluating capabilities, rather than functionings, in existing school systems allows attention to issues of student identity and agency.

Investigating the learning conditions in schools that offer the chance to, for example, access appropriate resources or challenge inequitable practices (Brighouse, 2002; McLeod, 2005), affords opportunity to contest operational systems and structures, and therefore helps to attend to issues of social justice for underrepresented groups. This is important as, as Nussbaum (2000) points out, individual choices are shaped by, and informed or deformed by, society and public policy.
3.8 Chapter Summary

This chapter reviewed the theoretical framework of the capability approach. Whilst the capability approach does not purport to be a complete theory of social justice, it does attend to issues of fairness and equality of opportunity (Walker & Unterhalter, 2007). With regard to education, the approach helps to recognise concerns about the equivalence of learning opportunities in considering the learning needs of different student groups. Education is considered a fundamental capability within the approach, as it has the potential to advantage individuals personally, as well as instrumentally, by its role in the expansion of all other capabilities (Sen, 1992). It therefore represents an essential entitlement and its appropriate provision becomes a matter of social justice.

Sen (1992) advances the argument that what we should equalise is not resources or outcomes but rather individual capabilities, based on what people value in, and from, education itself. In this respect, the notion of capability is “essentially one of freedom—the range of options an individual has in deciding what kind of life to lead” (Dreze & Sen, 1995, p. 11). The adoption of this perspective to evaluate educational arrangements in light of principles of social justice, allows individual capabilities to guide assessment, rather than the availability of existing funds, resources or the outcomes that individuals are currently able to command (Walker & Unterhalter, 2007).

The capability approach acknowledges that due to human diversity, individual differences act to promote advantage or disadvantage irrespective of equality in the distribution of resources. Social arrangements further enhance personal benefits or burdens, by the structure of policies and practices that act to either expand or contract the agency of different groups. Unequal opportunities to achieve valued goals arise from inequitable socio-political arrangements, which influence individual decision making and, ultimately, the development of identity,
agency and capability in a context. Nussbaum (2000) argues that individual choices are shaped by the structure of the opportunities available in a setting. Limitations in opportunities or freedoms to pursue valued goals, results in disadvantaged groups coming to accept a relegated position in the social hierarchy, constraining individual hopes, aspirations and personal well-being. The capability approach thus calls for consideration of both personal and contextual factors in the evaluation of socially just arrangements, and the achievement of individual capabilities and freedoms. It was therefore considered an applicable framework to advance the construction of an explanatory theory concerning the phenomenon of underachievement of twice-exceptional students in NZ schools.
Chapter 4: Research Design and Methodology

As demonstrated in Chapters 1 and 2, 2E students in NZ schools are currently at risk of underachieving for their potential when compared with their gifted, non-learning-impaired peers. Therefore, the focus research question for this thesis was developed as follows: How do twice-exceptional students negotiate identity and capability within the New Zealand school system? Using information from questionnaires, extant documents, and semi-structured interviews as data, the objective of the investigation was to generate new theory to help explain the phenomenon of underachievement in gifted students with concomitant learning difficulties. This chapter details the study rationale, aims, and objectives, the research methodology and researcher’s interpretive paradigm, as well as the study design. This is followed by discussion of ethical concerns, the data-analysis procedures, and issues of trustworthiness, credibility and transferability.

4.1 Study Rationale

This research project evolved from the author’s informal observations of, and conversations with, 2E students studying at primary and secondary levels of the NZ education system. As a teacher, the author observed that some 2E students struggle with the process of schooling and have difficulty adapting to the cognitive, academic and socio-emotional demands of the NZ school system. An earlier, small-scale study investigating the transfer of three 2E students from intermediate to secondary school (Ng, 2014), revealed challenges during the transition period, and indicated that limited specialised assistance was available to assist gifted students with learning difficulties over this time (Ng et al., 2016). The paradox of gifted students underachieving due to what was perceived as a mismatch between personal attributes and circumstance, and the social construction of schools, served as a critical juncture from which this study emerged.
As little original empirical research concerning 2E students in the NZ school system currently exists, this study is novel in respect of its research aim, objective and design. The study examines the perspectives of 2E students, their parent(s)/caregiver(s), and teachers/special education needs coordinators (SENCos), alongside the contents of existing school documents concerning 2E students, to develop an in-depth understanding of the current challenges facing this student group. By examining multiple views, the facilitators and barriers to achievement that arise from different spheres of influence are better able to be considered. Spheres of influence identified in this research emanate from personal (immediate), family (proximal), and school (distal) realms, which are guided in construction by wider sociocultural/political narratives. By investigating different perspectives, influential factors can be identified and examined in the hope that, in doing so, greater insight, understanding and supportive measures can be established that enable 2E students to learn and thrive in NZ schools.

4.2 Research Aim, Questions and Objective

Drawing on the complex contexts and issues outlined in Chapters 1 and 2, this project sought to develop a new explanatory theory to help clarify why 2E students typically underachieve in NZ schools when compared with their potential. To help examine this phenomenon, a focus question was derived from an initial exploration of the research data: How do twice-exceptional students negotiate identity and capability within the New Zealand school system? Four further sub-questions supported and directed the investigation:

1. How do twice-exceptional students become aware of, and negotiate their own understandings about learning differences?

2. How do parents/caregivers of twice-exceptional children come to recognise, become knowledgeable about, and seek appropriate provision for their children’s schooling needs?

3. How do NZ schools currently support twice-exceptional students in learning?
4. How does the nature and extent of the support offered to twice-exceptional students in NZ schools influence the negotiation of student identity and capability?

The objective of the research is to present a thesis, in the form of an explanatory theory, in response to the claim that 2E students are currently under-recognised, underserved and thereby underachieving in the NZ school system. The thesis is grounded upon the idea that these students deserve to receive an education that provides them with opportunities to thrive and contribute to society, through the positive development of their unique identity, agency and capabilities. In order to nurture gifts and talents alongside the learning difficulties, these must be identified and appropriately provided for. The process of schooling provides an important opportunity for recognition and provision for dual exceptionalities, and, thereby, for the successful negotiation of a positive student identity that encompasses perceptions of capability, in learning, and in later life.

As different contextual conditions impact upon the development of identity and capability, exploring factors within different spheres of influence that impact upon this process is critical to understanding the phenomenon of 2E student underachievement. Thus, in seeking to develop innovative theory to answer the research questions, this study explores, from multiple perspectives, how 2E students currently negotiate student identity, and their capability to achieve, in NZ schools.

4.3 Research Methodology

The methodological design of a research project acts as a structural framework within which a researcher employs methods and identifies her/his philosophical orientations. Research credibility is dependent upon the use of a research design that ensures quality and rigour throughout the entire research process. A researcher must be able to adequately explain and
justify the selection of a methodological approach to be able to claim trustworthiness in the study outcomes.

### 4.3.1 Historical overview of the development of grounded theory.

Grounded theory (GT) was adopted as the methodological framework for this study as it is concerned with social and social-psychological processes, rather than individual experiences, within a particular setting (Charmaz 2006). Thus, GT is ideally suited to investigations that seek to reveal influencing factors and social arrangements underpinning a particular phenomenon (Braun & Clarke, 2013). GT was originally conceived by Glaser and Strauss (1967) in response to what was considered an over-reliance on the use of existing theories to verify emerging research, which they perceived as being detrimental to the creation of innovative theory. Glaser and Strauss instead promoted the use of inductive reasoning (where new theory is generated from the data) that required researchers not to assume a theoretical position in advance of the analysis of the data. This was a revolutionary approach to research at that time, as it involved data collection and analysis taking place simultaneously, as discussed below. In GT, the emerging theory is iteratively modified as it is constructed by incoming data, to ensure that abstract concepts are verified by the data. More recently, it has been argued that GT has become more closely aligned with abductive reasoning, where in working with an incomplete/small set of observations, intuition is used to infer the most likely explanation for that data set (Kelle, 1995).

Following the first iteration of GT by Glaser and Strauss (1967) there have been subsequent versions, of which three major iterations are explained here. In the 1990s, A. Strauss and Corbin developed what was to become known as “Straussian GT,” which emphasised the influence of symbolic interactionism (the symbolic construction of meaning, especially concerned with language and text, that influences social interactions) and pragmatism (where theories/beliefs are evaluated in terms of their practical application), as well as the need for...
some exposure to relevant literature, upon which to base research studies. Glaser (1992) disagreed with this interpretation, resulting in a rift between parties that saw him establish his own “Glaserian GT,” firmly structured upon the original (classic) version. Reformation of the original version continued with Charmaz (2000, 2006) who developed “constructivist GT,” based on the argument that researchers construct rather than discover theory via social interactions and in reflection of lived experiences. Charmaz’s (2006) version of GT proposed flexible guidelines for data construction and analysis, rather than adherence to strict methodological rules, and is the version employed by the author for this study.

GT differs from other qualitative research methods in that it seeks to explain, rather than just describe, a phenomenon. GT theorists celebrate the depth and complexity of data obtained through methods such as interviewing and document analysis that draw new knowledge from the perspectives of the participants. As such, it is aligned with an interpretivist paradigm. Innovative theory is directly generated from the data as interpreted by the researcher. This interpretation involves investigating how the codes, concepts and categories in the data fit together to create emerging theories about how social and psychological processes influence the research field (Braun & Clarke, 2013).

Grounded theorists pursue fit (how closely concepts align with the events they represent), relevance (the study’s pertinence in consideration of the real concerns of the participants), workability (how the theory performs in relation to the question posed), and modifiability (flexibility of theory in light of new data), rather than traditional validity, and, as such, a theory can never be judged to be right or wrong, but rather more or less in keeping with these four key elements (Glaser, 1978, 1998; Glaser & Strauss 1967). Quality controls are used to enhance procedural trustworthiness and therefore ensure that the findings are of value. Birks and Mills (2015) name three factors that influence the quality of a study, these being researcher expertise (experience), methodological congruence (the fit between the
researcher’s chosen methodology and her/his philosophical perspective) and procedural precision (in reference to the logical management of data), that all interact to influence the credibility of the study, and thus must be attended to throughout the research process.

GT is appropriate for research studies when there is relatively little existing research in the field and the researcher wishes to generate new theoretical understandings about the subject area (Birks & Mills, 2015). Whilst Birks and Mills (2015) argue that researchers need not subscribe to just one version of GT, a researcher’s philosophical leanings will usually align more with one form or another, or sometimes to hybrid forms. For this study, Charmaz’s (2014) constructivist GT was adopted to investigate the perspectives of different stakeholders in the education of 2E students in NZ schools. This approach was selected because of its foundations in pragmatism and relativist epistemology, where understandings about the nature of the world are taken as being influenced by individual experiences. Constructivist GT thus acknowledges that nascent theory is generated through interactions between the researcher and research participants (Charmaz, 2014; O’Callaghan, 2016). This positions constructivist GT between realist (framed on the belief that a real/tangible world exists independent of an observer’s interpretations or perceptions) and post-modernist (no absolute truth exists) orientations (Charmaz, 2006).

4.3.2 Constructivist grounded theory.

Constructivist grounded theorists such as Charmaz (2014) consider the actual process of using GT research to be essential to claiming it as a method. This is because emphasising process during analysis directs attention to the data from which relationships and theoretical concepts are derived. Birks and Mills (2015) consider the following methods as identifying processes of GT methodology: initial coding and the generation of categories from the data, concurrent data collection and analysis, writing memos, theoretical sampling, constant comparative analysis, theoretical sensitivity, intermediate (focused) coding, identification of
key categories, advanced coding, and theory generation. The meanings of, and relationships between, these processes are important and will, therefore, be briefly described.

Initial coding involves applying labels to important words or phrases identified in the segmentary analysis of the data. Tentative categories are then generated from groups of related codes and are considered as theoretically saturated when ongoing data analysis fails to reveal any new concepts and all aspects of that category seem to be satisfactorily explained (Birks & Mills, 2015). Concurrent collection and analysis occurs in an iterative manner as the researcher gathers data from an initial purposive sample of participants, codes the data, then proceeds to collect further data as directed by the previous analysis.

Used alongside repeated data analysis, memos record the thoughts of the researcher as she/he undertakes the research and are useful in developing theoretical propositions. They provide a valuable opportunity to explore the data with an eye to conceptualising abstract associations that lead to the generation of new ideas and, ultimately, original theory. Charmaz (2014) considers the use of memos as critical in promoting quality in the research process, as they assist in managing the ever-increasing volume of data and can be used as evidence to support and justify decisions the researcher makes. Theoretical sampling refers to the strategic decisions researchers make in considering who (or what) will provide the most information to answer the research questions (Birk & Mills, 2015). Constant comparative analysis is the iterative process of comparing codes, events and categories across the data, and employs both inductive and abductive reasoning to challenge conventional views.

A researcher’s theoretical sensitivity reflects her/his positioning and unique insights into the topic, influenced by her/his theoretical knowledge, personal perspectives and intellectual insights. In this respect, Charmaz (2006) argues that researcher reflexivity is critical to promoting research objectivity (as seen by the quote below), where the data directs the
analysis and development of the emergent theory- this being the key component of constructivist GT. Charmaz (2006) defines reflexivity as:

The researcher’s scrutiny of his or her research experience, decisions and interpretations in ways that bring the researcher into the process and allow the reader to assess how and to what extent the researcher’s interest, position and assumptions influenced inquiry. A reflexive stance informs how the researcher conducts his or her research, relates to the research participants and represents them in written reports.

(pp. 188–189)

Intermediate (focused) coding occurs concurrently with, and following on from, initial coding, to both generate newly defined categories, and to link categories together to generate an overview of the developing theory. This process helps reconnect the coded data in abstract ways that raises the level of conceptual analysis with the aim of identifying a core category on which the emerging theory is centred. A final advanced-coding process can also assist with theoretical integration and theory generation, to provide a coherent and comprehensive explanation of the phenomenon under investigation. A. Strauss and Corbin (1990) recommended a process called axial coding to achieve this, providing a pre-set framework for advanced analysis. Charmaz (2014), however, suggests that axial coding limits what researchers can learn about a phenomenon, placing restrictions on coding and the development of nascent theory. Instead, she promotes the idea of theoretical coding, a sophisticated level of coding embedded in the data. Theoretical codes arise from categories and serve as interpretive frameworks that offer abstract elucidations of relationships between data.

4.3.3 Researcher positionality and grounded theory.

Researchers do not approach their studies with a blank slate upon which they develop unbiased theories. Orientation towards a domain is usually borne out of interest based on
previous exposure to literature and/or experiences. The ability to synthesise and develop new theories arises from a developed theoretical sensitivity toward concepts related to the field of interest. Grounded theorists seek to find balance between the requirements of being open minded and yet sensitive to concepts of significance. Acknowledging researcher positionality is an important step toward making clear what philosophical leanings, existing knowledge, professional experience and personal expectations the researcher holds, from the outset of the study.

Merriam et al. (2001) define the term *positionality* as referring to where one stands in relation to “the other.” A researcher’s reflection on, and declaration of, stance helps make visible potential biases that may arise from the ideological frameworks individuals construct to make sense of the world around them (Charmaz, 2008; A. Clarke, 2005). This is especially important when considering the participants and setting of a study, as prejudice towards, or preconceived ideas about, factors such as gender, (dis)ability and/or achievement, influence analysis of collated data. Merriam et al. (2001) claim that researcher reflection on positioning informs research findings, strengthening claims made, by making explicit the researcher’s socio-political perspectives. Similarly, Herr and Andersen (2005) state that “the degree to which researchers position themselves as insiders or outsiders (in a study) will determine how they frame epistemological, methodological and ethical issues in the dissertation” (p. 30).

A researcher’s declaration of positionality reflects their ontological and epistemological beliefs. Constructivists assume a relativist position in the debate about the nature of reality (ontology), where reality is understood in relation to a theoretical framework, paradigm or conceptual understanding about the nature of the world (Blaikie, 2010). Charmaz (2006) believes that reality is perceived as such through the discourse and actions of its constituent members, and is thereby a subjective, fluid concept that is constantly reconceptualised by individuals and wider society. Epistemological beliefs reflect the researcher’s position
regarding the nature of justifiable knowledge (Blaikie, 2010), whether this is through quantitative or qualitative measures, or an amalgam of both. Memos concerning personal perceptions of the world, and how people come to understand it, are useful in making explicit hidden assumptions that influence all aspects of the research, including interpretation of data. Systematic reflexivity in the process of reviewing memos helps to develop researcher self-insight into the nature and direction of these influences (Charmaz, 2014).

The author’s ontological beliefs reflect a critical realist stance, which acknowledges that a pre-social (located behind socially influenced, and therefore subjective) reality exists, but that it is only ever partially accessible to researchers (Braun & Clarke, 2013). This is an important acknowledgement, as researchers must believe that some authentic reality exists to be able to reveal meaningful theory that can make a difference to peoples’ lives. Critical realism provides a platform from which researchers can explore and challenge underlying social structures that help determine individual capabilities. It is therefore useful in emancipatory studies concerned with issues of social justice or equality, and common within the field of qualitative research, including studies employing GT methodology (Charmaz, 2000). For this study, this positioning supports the reality of the claim that 2E students’ unique learning characteristics require the provision of differentiated learning opportunities that cater for both areas of high ability and learning impairment. As such, the investigation seeks to produce new theory that encourages transformational change in the way such students are provided for in NZ schools. In sum, the external reality of 2E students having unique learning differences when compared with their gifted, non-learning-impaired peers, provides the foundation for the creation of new theory. This theory seeks to evoke transformational change to create more equitable learning opportunities for those with dual exceptionalities.

The author’s epistemological concerns of what counts as legitimate knowledge were based upon a constructivist perspective. Epistemological positioning is important, as what is
considered as knowledge helps to determine how meaningful knowledge is created. A basic distinction between differing epistemological positions is whether the researcher considers that reality is either discovered (post-positivist) or created (constructivist) through the process of research (Braun & Clarke, 2013). A post-positivist perspective assumes that researchers influence, and are influenced by, the research process, but aims to control these subjective influences to reveal “the truth.” In contrast, constructivists challenge the notion that knowledge is an objective reflection of reality, rather considering that knowledge is generated through the process of research, influenced by surrounding discourses and socially constructed systems of meaning, which are subject to change (Braun & Clarke, 2013). These changing conceptions of the truth imply that there is not one truth, but rather multiple versions of the truth, and thus a critical approach is taken in its interpretation. In this regard, constructivists recognise that exposure to literature, as well as social discourse and experiences pertaining to a research domain, influences a researcher’s theoretical sensitivity toward a subject of study. Such influences impact upon researcher positionality in that they represent a combination of personal, professional and experiential activities that sway the nature and direction of the research.

Acknowledging the ontological beliefs and the epistemological stance a researcher assumes, at the outset of a study, affords opportunity for conscious self-examination of inferences in analysis of the findings. Whilst quantitative research seeks to be objective, qualitative research is, by nature, subjective and reflexive. As alluded to earlier, Charmaz (2006) regards critical reflexivity as essential in considering the role researchers have in the interpretation and production of knowledge. Whilst functional reflexivity emphasises the role that the research design has in the interpretation of the study conclusions, personal reflexivity brings the researcher into the research and acknowledges the role that their positioning has on the research (Braun & Clarke, 2013).
Being a reflexive researcher is an essential component of qualitative research and helps ensure research quality control. In GT, memoing provides the researcher with an overt method of critically examining existing beliefs that might otherwise subconsciously impact upon interpretation of the study findings. By utilising memoing in this study, the researcher examined her existing beliefs toward the phenomenon under investigation. The author’s personal life experiences, that mirrored those of some of the student participants, may have influenced the findings. However, these experiences also provided benefits, especially in respect to developing empathetic, shared understandings about significant events, that facilitated data creation and interpretation in analysis. Familiarity with medical terms (a consequence of studying a medical-based degree for an earlier career), as well as educational concepts (gathered through teacher qualifications and education degrees), assisted in merging these two oft-considered disparate fields in analysis and development of the explanatory theory. Such understandings facilitated participant interactions, and, as a result, interviews generally proceeded in a relaxed and conversational manner, which assisted in revealing the depth and complexity of the participants’ lived experiences.

4.3.4 Inclusionary versus exclusionary research practice.

As discussed above, making researcher positionality overt is important to GT studies (Charmaz, 2014). A brief overview of exclusionary versus inclusionary research practice, as applied in this study, is included here; because this research sought to be inclusive of, and faithful to, the perspectives of the key focus group, the 2E students, an inclusionary rather than exclusionary research approach was adopted. In contrast to inclusionary research practices, exclusionary research, characterised by omission of focus-group voice and experiences, usually frames the focus group as objects of study, rather than participants in the study. This has been shown to perpetuate misunderstandings about relegated groups in a society (Bryant, 2016). Such studies typically fail to produce transformational change that
addresses issues facing marginalised groups (such as 2E students), who often experience “lack of fit” with mainstream organisations. One essential problem with exclusionary research is that it tends to reproduce the existing social inequalities that affect such groups (Habermas, 1984, 1987).

In contrast, inclusionary research practices occur when researchers collaborate with key participants, which helps to redress an authority imbalance by returning the benefits of the study findings to the participants. Inclusionary research practices thus aim to identify operating exclusionary mechanisms, as identified by members of the focus group, so that existing barriers can be overcome; this later aspect represents the transformational dimension of the research process (Bryant, 2016). In this study, the voices and experiences of 2E individuals (alongside those of parents/caregivers and teachers/SENCos) were sought to reveal unique perspectives that directed the construction of the emergent GT.

4.4 Research Methods

This study employed an embedded mixed-methods approach. The adoption of mixed methods (the collection of both qualitative and quantitative data) is recommended for projects such as this, where the aim of the research is the generation of new theory, typically because existing research in the field is limited (Morse, 2003). The form of embedded mixed methods employed in this research involved the initial collection of quantitative data, which was then used to support the qualitative findings that provided the framework for the study. Employing mixed methods has many advantages including: giving voice to the study participants (via interviews or observation) to ensure that findings are grounded in the data; revealing and helping in the analyses of contradictions between quantitative and qualitative findings; providing methodological flexibility; and allowing for the collection of rich, in-depth data (Wisdom & Creswell, 2013). However, mixed-methods research does present challenges in
that researchers need to be able to access the appropriate resources, and have expertise in both types of data use and analysis, including the ability to combine, evaluate, and interpret the different sets of results (Creswell, 2014).

Another benefit of mixed-method studies is that the collective data is usually viewed as more acceptable to policy makers, who tend to favour numbers over narratives (Creswell, 2014). As the expectation of this research was that it would generate not only new understandings pertaining to the phenomenon of underachievement in 2E students in NZ schools, but also inform education policy and practices, mixed methods were considered the most appropriate approach.

4.4.1 Mixed-methods research.

The use of mixed methods has been shown to help confirm research findings by triangulation of the different data types. This is because triangulation helps offset weaknesses that can be found in methodological approaches that use either quantitative or qualitative methods alone (M. Gardner, 2015). There are four main types of mixed-methods studies, namely: triangulation (quantitative and qualitative data are given equal status and collected concurrently); embedded (one type of data collection is used within a larger design focused on the other data method); explanatory (quantitative methods are given higher priority than qualitative methods); and exploratory (qualitative methods are predominant over quantitative methods; Cresswell & Plano-Clark, 2006; Creswell, Plano-Clark, Gutmann, & Hanson, 2003). As previously described, an embedded mixed-methods approach was chosen for this study because of its appropriateness in approach to both understanding and answering the research questions. In this project, qualitative inquiry was used as the dominant design, with survey results being quantitatively analysed and embedded to inform the findings.
4.4.2 Quantitative data.

In this study, quantitative data in the form of a questionnaire was collected at the outset of the data-collection process. This data was considered as playing a secondary role to qualitative data, although both data types were viewed as essential to answering specific aspects of the research problem. The quantitative data was therefore embedded within the GT methodology, which was, in turn, determined by a focus on the qualitative data.

As some data related to specific research questions, it required quantitative analysis to enable meaningful discussion of the emergent concepts. Statistics were therefore used to assist in the identification and measurement of various factors that influenced discussion of the findings (Fraenkel, Wallen, & Hyun, 2015). This analysis helped to quantify the findings of repeated forms of the research (the questionnaires) to help identify features across multiple data sets. The quantitative analysis also helped to simplify large amounts of data, allowing claims to be made with a specified degree of confidence, to help clarify and explain relationships between certain variables in greater depth (M. Gardner, 2015).

As this study focused on a largely “hidden” and little-understood population of students, accessing participants proved to be challenging. This may have been because of the threat attached to being perceived as different by peers or adults in positions of authority. In this regard, the quantitative questionnaire provided an important first point of contact that was non-threatening to the research participants, yet informative, to the research. The option of a follow-up interview, included within the questionnaire, afforded families of 2E students an opportunity to assess their level of interest in, and commitment to the research. The quantitative questionnaire thus provided a useful means of recruiting willing participants into the research.
4.4.3 Qualitative data.

Unlike quantitative data that seeks to be objective, qualitative data is by nature subjective and reflexive (Braun & Clarke, 2013). Qualitative data seeks to reveal the depth and complexity of individuals’ lived experiences, which can be used to interpret or better understand behaviours or actions arising in response to incidents or events in a particular context. Qualitative data in this study consisted of narratives (collected from semi-structured interviews) and school documents, which were analysed using GT methodology (detailed in Section 4.7). Whilst, in the initial stages of planning the research, it was envisaged that equal weighting would be given to both quantitative and qualitative forms of data, the voices and experiences of the participants in the interviews were compelling. The recollections of lived events by the 2E participants, their families and teachers/SENCo, meant that greater emphasis was given to the qualitative findings in the development of the final theory. This was reflected in the adoption of an embedded mixed-methods approach.

4.5 Ethical Considerations in Mixed-Methods Research

Ethical concerns inform all forms of research; however, qualitative aspects of mixed-methods studies are especially affected by codes of conduct and moral responsibilities towards research participants to help ensure that any chance of harm to those involved is minimised (Creswell, 2007; Punch, 2009). As GT necessarily involves unpredictability and uncertainty from which new directions for further research emerge and evolve, unforeseen ethical and legal concerns can arise along the way (Birks & Mills, 2015). As well as following the protocols approved by an ethics review committee, a high degree of researcher responsibility in terms of an ethics of care is required to be able to adequately respond to these changing situations. In some situations, amendments to human ethics protocols are required during the research process. Lindsay (2010) states that it is the researcher’s responsibility to take appropriate care to minimise the degree of intrusiveness and risk of
negative outcomes for participants associated with a study. In keeping with these factors, the
following ethical considerations were attended to during all stages of the research: informed
consent was obtained from all parties; privacy and confidentiality was maintained during the
research process; the researcher maintained respect for the participants and was alert to
potential researcher-participant power imbalances; and the ownership and use of the data and
findings was made explicit to all parties (Lindsay, 2010; Mutch, 2013; Punch, 2009; D.
Silverman, 2005).

All ethical considerations were guided by the regulations and processes set out by the
University of Auckland Human Participants Ethics Committee (UAHPEC). Emphasis was
placed on the voluntary nature of all the participants’ involvement (V. Robinson & Lai,
2006). Participant information sheets and consent forms were sent out to all parties involved,
detailing the research aim and purpose, time commitment and data-collection processes (see
Appendices A-J). Verbal and written consent and assent (in the case of children under the age
of 16 who had their parents’/caregivers’ consent) was obtained from all participants before
the interviews took place (V. Robinson & Lai, 2006). Participants were offered their
interview transcripts to review and modify, which emphasised the value placed on their input
in the study. The researcher was mindful of treating all research participants with respect,
while reflecting honestly and critically upon the findings to help ensure trustworthiness in the
conclusions (Flick, 2007). Confidentiality (where the researcher has information about
participants that can be used to identify individuals), but not anonymity (where no identifying
information is asked for, and/or the project does not link individuals to responses), was
assured to all participants as part of this ethical process.
4.6 Data-Creation Methods

Data creation consisted of examination of three types of information, namely: semi-structured interviews, cross-sectional questionnaires, and school documents relevant to policy and procedures developed for 2E students. Each data source is described below, under the relevant headings. The procedure for the selection of a sample of schools, and the subsequent invitation to participate in the research to a sample of 2E students, their parents/caregivers, and teachers and SENCos, is described first.

4.6.1 Sample selection.

To initiate the research process, 250 schools (from a total of over 2500 schools registered on the New Zealand School Directory 2015) were purposively selected. Purposive sampling sought to ensure diversity in school type including different decile ratings, school levels and locations, to garner as wide an understanding as possible of the many aspects that contribute to the educational experiences of 2E students. Schools were chosen from throughout NZ (both North and South Island) and the numbers in each area of NZ selected in reflection of local population statistics. For example, Auckland had the highest percentage of schools selected as it has the highest percentage population in NZ. Schools from throughout Auckland’s many suburbs were also chosen to be representative of the diversity in the population found in this large city. The selected schools from throughout NZ were all sent letters, participant information sheets (PIS) and consent forms (CF) (see Appendices A-J) in an introductory research invitation pack.

Of the 250 schools (125 primary or intermediate and 125 secondary schools) initially approached for this project, only eight schools (five primary and three secondary schools) initially consented. The majority of schools did not respond to the research request, and of the small number (n= 16) that did decline, four cited involvement in other research studies, two
referred to other school commitments, two stated having no 2E students on a special-needs/gifted and talented register, whilst the remainder provided no reason. A follow-up email was then sent to the schools that did not respond to the initial request. Several more subsequently declined; however, again, the majority did not respond. A final attempt to gather a larger sample for the study resulted in another 70 schools being selected from the New Zealand School Directory and emailed the introductory research invitation. A second round of emails was again sent out, 2 weeks following the first contact. Only five responses were received from this second round of invitations and of these three more schools agreed to participate. In total, 11 schools agreed to participate out of a total of 320 schools invited nationwide. Due to the low participation rate, an amendment to the ethics application was subsequently made to include 2E students affiliated with an online forum (gifted@lists). This invitation garnered an additional 10 student participants. Table 4.1 presents a summary of the assigned identifying codes and particular characteristics of the participating schools.
Table 4.1

School Summary

<table>
<thead>
<tr>
<th>School Code</th>
<th>School Decile</th>
<th>School Type</th>
<th>School Description</th>
<th>School Character</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>9</td>
<td>Full primary</td>
<td>Co-ed Main urban area</td>
<td>State</td>
</tr>
<tr>
<td>02</td>
<td>6</td>
<td>Secondary</td>
<td>Co-ed Minor urban area</td>
<td>State</td>
</tr>
<tr>
<td>03</td>
<td>10</td>
<td>Full primary</td>
<td>Co-ed Rural</td>
<td>State</td>
</tr>
<tr>
<td>04</td>
<td>8</td>
<td>Contributing</td>
<td>Co-ed Main urban area</td>
<td>State</td>
</tr>
<tr>
<td>05</td>
<td>6</td>
<td>Contributing</td>
<td>Co-ed Minor urban area</td>
<td>State</td>
</tr>
<tr>
<td>06</td>
<td>5</td>
<td>Intermediate</td>
<td>Co-ed Main urban area</td>
<td>State</td>
</tr>
<tr>
<td>07</td>
<td>7</td>
<td>Full Secondary</td>
<td>Co-ed Main urban area Special character</td>
<td>State</td>
</tr>
<tr>
<td>08</td>
<td>9</td>
<td>Full Primary</td>
<td>Co-ed Main urban area</td>
<td>State</td>
</tr>
<tr>
<td>09</td>
<td>2</td>
<td>Secondary</td>
<td>Girls Main urban area</td>
<td>State</td>
</tr>
<tr>
<td>10</td>
<td>8</td>
<td>Secondary</td>
<td>Co-ed Main urban area</td>
<td>State</td>
</tr>
<tr>
<td>12</td>
<td>10</td>
<td>Full Secondary</td>
<td>Co-ed Main urban area</td>
<td>Private</td>
</tr>
</tbody>
</table>

Note: School decile (or socioeconomic decile bands) refers to ratings attributed by the MoE to a school, which are primarily used to calculate funding and support allowances. Lower decile schools receive higher funding allowances to support students’ learning.

School type: Primary (elementary) typically encompasses Years 1–6; intermediate (middle) typically encompasses Years 7–8; secondary (high school) typically encompasses Years 9–13.

School description: Co-ed (co-educational), main urban (city), minor urban (city fringe), rural (outside main city), special character (normally refers to religious school).

School character: State (publicly-funded school), private (mostly privately-funded school).

The SENCo at each of the consenting schools was subsequently contacted and either sent a facilitator-research pack by post or visited by the researcher to personally deliver and explain the research process. The facilitator-research pack contained the teacher and student PIS, CF, and questionnaires (see Appendices A-L), as well as a letter detailing the SENCo’s role as a facilitator in the study, which was to locate and photocopy school documents relevant to addressing the teaching and learning needs of 2E students at the school. The SENCo was also
asked to identify up to 10 teachers at the school with an interest in the field of gifted and
talented education; these teachers were subsequently invited, via a teacher-research pack, to
complete a questionnaire (see Appendix L) with the option of volunteering for a possible
follow-up interview (see Appendix M).

Additionally, the SENCo was asked to identify up to 10 2E students at the school, using
selection criteria provided by the researcher. Twice-exceptional students were defined for
SENCos as individuals with gifts and talents in one or more learning domains, who also had
one or more learning difficulties, including: SLD (such as executive functioning difficulties,
dyslexia, dyspraxia and/or dyscalculia), and/or social-emotional/behavioural difficulties (such
as obsessive-compulsive disorders, anxiety, attention deficit disorders or ASDs).

Additionally, physical impairments such as visual or hearing disorders that affected learning
were included; however, no student participants were identified as having these conditions in
this sample. Selection criteria included the requirement that invited 2E students were on the
SENCo’s or gifted and talented coordinator’s special-needs register, having been identified as
such by an educational psychologist (for both gifts and learning difficulties) and/or medical
practitioner (usually for identification of a learning difficulty) and/or education professional
(for alternative evidence of learning difficulties and gifts and talents). This was to ensure a
valid and consistent sample of 2E students was included in the study. It was also hoped that
in selecting from an existing database at schools, difficulties with home–school partnerships,
such as querying a child’s sudden identification as 2E, would be avoided.

Identified students were invited to participate in the study via the distribution of student-
research packs (tailored for either primary or secondary-school students) containing PIS, CF,
information pamphlets and questionnaires for students that were addressed to parents/
caregivers (see Appendices A-K). The student questionnaires included an option for a
possible follow-up interview (see Appendix M) for up to 15 student participants and their
parent(s)/caregiver(s). Post-paid return envelopes (addressed to the researcher) were provided to all participants to facilitate the consent process and encourage return of the questionnaires. Participants recruited via the online forum had the option of either completing the questionnaire electronically and returning it to the researcher by email, or posting the completed questionnaire to the researcher. A summary of data-creation methods is shown in Table 4.2.
Table 4.2

*Data Creation Summary*

<table>
<thead>
<tr>
<th>Data method and timeframe</th>
<th>Date(s)</th>
<th>Data source used for analysis</th>
<th>Participants</th>
<th>Data-creation process</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>School policy documents</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-week timeframe for consent forms to be returned and documents to be sent.</td>
<td>February to August 2016</td>
<td>School documents pertaining to policies and procedures for 2E students.</td>
<td>Original invite to a total of 320 schools. 11 schools consented to participate and seven returned documents</td>
<td>PIS and CF sent to purposive sample of schools. Consent sought from principals, and/or boards of trustees. SENCos invited to act as facilitators for the study. SENCos at consenting schools sent request for all documentation pertaining to the education of 2E students.</td>
</tr>
<tr>
<td><strong>Questionnaires</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-week timeframe for completed questionnaires to be returned.</td>
<td>April through to September 2016</td>
<td>Student and teacher/SENCo questionnaires: 80 received in total</td>
<td>54 teachers/SENCos 26 students</td>
<td>Research packs sent out to SENCos at consenting schools. SENCos invite identified 2E students via parents/caregivers using student-research pack. SENCos also invite teachers with an interest in gifted and talented education, using teacher-research pack. Return envelopes provided for questionnaire CFs, questionnaires and interview CFs for all invited parties. Online electronic invitation also sent via gifted@lists forum.</td>
</tr>
<tr>
<td><strong>Interviews</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conducted over an 8-month period.</td>
<td>April through to November 2016</td>
<td>Interview transcripts</td>
<td>18 teachers/SENCos 12 family interviews</td>
<td>One follow-up semi-structured interview with consenting teachers or families. Transcripts offered to participants for member-checking within 6 weeks of transcription of interviews.</td>
</tr>
</tbody>
</table>
4.6.2 Participant selection.

Participation in research is always influenced by the availability and willingness of organisations and individuals to be involved. It is further complicated when participants are stigmatised and marginalised in society because of perceived social differences. The design of this project, with the initial approach to 2E students and their parent(s)/caregiver(s) being made through school principals, boards of trustees, and SENCos, proved to be somewhat of a barrier to recruiting participants. This may have been, in part, a reflection of the lack of recognition of 2E students in NZ schools, arising from various and vague conceptions of dual exceptionality. In addition, NZ SENCos, who have responsibility for appropriately providing for neurodiverse students, are not required to have specialist qualifications in special-education needs, and this may have impacted upon willingness to be involved with the research.

Additionally, to meet UAHPEC requirements, students under the age of 16 years needed parent/caregiver permission to participate in research studies. Since many conditions that lead to twice-exceptionality have a genetic basis (Gagné, 2013; Kalbfleisch 2009, 2012), and given that these learners have historically been underserved in the education system, parents/caregivers may have been uncertain about the impact of their child’s involvement in the research. As a result, a smaller participant sample than originally envisaged resulted from the research invitation. However, a substantial amount of information was gathered for analysis from consenting schools and individual participants. Table 4.3 provides a summary of the types of data collected from each school, as well as from participating students and their families.
Table 4.3

Summary of School Data Sources

<table>
<thead>
<tr>
<th>Code</th>
<th>School Documents</th>
<th>Teacher Questionnaires</th>
<th>Student Questionnaires</th>
<th>Teacher Interviews</th>
<th>Student-Family Interviews</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Yes</td>
<td>8</td>
<td>1</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>02</td>
<td>Not supplied</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>03</td>
<td>Yes</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>04</td>
<td>Not supplied</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>05</td>
<td>Yes</td>
<td>4</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>06</td>
<td>Yes</td>
<td>10</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>07</td>
<td>Yes</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>08</td>
<td>None available</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>09</td>
<td>None available</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>10</td>
<td>Yes</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>12</td>
<td>Yes</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

| Totals | 54 | 16 | 18 | 11 |

As previously mentioned, in addition to the 2E student participants invited through schools, students and parents/caregivers were also invited via an online invitation. A summary of these participant sources is seen in Table 4.4

Table 4.4

Summary of Online Participants

<table>
<thead>
<tr>
<th>Code for Online Participants</th>
<th>Student Questionnaires</th>
<th>Student-Family Interviews</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assigned only a numerical code</td>
<td>10</td>
<td>1</td>
</tr>
</tbody>
</table>

In total, 26 student questionnaires were received (16 school participants and 10 online participants). Of the 26 student questionnaires received, only three were from female students, the remaining 23 identifying as males. This represents a female to male ratio of approximately 1:8. Whilst the small sample size precludes an assumption concerning bias in
identification processes in the participating schools, this was an interesting finding, mirroring those of international research studies. For example, Bianco et al. (2011) and Heller (2013) consider gendering to be influential in the identification of gifted/exceptional students, resulting in female students frequently being overlooked, in part due to societal beliefs, attitudes, and expectations, which influence the expression and recognition of learning behaviours. In respect of the diagnosis of twice-exceptionality, of the 26 student participants, 21 were assessed as being 2E by an educational psychologist, one through a general practitioner, and the remaining four using school identification procedures via the SENCo.

Summaries of the student and teacher/SENCo interview participants are detailed in Tables 4.6 and 4.7 respectively. A table explaining the transcript keys (Table 4.5) is included first to explain the coding system used for participants throughout this thesis. A consistent coding system was employed to ensure links between the school, questionnaire and interview data could be made for the same participant.

Table 4.5

Transcript Key

<table>
<thead>
<tr>
<th>Participant</th>
<th>Code (C) example</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Student Participant</td>
<td>C01A</td>
<td>School code (e.g., C01) followed by a participant code represented by a letter of the alphabet (excluding S).</td>
</tr>
<tr>
<td>Online Student Participant</td>
<td>C19</td>
<td>Numerical code with no alphabetical coding.</td>
</tr>
<tr>
<td>Teacher/SENCo Participant</td>
<td>C0101 or C01S</td>
<td>School code followed by a participant code represented by a number, or S for SENCo.</td>
</tr>
<tr>
<td>Family Participants Interview</td>
<td>T9F C07L 03.06.16</td>
<td>Transcript (T) number with F (family), followed by the student participant code (C) (as per questionnaire code) followed by the date.</td>
</tr>
<tr>
<td>Teacher/SENCo Participants Interview</td>
<td>T2 T/DP C0202 23.05.16</td>
<td>Transcript (T) number followed by codes T (teacher) and/or DP or AP (deputy or associate principal) and/or S (SENCo) and/or G&amp;T (gifted and talented coordinator) then the participant code (C) (linked to questionnaire code) followed by the date.</td>
</tr>
</tbody>
</table>
As information for the domains of exceptionality were derived from the student questionnaires and then confirmed at the time of the interviews with the students and their parent(s)/caregiver(s), references to learning strengths and difficulties were framed in everyday language in most cases. This was despite the fact that most of the student participants had either an official diagnosis of dual exceptionality from a specialist such as an educational psychologist (Ed. Psych.), psychologist (Psych) or general practitioner (GP) or had been tested in-school by a SENCo. This meant that learning strengths were typically referred to in relation to an academic subject domain such as English or mathematics, and weaknesses with respect to spelling or writing, as a skill, rather than in terms of neurophysiological differences such as dyscalculia, dyspraxia or ASD, although dyslexia was the exception to this trend.

The use of lay-terms highlights current difficulties in participating in a shared discourse about twice-exceptionality based on a common language that spans the intersecting medical, educational and social domains of operation. Developing a shared language is critical to advancing understandings about, and provisions for, gifted students with learning difficulties, especially with respect to establishing a coordinated response to address their diverse cognitive, academic and socio-emotional/behavioural needs.

Table 4.6

*Student Interviews*

<table>
<thead>
<tr>
<th>Code</th>
<th>Gender</th>
<th>Age</th>
<th>Schooling Level</th>
<th>Learning Strength</th>
<th>Learning Difficulty</th>
<th>Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>C01B</td>
<td>M</td>
<td>10</td>
<td>Primary</td>
<td>Reading &amp; mathematics</td>
<td>Anxiety and socio-emotional difficulties</td>
<td>Psych.</td>
</tr>
<tr>
<td>Code</td>
<td>Gender</td>
<td>Age</td>
<td>Schooling Level</td>
<td>Learning Strength</td>
<td>Learning Difficulty</td>
<td>Diagnosis</td>
</tr>
<tr>
<td>-------</td>
<td>--------</td>
<td>-----</td>
<td>-----------------</td>
<td>------------------</td>
<td>---------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>C03A</td>
<td>M</td>
<td>11</td>
<td>Intermediate</td>
<td>Science, art &amp; technology</td>
<td>Mathematics, spelling &amp; writing</td>
<td>GP</td>
</tr>
<tr>
<td>C03B</td>
<td>M</td>
<td>10</td>
<td>Primary</td>
<td>Writing, science &amp; reading</td>
<td>Mathematics &amp; art</td>
<td>Ed. Psych.</td>
</tr>
<tr>
<td>C07C</td>
<td>M</td>
<td>15</td>
<td>Secondary</td>
<td>English</td>
<td>Writing &amp; mathematics</td>
<td>SENCo</td>
</tr>
<tr>
<td>C07D</td>
<td>M</td>
<td>14</td>
<td>Secondary</td>
<td>Science &amp; mathematics</td>
<td>Processing speed, writing &amp; organisation</td>
<td>SENCo</td>
</tr>
<tr>
<td>C07L</td>
<td>M</td>
<td>14</td>
<td>Secondary</td>
<td>Mathematics &amp; reading</td>
<td>Writing &amp; fine motor skills, ASD</td>
<td>Ed. Psych.</td>
</tr>
<tr>
<td>C08G</td>
<td>M</td>
<td>11</td>
<td>Primary</td>
<td>Information technology</td>
<td>English as a subject &amp; mathematics</td>
<td>SENCo</td>
</tr>
<tr>
<td>C12Z</td>
<td>M</td>
<td>15</td>
<td>Secondary</td>
<td>Art, computing &amp; science</td>
<td>English as a subject &amp; dyslexia</td>
<td>Ed. Psych.</td>
</tr>
<tr>
<td>C20</td>
<td>M</td>
<td>17</td>
<td>First Year Tertiary</td>
<td>Mathematics &amp; physics</td>
<td>Dyslexia</td>
<td>Ed. Psych.</td>
</tr>
<tr>
<td>C21</td>
<td>M</td>
<td>20</td>
<td>Third Year Tertiary</td>
<td>Biology, chemistry &amp; physics</td>
<td>Dyslexia</td>
<td>Ed. Psych.</td>
</tr>
</tbody>
</table>

The teacher/SENCo participants had additional codes relating to their school level (P= Primary, I=Intermediate, and S= Secondary school), teaching position (T= classroom teacher, DP or AP = deputy or assistant principal, SENCo = special education needs coordinator, G&T= gifted and talented coordinator), and achievement of, or participation in, specialist qualifications or courses (SEN= special education needs, G&T= gifted and talented, MEd= Master of Education, and PLD= professional learning and development course).
Table 4.7

*Teacher/SENCo Interviews*

<table>
<thead>
<tr>
<th>Code</th>
<th>Gender</th>
<th>Age Bracket</th>
<th>Position</th>
<th>Length Teaching Service</th>
<th>School Level</th>
<th>Frequency of Contact with SEN Students</th>
<th>Specialised Qualifications or Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>0108</td>
<td>F</td>
<td>35–45</td>
<td>T</td>
<td>10 years</td>
<td>I</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>01S</td>
<td>F</td>
<td>35–45</td>
<td>G&amp;T and DP</td>
<td>16 years</td>
<td>N/A</td>
<td>Weekly</td>
<td>None</td>
</tr>
<tr>
<td>0102</td>
<td>F</td>
<td>35–45</td>
<td>T</td>
<td>19 years</td>
<td>P</td>
<td>Daily</td>
<td>SEN (PLD on Down syndrome and ASD)</td>
</tr>
<tr>
<td>0107</td>
<td>F</td>
<td>45+</td>
<td>T/SENCo and AP</td>
<td>35 years</td>
<td>P</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>0202</td>
<td>M</td>
<td>45+</td>
<td>DP</td>
<td>25 years</td>
<td>S</td>
<td>Daily</td>
<td>None</td>
</tr>
<tr>
<td>0209</td>
<td>F</td>
<td>45+</td>
<td>T/Dean</td>
<td>20 years</td>
<td>S</td>
<td>Daily</td>
<td>None</td>
</tr>
<tr>
<td>0507</td>
<td>F</td>
<td>45+</td>
<td>T</td>
<td>20 years</td>
<td>P</td>
<td>Daily</td>
<td>SEN (short PLD on ASD)</td>
</tr>
<tr>
<td>05S</td>
<td>F</td>
<td>45+</td>
<td>T/SENCo and AP</td>
<td>36 years</td>
<td>P</td>
<td>Daily</td>
<td>SEN</td>
</tr>
<tr>
<td>0603</td>
<td>F</td>
<td>25–35</td>
<td>G&amp;T and T</td>
<td>5 years</td>
<td>I</td>
<td>Daily</td>
<td>None</td>
</tr>
<tr>
<td>07S</td>
<td>F</td>
<td>35–45</td>
<td>G&amp;T and T</td>
<td>6 years</td>
<td>S</td>
<td>Daily</td>
<td>G&amp;T (PLD)</td>
</tr>
<tr>
<td>0709</td>
<td>F</td>
<td>25–35</td>
<td>T</td>
<td>8 years</td>
<td>S</td>
<td>Daily</td>
<td>G&amp;T (MEd)</td>
</tr>
<tr>
<td>0704</td>
<td>F</td>
<td>45+</td>
<td>T/SENCo</td>
<td>14 years</td>
<td>S</td>
<td>Daily</td>
<td>G&amp;T and SEN (PLD)</td>
</tr>
<tr>
<td>0700</td>
<td>F</td>
<td>35–45</td>
<td>T/Dean</td>
<td>Not stated</td>
<td>S</td>
<td>Daily</td>
<td>Not stated</td>
</tr>
<tr>
<td>0801</td>
<td>F</td>
<td>45+</td>
<td>SENCo</td>
<td>25 years</td>
<td>P</td>
<td>G&amp;T and SEN (PLDs)</td>
<td></td>
</tr>
<tr>
<td>0806</td>
<td>M</td>
<td>35–45</td>
<td>T</td>
<td>6 years</td>
<td>P</td>
<td>Daily</td>
<td>None</td>
</tr>
<tr>
<td>0809</td>
<td>F</td>
<td>45+</td>
<td>T/DP</td>
<td>20 years</td>
<td>P</td>
<td>Daily</td>
<td>None</td>
</tr>
<tr>
<td>09S</td>
<td>F</td>
<td>45+</td>
<td>T/SENCo</td>
<td>10 years</td>
<td>S</td>
<td>Daily</td>
<td>SEN (PLDs)</td>
</tr>
<tr>
<td>1205</td>
<td>M</td>
<td>35–45</td>
<td>T</td>
<td>19 years</td>
<td>S</td>
<td>Daily</td>
<td>SEN (PLD)</td>
</tr>
</tbody>
</table>
4.6.3 School documents.

Documents for analysis are sometimes considered secondary data sources, defined as data constructed by someone else and used for an alternative purpose (Birks & Mills, 2015). Prior (2008), regards documents as more than just informants on existing events, considering rather what they reveal about what is done, or being done, in relation to an event under study. A researcher may therefore use a document to discover what an author set out to accomplish, the processes involved, the audience affected, as well as how the document is interpreted, viewed and utilised by stakeholders (Charmaz, 2014). In this regard, documents are not objective “facts” but tools created for specific purposes to fulfil a need, whether this be social, political, economic, cultural, operational or contextual in design. The construction and language of a document belie the underlying socio-political discourse of the time, as does an absence of information pertinent to an event under study. Documents that direct policies and procedures in schools therefore serve as both an account of, and discourse on, the current beliefs, values, understandings and conventions pertaining to the focus of the document. They serve as an indication of the degree of seriousness or willingness to achieve outcomes in respect to accountability for actions, and consequences for inaction, pertaining to a phenomenon. In this research project, these documents included individual school policies and procedures concerning 2E students.

The SENCo at each school were asked to locate and photocopy any school documents relevant to identification of, and provision for, 2E students, including school policies, processes and procedures pertaining to the education of gifted students with learning difficulties. Out of the 11 schools participating in the research, seven returned school documents, posted back to the researcher using the post-paid return-address envelope, provided in the SENCo facilitator pack.
4.6.4 Questionnaires.

Cross-sectional questionnaires are used to collect information from a predetermined sample at a single point in time (Fraenkel et al., 2015). Two questionnaires were designed for this project, one for 2E students and another for teachers/SENCos. Both questionnaires included closed (measured on a Likert [1932] scale) and open-ended questions (Appendix K & L). The Likert scales ranged in value between one to six, with one representing the lowest value and six the highest-value response to a question. The student questionnaire had an additional column that allowed respondents to indicate if a particular strategy was not offered at a school, this being coded as zero. These responses were analysed statistically, whilst the open-ended responses were examined using an inductive/abductive approach as part of the analysis of the qualitative findings. In total, 80 questionnaires were received: 54 from teachers/SENCos and 26 from 2E students.

Prior to distribution of the student questionnaire (Appendix K), pilot trials were conducted with 52 general education students from two Year 9 classes at a secondary school. Students reported problems with interpretation of just one of the questions, which was subsequently modified. The teacher/SENCo questionnaire (Appendix L) was also piloted with five secondary-school teachers; however, no changes were necessary to the survey questions or layout.

The student questionnaire set out to reveal the perceived degree of helpfulness of specific teaching strategies. It also sought data on measures of academic, social and emotional self-efficacy using a modified “Self-Efficacy Questionnaire for Children—Brief Survey on Academic, Social and Emotional Self-Efficacy,” originally designed by Muris (2001). Of the 26 2E students who completed the questionnaire, six attended primary/intermediate (aged 10–12) and 18 attended secondary school (aged 13–18). Two additional participants had recently transitioned from secondary school to tertiary education; however, their responses
were considered valuable in informing the findings as they completed their pre-tertiary education in NZ.

The teacher/SENCo questionnaire sought information about educator background, familiarity with relevant policies and concepts, and extent of experience in working with different 2E student groups. It also included questions regarding the importance of relative indicators for referral, the level of responsibility of various providers for delivering learning support, as well as the level of difficulty of various factors related to educational provision for 2E students. In addition to the Likert-scale items mentioned above, educators were asked in an open-question format about teaching strategies employed at their school, the focus of teaching and learning strategies and school methods of identification and evaluation for 2E students.

Sufficient time (4 weeks) was allowed for participants to respond to the questionnaires. The questionnaires were confidential to the researcher but not anonymous, as individual codes were included to enable participants to withdraw data within a 6-week period following receipt of the questionnaires. This was detailed on the PIS and CFs for the questionnaires (Appendices A-D and G-H).

4.6.5 Interviews.

Semi-structured interviews (Appendix M) were conducted to gain a greater understanding about the depth and complexity of issues facing 2E students in NZ schools. These were sought from three different perspectives: those of the 2E students, the 2E students’ parents/caregivers, and teachers/SENCos. The interview questions for the teacher/SENCos were piloted with five secondary-school teachers and one primary school teacher; however, this did not result in any changes to the structure or format of the questionnaire. The student interview questions were similarly reviewed by three students with the same result.
The use of interviews as an open-ended data-collection method enables participants to respond to questions that they believe pertinent, in a manner reflective of their personal experiences and perspectives, without being unduly influenced by the researcher’s beliefs (Delaney, Johnson, Johnson, & Treslan, 2010). Interviews can also help to overcome problems experienced by individuals who have learning difficulties that affect ability to, for example, read or write, as seen in conditions such as dyslexia and dyspraxia (Mutch, 2013). Twelve family interviews, which included a 2E child and their parents/caregivers, and 18 teacher/SENCo interviews were conducted, participants having indicated their interest on the invitation form sent with the questionnaire. The number of interview participants was limited so that an in-depth analysis of the narratives that explored underlying meanings, rather than just descriptions, of events, could occur.

The interplay between the researcher and research participants, especially in interviews, influences the nature of the findings through the reciprocal shaping of the data that is collected. Constructivists believe that it is impossible to separate the researcher and participant (Birks & Mills, 2015) and Charmaz (2014) states that recordings and transcripts reveal much about the “nuances of language and meaning” (p. 99). It is because of this interplay between participants and the researcher that interviews cannot be considered neutral interactions, but rather negotiated, context- and time-specific constructions of an individual’s current lived reality (Kvale & Brinkmann, 2009). GT methodology requires that researchers acknowledge and reflect upon the influence of authority and power imbalances during the research process. Developing a rapport with participants, and showing concern and respect for differing perspectives, are two methods by which such imbalances may be addressed and minimised.

Scheduling interviews in a place familiar to participants helps to ensure they are at ease and allows interviews to flow in the direction of the participant’s choosing, within the boundaries
of the research domain (Birks & Mills, 2015). Interviews were organised to take place at each student’s school, or teacher’s place of work, at the end of the school day (so as not to interrupt normal schooling) in a pre-arranged location. This was in keeping with the protocol set out on the PIS. The interviews were recorded using a digital-recording device and transcribed soon after by the researcher, who also made field notes and wrote memos pertaining to the interview context and ambience. Transcripts were returned to most of the participants for member-checking, to assist in promoting trustworthiness in the study. Charmaz (2006) argues that such a process is unreliable, as people’s perspectives are subject to change over time and in different contexts. Since grounded theorists aim for high-level conceptual theorisation of an event or phenomenon, member-checking is often considered a redundant process (Birks & Mills, 2015). However, this process was included to help ensure trustworthiness, and it provided an opportunity for the researcher to return, to re-interview participants as and when necessary. This opportunity to revisit participants is part of essential GT method, through which theoretical saturation of concepts and categories occurs.

4.7 Data Analysis

In GT two main rules apply in data analysis. The first is that everything is a concept, and the second is that analysis must be aligned with decisions made about the research question, aims, and unit of analysis (Birks & Mills, 2015). Concepts are words or categories that help explain how data varies between the sources or unit of analysis in the study. While different terminology is used by various grounded theorists to describe aspects of the data-analysis process, the underlying ideas behind these terms is essentially the same across the field. Following Charmaz (2014), this thesis uses the terms initial coding, focused coding and categories to describe stages of data analysis, with significant categories being referred to as theoretical concepts and higher level (advanced) concepts being termed theoretical codes.
Constructivist GT requires the adoption of an analytic questioning style when coding data. Data analysis always proceeds from lower-level codes to higher level concepts. Codes are words or phrases that are used to identify reoccurring patterns or concepts in the data (Birks & Mills, 2015). The process of coding represents the vital link between the collected data and emergent theory and occurs in a minimum of two phases, these being an initial and then focused coding stage (Charmaz, 2014).

Charmaz (2014) promotes the use of gerunds (a verb functioning as a noun, always ending in an -ing) when coding, so that the focus is on actions, events, and meanings that help to reveal a participant’s experience of an incident or phenomenon. For instance, in this study the code “feeling misunderstood” referred to incidents where 2E students and their parent(s)/caregiver(s) felt a disconnect between teacher/school understandings of twice-exceptionality and the actual experience of being 2E. Charmaz argues that this form of coding “curbs our tendencies to make conceptual leaps and to adopt extant theories before we have done the necessary analytic work” (p. 117). This technique of coding sets grounded theorists apart from other qualitative methods that typically code for topics or themes in the data.

The GT process of coding is iterative but also interactive, in that not only does the researcher directly meet with participants, but she/he also examines and re-examines collected data to assist in accurately portraying participants’ tacit meanings (Birks & Mills, 2015). No researcher is unbiased, as individuals are products of collective experiences that influence thoughts and perceptions of events. The language employed when coding is, therefore, reflective of the researcher’s worldview. It is here that the importance of declaring researcher positionality (discussed in Section 4.3.3) comes to the fore, due to its influence on the process of coding, abstraction, and theory construction.
Charmaz (2014) believes that recognising and understanding participants’ perspectives through the reading, re-reading and coding of the data allows for novel insights to arise in research. The researcher’s disciplinary experiences and own worldview create a unique positioning in respect of interpreting the data, often revealing perspectives not previously obvious to others. In this manner, hegemonic processes can become obvious and hidden assumptions or stereotypes made visible, providing opportunity for the creation of innovative theory (Charmaz, 2014). To facilitate the reading of the remaining sections of this thesis, a table of the key processes of the explanatory theory as they relate to constructivist GT is supplied (Table 4.8). Each process is explained in detail in the following sections.

Table 4.8

<table>
<thead>
<tr>
<th>Process</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line-by-line coding</td>
<td>Margin addition on transcripts</td>
</tr>
<tr>
<td>Initial codes</td>
<td>“developing awareness”</td>
</tr>
<tr>
<td>Focused codes</td>
<td>Becoming Aware</td>
</tr>
<tr>
<td>Subsidiary categories</td>
<td>Understanding-self</td>
</tr>
<tr>
<td>Identified properties of core category</td>
<td>Imagining-self</td>
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<tr>
<td>Core category</td>
<td>Categorising-self</td>
</tr>
<tr>
<td>Theory</td>
<td>Conceptualising Difference</td>
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<tr>
<td><strong>Negotiating Student Identity and Capability</strong></td>
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with its critical and analytical analysis (see Appendix N). This process helps to focus researcher attention on the nuances of the text that may prompt innovative perspectives on issues previously undetected. It is a technique suited to interviews and document analyses, as it allows for identification of “implicit concerns and explicit statements” (p. 125) both within and across texts. Coding can also be done word-by-word or incident-by-incident, depending on the data type, purpose of the research and level of abstraction.

Initial codes are representative of what is happening in the text, setting up the relationship between the participants and the data by labelling segments but are also provisional (or tentative) and may be discarded as other analytic possibilities present as a more suitable fit. Initial coding is done instinctively as the researcher moves through the data, with the codes being representative of snippets of action, descriptions or the progression of events that reveal the participants’ perspectives (Charmaz, 2014). In GT, codes emerge from the data rather than being applied from an adopted framework for analysis. For example, “recognising exceptional traits” coded for events where parents/caregivers remarked upon their first inklings of dual exceptionality in respect of their child’s development. Significant codes are later developed into broader theoretical categories, which act to effectively synthesise and organise larger amounts of data (Charmaz, 2014).

Initial coding requires alertness to actions within the data, with the language of the codes also being expressed as actions (Charmaz, 2014). This form of coding directs the researcher to examine happenings within the text in depth, rather than focus on characteristics of individuals, which can limit data analysis and reproduce existing theories about a phenomenon (Charmaz, 2006). For example, coding incidents of conflict between 2E students and teachers/schools gave rise to the code “recognising asynchrony and difference.” This code phrase gave life to incidents that, for example, saw a young 2E child and his mother summoned to meet with senior school management to discuss issues of behavioural
compliance (not being able to keep still on the mat) in the classroom. The parent recognised that her child could not contain himself in the same way that other children in the class could, and that this was an issue for the classroom teacher. Due to the reported severity and ongoing nature of the problem, specialist advice was sought that resulted in the diagnosis of dual exceptionality (T9, C07L, 03.06.16).

Constant comparisons made between codes, incidents, concepts and categories, at all levels of data analysis, is a feature of GT that sets it apart from other qualitative methodologies (Birks & Mills, 2015). Constant comparative methods provide a means whereby researchers can systematically access and analyse different perspectives in data, which is then used to generate new theory to explain a phenomenon under study. To achieve this, data is broken into incidents or events (Glaser & Strauss, 1967), which are coded, and later categorised, as discussed above. This iterative process of comparison, involving both inductive and abductive thought and reasoning, results in the generation of high-level, conceptual categories defined by distinct dimensions and properties.

4.7.2 Focused coding.

Whilst initial codes provide possible routes for analysis, focused coding acts to condense or subsume early codes (that highlight important aspects of the emerging analysis) into larger collections of data, and are therefore analytically useful (Charmaz, 2006, 2014). Focused codes are used to comparatively analyse and conceptualise these larger sections of data, to help reveal underlying patterns or perspectives used to form the framework for analysis. At this stage, the researcher moves from being immersed in the raw data to interpreting it, and, as such, informed inferences become an important means through which the analysis proceeds (Charmaz, 2006).
In conducting focused coding, Charmaz (2006) suggests that researchers ask which of the initial codes reveal patterns or trends, or best account for the data, as these questions often indicate the need to elevate initial codes to focused-code status. Focused codes are typically designed to be more abstract so that they encompass larger collections of initial codes under an umbrella term or phrase (Charmaz, 2006). Focused coding signals a shift to a higher level of analysis, indicated by a change in emphasis on narrow codes to broader conceptual categories, and involves clearly defining the properties and dimensions of categories to allow relationships between them to be explored (Charmaz, 2014). This occurs in part due to code-saturation, where no further initial codes are generated from the data, but is also a recursive process (Braun & Clarke, 2013). Advanced memos and free-writing which relate to the developing conceptual analysis, help to organise, analyse and integrate emerging categories and their properties, so that relational statements can be inferred (Braun & Clarke, 2013). This process also increases theoretical sensitivity toward the phenomenon under study, as codes, concepts and categories emerge from the data and are systematically sorted as part of theory integration (Charmaz, 2006). As analysis is always grounded in the data, the research question may also be refined at this stage to reflect the direction of the emerging inquiry.

In this study, focused codes either arose de novo or were elevated from initial codes. For example, in coding 2E students’ early perceptions of having dual exceptionalities, three initial codes that accounted for the responses of the different students were generated. These initial codes were: “becoming aware,” “developing early understandings,” and “realising differences.” In developing a code that adequately encompassed all three of these initial codes, becoming aware was elevated to focused-code status as it captured the data from all the initial codes within it.
4.7.3 Subsidiary categories.

Subsidiary categories are constructed from the emergent relationships between the different codes. A subsidiary category "captures something important about the data in relation to the research question and represents some level of patterned response or meaning within the data set" (Braun & Clarke, 2006, p. 82). They are, therefore, conceptually broader than codes and help to identify the core concepts within the data. To help construct subsidiary categories, an analysis of the concepts or issues that codes relate to must be completed to help identify similarities between codes (Braun & Clarke, 2013). Memos, free-writing, and conceptual diagrams or maps, are all useful tools that can assist with the construction of subsidiary categories. This is because these tools help with the conceptualisation and development of the relationships between codes.

In naming subsidiary categories, concise, informative and engaging terms related to the data should be developed to help in understanding the thesis narrative. Theoretical coding, constant comparative methods and theoretical sampling are techniques used in the construction of categories, discussed below in Section 4.7.4.

4.7.4 Identified properties and core category.

Theoretical coding is a process that can assist with the construction of categories and help identify any associated properties. This is because theoretical coding demands a higher level of analysis than focused coding. Whilst theoretical coding is not always necessary, it was used in this study as it was considered helpful in conceptualising how the subsidiary categories related to one another and clustered around a central concept.

Theoretical coding can reinforce a theoretical stance (Charmaz, 2006), with codes being derived from theories within a discipline, from concepts from other disciplines, or from coding families as suggested by theorists such as Glaser (2005).
system requires careful application as a lack of clarity of purpose can confuse analysis. Any adopted extant theoretical framework needs to earn its position in the GT, rather than inform or direct the data analysis. Charmaz (2014) highlights this by stating that if extant theories “are not integral for understanding your data then they do not have a place in your codes or in your later analysis” (p. 159). In this thesis, theoretical codes emerged from the data that reflected concepts associated with the theoretical framework of the capability approach (Sen, 1985), as well as from theories of identity development (Erikson, 1968; Marcia, 1980, amongst others). Examples of the use of these theoretical codes include: imaging-self, categorising-self, and negotiating student identity and capability.

Theoretical coding moves the “analytic story in the theoretical direction” (Charmaz, 2014, p. 150), by clarifying concepts and relationships between data and, thereby, enhancing the exactness of the developing theory. Birks and Mills (2015) argue that without this process “a grounded theory will struggle to demonstrate the explanatory power that distinguishes this approach to research” (p. 119). Glaser (2005) argues that by applying theoretical coding families from both within and outside of the area of discipline under study, support for a researcher’s own explanations of a phenomenon can be obtained, promoting trustworthiness in the findings.

Constant comparisons made throughout the data collection and analysis process assist in the development of “fully integrated grounded theory (with) a high level conceptual framework that possesses explanatory power” (Birks & Mills, 2015, p. 91). In this thesis, conceptually mapping the emerging analysis at each stage of the study, helped make obvious connections between codes and categories in examination of the data. Dating each map also provided an audit trail for future reference. By using conceptual maps, gaps in the data were more easily identified and investigated through further theoretical sampling, advancing development of the explanatory theory.
Theoretical sampling (Glaser & Strauss, 1967) is a key component of GT, occurring throughout the concurrent data creation, coding and analysis processes. Theoretical sampling assists in ensuring exactitude in the emergent theory, via the use of constant comparative analysis within and between texts to locate specific data of interest (Charmaz, 2006). This flexibility in approach to sampling means that, at any stage of the research, the researcher can alter the pool of participants, direction of analysis, and the developing theory, to assist in better answering the research question.

Theoretical sampling is used to develop thoroughness in the emergent theory. For this research project, this was achieved by examining participant transcripts to locate both supportive and unsupportive statements on identified concepts that confirmed or challenged the developing theory. This procedure provided a dimensional range of responses for a specific concept, extending the theory in its depth and breadth. By employing theoretical sampling, participants in the latter interviews were questioned directly about aspects of interest of the newly identified core category, negotiating student identity and capability. Earlier transcripts were also retrospectively reviewed to reveal pertinent information. For example, once the core category was identified, the significance of relationships between different stakeholders came to the fore. Whilst early transcripts had been coded using tentative codes such as “feeling misunderstood” and “reacting emotionally,” which helped highlight emotive issues of identity and capability, subsequent interviews revealed significant communication challenges that had resulted in incidents between home and school. Consequently, the original transcripts were reviewed to locate similar incidents. Subsequent interviews focused on this issue, amongst others, to provide further detail. The result was the creation of focused codes related to communication, positioned under different spheres of influence in the final theory. For example, feeling misunderstood was enveloped under the focused code, becoming aware, whereas reacting emotionally was encompassed within
developing intrapersonal understandings, both personal factors of the subsidiary category, understanding-self. These codes and categories are elaborated upon in the qualitative findings section, Chapters 5 and 6.

4.7.5 Theory.

Grounded theorists aim to develop new theory defined as an “explanatory scheme comprising a set of concepts related to each other through logical patterns of connectivity” (Birks & Mills, 2015, p. 108). Such theories are not required to be universally explanatory, as interpretivists consider theory to be an abstract construction, but represent novel ideas constrained by both context and time, and always in need of refinement (Birks & Mills, 2015; Charmaz, 2006). Theoretical saturation, the point at which no new codes arise from the data and all categories have well-defined properties (Glaser, 1978), indicates the time to stop data collection so that integration and creation of new theory can occur. Theoretical integration represents the stage of construction of the final theory and requires the use of advanced analytical skills to “raise the analysis to the highest conceptual level possible” (Birks & Mills, 2015, p. 109). Corbin and Strauss (2008) consider that the identification of a core category is vital to this process, as this category represents the centre of the emerging theory. During theoretical integration, existing memos are sorted, re-developed and re-sorted iteratively, to help identify relationships between categories and concepts with the aim of placing them into a logical scheme around the core category (Charmaz, 2014).

This study employed a “storyline” to create and provide a means to communicate new ideas and to assist with theoretical integration (A. Strauss & Corbin, 1990). A “story” arises from the analysis of the data and is described as a “descriptive narrative about the central phenomenon of the study,” with storyline being defined as the “conceptualization of the story…the core category” (p. 116). Using storyline, the theoretical constructs and relationships that arose from the data took precedence in the development of the nascent
theory. Variation was ensured due to the diversity of data sources obtained throughout sampling, that helped develop each category’s dimensional profile. Both positive (supportive of the views/experiences of the majority of respondents) and negative cases (unsupportive of the views/experiences of the majority of respondents) within the data were included to ensure theoretical saturation of the categories. Charmaz (2006) alerts researchers to the importance of negative cases that encourage reflection upon, and refinement of, the developing theory, thus raising the level of conceptual analysis. In sum, the use of storyline helps to reveal gaps in the data and emergent theory, so they can be attended to through further theoretical sampling.

4.8 Trustworthiness, Credibility and Transferability

The degree to which a research project is perceived as trustworthy by the reader, speaks to claims made by a researcher concerning the phenomenon under study. To claim trustworthiness in research findings requires that researchers examine procedures used, to help ensure inferences made are credible and not influenced by, for example, researcher bias or poor procedural technique. As the author was a novice grounded theorist, quality control procedures, including attention to methodological congruence and procedural precision, were especially critical to claiming credibility in the study conclusions. As such, the previously discussed key elements of GT methodology were adhered to throughout the research process. In attending to such control measures, issues of transferability of findings to other contexts were also able to be explored.

4.8.1 Enhancing research trustworthiness and credibility.

Processes that assist in improving trustworthiness of a study include triangulation of data, member-checking and collaborative checking of coding procedures with more experienced specialists. Each of these procedures will be discussed in turn in this section.
Sensitising concepts, researcher interests, and knowledge of a field all act as motivators to direct individuals towards ideas on which to develop a study (Charmaz, 2014). However, the credibility of any research study is dependent on the quality of the data. The depth, scope, relevance, suitability and sufficiency of the data in relation to reflecting empirical events are crucial (Charmaz, 2014). In this study, multiple data sources were created, including text analysis of school documents and interview transcripts, alongside the statistical analysis of 2E student and teacher/SENCo questionnaires. All data sources were reviewed several times during the course of the investigation as new categories were created as part of the emergent theory development, and thus retrospective analysis (in the form of theoretical sampling) of the data types was required. Combined, these methods provided a breadth and depth to data collection to allow analysis of the phenomenon under study from more than one perspective, and from more than one analytical standpoint. This allowed cross comparisons to be made between data types to help ensure that the scope, relevancy and sufficiency of the data was maintained throughout all stages of theory building, in line with a GT approach.

Additionally, member-checking, defined as informant feedback (Herr & Anderson, 2005) and conducted in this study via return and review of the interview transcripts to and by participants, afforded participants an opportunity to alter responses on reflection, to help ensure accurate reporting of perspectives on issues of relevance to the study. By employing member-checking, the author hoped that the inferred meaning of the transcripts would be more accurate and, thereby, the explanatory theory more plausible. Herr and Anderson (2005) consider that member-checking provides “democratic validity” (p. 56) to a study, as the multiple perspectives of the participants are taken into account.

To enhance precision in the process of coding the transcripts, a cross-check of the initial coding was also undertaken in the early stages of the research. Whilst the initial codes were developed by the author, a sample of the transcripts were recoded independently by two
supervisors to ensure there was at least 90% compatibility and consistency in the coding process. Any discrepancies were discussed and resolved to promote research credibility. Throughout the research, constant comparative methods of analysis were also used to evaluate narrative actions and processes within the same text, as well as between different texts, to promote consistency, and thereby trustworthiness, in the findings.

4.8.2 Acknowledging researcher bias.
As a teacher-researcher there is concern that familiarity with a professional domain invokes researcher bias toward the phenomenon under study (Stake, 2010). As the author identifies with the population under study (2E students), and her prior research in the field and exposure to existing literature predisposes her towards an empathetic disposition toward the subject area, it is plausible to consider that researcher bias could impact upon verification of the study conclusions. Thus, in declaring researcher positionality, the author hoped that any bias in interpretation of the findings as a result of her personal perspectives would be made explicit (Stake, 2010). Additionally, to assist in minimising any potential bias, negative cases within the data were actively sought out and acknowledged by the researcher to challenge any opposing preconceived views. These perspectives were reflected upon both individually and in conversation with colleagues to consider implications for the development of the emergent theory, in line with a GT approach.

4.8.3 Issues of transferability.
Transferability of research findings is dependent on the degree of similarity between the study context and that of the reader’s place of practice. Whilst the author initially hoped that a large sample of schools from across NZ, representative of the many settings and different communities, would be garnered, few schools were willing to participate and thus a limited sample resulted from the research invitation. As a result, the findings are only transferable in as much as they represent the perspectives of the different stakeholders in a particular setting.
and can therefore only be applied to similar settings. The study conclusions are, therefore, not
generalisable to 2E students in all NZ schools. As such, only the reader of the thesis can
decide whether the findings are applicable to their context and practice. However, it is hoped
that the research findings stimulate a wider socio-political discussion about the current
facilitators and barriers to the academic achievement of students with dual exceptionalities in
NZ schools.

4.9 Chapter Summary

This chapter detailed the research methodology, design, methods, and process, as well as
justification for the adoption of constructivist GT as a methodology. Following on from this,
a constructivist GT approach to data analysis and theory generation was explained. A
discussion of issues of trustworthiness, credibility and transferability of the research findings
rounded out the chapter. The next two chapters present the findings of the research. Within
these chapters, the development of the emerging theory is comprehensively described.
Chapter 5: Findings—Understanding-Self, Accepting Differences, and Managing Climates

The phenomenon that underpinned this investigation was the current underachievement of 2E students in the NZ school system. This underachievement when compared with potential was established in Chapters 1 and 2. Evidence in the literature to date suggests there is reason to suspect that the NZ school system is inequitable and/or exclusive of the complex learning needs of 2E students. Such inequities in education provision, impact upon individual capability to succeed academically. Thus, this thesis set out to investigate what factors might influence the ability of 2E students to realise their potential in NZ schools. The perspectives of 2E students, their parent(s)/caregiver(s) and teachers/special education needs coordinators (SENCos), were sought to provide a range of views on this issue. As noted earlier, the research question was: How do twice-exceptional students negotiate identity and capability within the New Zealand school system?

To facilitate reading of the findings Chapters 5 and 6, a visual overview of the developed theory (Figure 5.1) with a brief description of the key features is included here. This visual overview shows the generation of the new theory from the data up to the construction of the core category and explanatory theory.
Figure 5.1. Theory overview.
The developed theory is summarised as follows: Twice-exceptional individuals often struggle to achieve in NZ schools based upon a conceptualisation of learner difference that influences, and is influenced by, the process of negotiating student identity and capability. The key features of this theory, expressed as an organised arrangement of sets of concepts that help explain the phenomenon under investigation (D. Silverman, 2001), are as follows:

- Twice-exceptional identity and capability are the two concepts central to the emergent core category. The negotiation of identity and capability help to determine student achievement in the NZ school system. The process of negotiating identity and capability is influenced by twice-exceptional students’ realisation of difference in learning abilities (understanding-self), as well as by the ability of others to accept difference (accepting differences), and the degree of flexibility and suitability in school systems/arrangements (managing climates). These factors interact to influence conceptions of difference, and thereby the ability of twice-exceptional students to achieve in schools.

- The process of 2E individuals negotiating student identity and capability involves the reciprocal processes of imagining-self and categorising-self in a learning climate. These intertwined, continuous happenings influence the envisagement of a sense of self in reflection of changing personal circumstances and contextual conditions. Supports, as well as challenges, faced by 2E students in the NZ school system, help to define the conditions under which the negotiation of identity and capability occur. Ongoing negotiations influence, and are influenced by, conceptions of 2E student difference in particular learning climates.

- Conceptualising difference is the culminating theory emerging from analysis of the data. The theory helps to determine, via the construction of differing conceptions of dual exceptionality, the capacity of 2E students to successfully negotiate identity and
capability to achieve in a learning climate. As such, the need for more equitable
provisioning for gifted students with learning difficulties in NZ schools is justified.
Realisation of equity in provision helps address issues of social justice by recognising
the unique complexities associated with the condition in the school context. It is
argued that the ability to re-conceptualise 2E students in NZ schools as first and
foremost having learning strengths, rather than only learning deficits, assists with the
development of positive identity and perceptions of capability. This re-
conceptualisation ultimately influences realised achievements.

Chapter 5 will unpack the findings (and the process used) to construct the initial and focused
codes in order to substantiate the subsidiary categories shown in the lower layers of Figure
5.1. Chapter 6 will then present arguments for the generation of the theory of conceptualising
difference, as shown in the higher levels of Figure 5.1

5.1 Twice-Exceptional Students’ Perceptions of Schooling: Understanding-Self

The perspectives of 2E students were sought at the outset of the study as these were central to
the phenomenon under investigation. As the focus of the research was to develop greater
understandings about factors that influence the capacity of such students to achieve NZ
schools, the voices of the student participants were critical to understanding why they
typically underachieve when compared with their considerable potential. Understandings of
self, that is, the personal perceptions of 2E students concerning their learning, emerged as a
subsidiary category during the early stages of data collection and analysis. The dynamic
process of coming to understand oneself in comparison to others, influenced by personal
constructions of similarity and difference, appeared to guide the development of identity and
perceptions of capability in the NZ school system.
The subsidiary category, understanding-self, arose from the merging of three focused codes: *becoming aware, developing intrapersonal understandings, and realising dual effects*. These codes were all developed from line-by-line analysis of the interview transcripts of the students. The generation of each of these focused codes will now be discussed.

### 5.1.1 Becoming aware.

The focused code, becoming aware, specifically related to one of the first interview questions asked by the researcher: When did you first become aware of your learning differences? The analysed student responses ranged on a continuum (identified through theoretical sampling and constant comparative analysis of the student transcripts), from early to later awareness of difference. Early awareness was most commonly acknowledged, as shown by comments such as: “When I was younger the longer the book the better-I used to have a pile of books and was reading way ahead of my age” (T23S C07D 06.09.16), and in the excerpt:

> Early on—yes, early on, like preschool. I was standing on the table dropping things, so that was a fairly early sign, lecturing the others…not that I knew a lot about gravity at that point. But in Year 1 and 2 writing was not my forte, so that happened fairly early on. And then of course Mum realised, and it took us a while to learn about all this sort of stuff. (T27F C21 09.10.16)

Another student similarly linked awareness of learning difference to early schooling experiences stating: “[It was] early in primary school—at first we thought it was my eyesight [as a learning difficulty] and then it wasn’t, and we got a few more tests done, and it was [dyslexia]” (T28F C12Z 15.10.16). It was these early experiences that gave rise to the initial code of *developing awareness*, which referred to a more naturally occurring process of recognising difference emanating from student actions or behaviours, in a fitting developmental timeframe.
Awareness of learner difference often appeared to be related to the conditions of a social setting that provided a source of comparison of learning traits amongst peers. Commonly, 2E students reported that it was significant adults who commented on learning disparities in these settings, which first alerted them to difference (coded as supporting conditions), as evidenced in the above excerpts. The need for assistance in developing awareness was a significant finding in the transcripts of the students. Children are often unable to articulate difference as they lack a basis upon which to compare and contrast individual peculiarities, and therefore require help from more knowledgeable adults.

Whilst the majority of the students reported early awareness, some students reported developing a later appreciation of their dual exceptionalities. Again, later awareness appeared to be related to a context, and specifically to the demands of that setting, that influenced expressions of individual ability. Student 07C commented: “[It was] Year 8 when they said I could use a computer for doing my essay instead of writing it...and then it just went on and on, until it was just computers for everything basically” (T22F C07C 06.09.16). This later awareness was coded under the initial code, realising differences, as it occurred in reference to specific demands of schooling (incidents) that provoked a learning intervention. The term realising was used to evoke the idea of students attaining awareness of difference at a later time, and usually in response to challenging contextual conditions.

Realising differences appeared to have different consequences for students when compared with the earlier concept of developing awareness. For example, student 12E revealed that he only became aware of his learning differences in Year 8, following assessment for learning challenges that compromised expression of his academic ability in the classroom. His learning difficulties were subsequently diagnosed as dyslexia. This diagnosis then required a period of time dedicated to understanding, and adjusting to, the learning challenges
associated with this form of cognitive impairment. These adaptations in functioning had to occur in parallel with the demands of his schoolwork.

S: I didn’t really know too much about [learning differences] until we got tested.

I: Was it a bit of a revelation for you?

S: It was really good in tests, yeah.

I: And the learning challenge- it is dyslexia?

S: Yeah and I found copying things off the board was so hard, because I get one line, copy it down then forget where I was.

I: Did you feel you could talk to your teachers about this?

S: No, not really. Nah.

P: Did you just think it was normal?

S: Yeah—yeah, I did. Well, I didn’t really know about dyslexia or anything until Year 8 when I got the diagnosis, so I just thought it was a thing…like, everyone had the same problem. (T31F C12E 20.10.16)

This excerpt is suggestive of the difficulties associated with day-to-day functioning in mainstream schooling contexts for dual-exceptional students. The revelation of the diagnosis of dyslexia alongside areas of learning strength, was transformative for this student, as he better understood why he had difficulty with the task of reading and writing when compared with his peers, and how this impacted upon his learning. Not knowing that he had a specific learning difficulty had meant that he had no conception of difference in learning ability—rather he presumed others perceived the world in the same way as he did.

Developing awareness or realisation of dual-learning exceptionalities was an important event in each of the students’ lives. These two significant initial codes were consequently united, via the process of abstraction, under the focused code, becoming aware. The continuum of student responses, from early to later awareness, alongside the manner in which they
emerged, appear to suggest there is currently considerable variation in recognising dual exceptionality in the NZ education context.

5.1.2 Developing intrapersonal understandings.

The second focused code, developing intrapersonal understandings, emerged from analysis of the student transcripts in response to interview questions concerning domain(s) of gift and talent and area(s) of learning difficulty, and how these manifested in the school setting. Students appeared to develop deeper understandings about their learning differences as they aged, and in consideration of the nature and extent of their dual exceptionalities and the support networks surrounding them. Again, theoretical sampling and constant comparison between and within the student transcripts, resulted in student experiences being located on a continuum ranging, this time, from positive to negative. This was because whilst some aspects of the development of understandings were affirming of difference, like the ability to seek assistance for areas of learning need, some aspects were less welcome. For example, socio-emotional impacts, including bullying and fear of social exclusion or rejection by the peer group, were often referenced in the transcripts of the students. It was comments like those seen in the following excerpt referencing such challenges, that gave rise to the initial code, becoming conscious of impacts. The following passage references a conflict between student 19 and a classmate regarding equitable provision for dual-exceptional learning needs:

S: I did my speech on dyslexia to show everyone what it is, and Mum showed me this way of explaining it…

P: Equity…

S: So, there’s like this family and they are at a rugby game and in order for them all to see the child needs a step. Because I’ve been told that me skipping a year isn’t fair. They felt it wasn’t fair…

I: Who felt it wasn’t fair?
S: Another kid. She was like, that’s not fair! She said it was unfair I skipped a year because she had done all this hard work to get to where she was, and I had just jumped in. So, my whole speech was how it’s not—it’s making things more equitable because it’s giving me extra time. But because I am allowed extra time they thought I was cheating. (T27F C19 09.10.16)

In this regard, many of the student participants reported becoming more conscious of their learning differences as the school years progressed. For example, student 02B stated that “You can see [them] more prominently in college than in primary I think. Probably because in college you have classes and they split you up. But in primary you have the same teacher all the time, teaching all the subjects, so they get to know you better” (T1F C02B 04.05.16). Becoming conscious of impacts was a broad term that allowed the labelling of fragments of data (like that shown above), which referenced the cognitive, and/or socio-emotional and/or academic domains of student functioning. Whilst this analytic idiom was more often assigned to schooling challenges, there were a few positive examples within the student transcripts. These positive incidents appeared to enable the development of an affirmative student identity, as well as personal agency, in the school setting as seen by student 21’s remarks:

One of the things I did at the beginning of the year was that I had a template email that I personally sent out to all my teachers that said look, I am dyslexic, and I am dyspraxic. I will be coming to all my classes with a computer—what you need to facilitate this is please accept my work by email, instead of in print. If I have exams there are special exam conditions with procedures in place you email this teacher, and it will all just happen. (T27F C21 09.10.16)

The initial code recognising asynchrony and difference was similarly developed from the comments of the student participants, this time in reference to their learning differences. As discussed in Chapter 1, asynchrony in learning is often considered an important indicator of
giftedness. Failure to support 2E students in the school setting in recognising, and ultimately accepting, asynchrony and difference, appeared to influence motivation and achievement. For example, student 03A commented that his enjoyment of a learning activity (robotics programming) was impacted by controls placed by his teacher around his ability to create and innovate at his own advanced pace. Instead, he had to comply with the instructions and task given to the rest of the class, even though he had demonstrated his skills in this field at an earlier time:

I: Are you enjoying robotics programming?
S: Yes- the only thing I don’t enjoy [is when] everyone still has to learn stuff and I don’t get to zoom off and learn new things. I have to re-learn everything... At least it’s going faster than it did last year- last year we took 2 weeks, like every Wednesday, to learn the same thing. (T5F C03A 01.06.16)

Being able to recognise and understand the extent of the impacts learning asynchrony has on the process of schooling for gifted students with learning difficulties is therefore important. Comments such as those seen in the excerpt below, demonstrate the frustrations often felt by students with dual exceptionalities attending mainstream schools. Such affective responses to developing intrapersonal understandings were assigned the initial code *reacting emotionally.* In this example, student 03B remarks on the difficulties he has in reconciling his placement in a high-ability accelerate class for English, with his placement in a low-ability group for mathematics:

I am in the top writing group with the Year 7 and 8s. We do extremely big writing with, like, big vocabulary and what-not. I do like it, they are putting me up way high, as high as the sky for literature, but for maths they are putting me down into the sewers. [They are] just expressions. (T4F C03B 01.06.16)
The development of these initial codes assisted with explicating the dimensions and properties of the focused code as described above. Developing intrapersonal understandings thus became another key feature of the analysed student data that would eventually be located within the subsidiary category of understanding-self.

With respect to developing intrapersonal understandings, data was also collected on student academic, emotional and social self-efficacy using a self-efficacy questionnaire (as part of the student questionnaire, Appendix K) designed by Muris (2001). As Muris’s (2001) questionnaire had been adapted for this study to better capture the perceived self-efficacy of 2E students, a reliability check was first conducted on the scales using Cronbach’s alpha statistics. This reliability analysis indicated that the modified questionnaire was acceptable (α >.70) across all three domains of self-efficacy (academic (α = 0.85), social (α =.85) and emotional (α =.81). A Likert scale of 1–6 was used for the responses, where 1 represented “not at all well” and 6 represented “extremely well.” Results were reported as means for the group as seen in Table 5.1.

Table 5.1

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<thead>
<tr>
<th></th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic self-efficacy</td>
<td>26</td>
<td>2.96</td>
<td>0.80</td>
</tr>
<tr>
<td>Social self-efficacy</td>
<td>26</td>
<td>3.00</td>
<td>1.04</td>
</tr>
<tr>
<td>Emotional self-efficacy</td>
<td>26</td>
<td>2.43</td>
<td>0.99</td>
</tr>
</tbody>
</table>

An inspection of the means showed that the 2E student participants did not perceive themselves as particularly academically capable (mean = 2.96, representing “not very well” to “quite well” on the student questionnaire) in respect to succeeding in specific situations or tasks at school. Additionally, whilst social self-efficacy averaged across the group at a mean
of 3.00 (reported as quite well), emotional self-efficacy was reported at a mean of 2.43 (also representing not very well to quite well) across the group. It should be noted that these findings were based purely on the reported means, as the significance of any differences between means was not investigated. These findings suggest that the 2E students were experiencing some difficulty in developing self-efficacy overall, perhaps due to difficulties in developing intrapersonal understandings about dual exceptionality as a construct in the school context. Unfortunately, no further analysis of these findings could be undertaken as the participant sample size was too low. This will be discussed in the limitations section.

5.1.3 Realising dual effects.

Realising dual effects formed the third developed focused code in the subsidiary category of understanding-self. This focused code was constructed as a result of responses to questions concerning recognition and appropriate provision for dual-exceptional student-learning needs in NZ schools. Realisation of the effects of being dual exceptional in NZ schools encompassed the students’ perceptions of teacher/SENCo knowledge and the appropriateness of school resourcing for dual-exceptional student needs, as well as socio-affective aspects such as empathy for, and respect of, learner difference. As for the previous two focused codes, shared insights concerning identification and provision for 2E student needs were located on a continuum.

An initial code, appreciating learning differences, was constructed from student responses concerning teacher/SENCo/school conceptions of 2E student difference in NZ. Such perceptions included the extent of knowledge, and socio-affective aspects of care, that existed in the teaching–learning setting. The nature and degree of development of teacher/SENCo/school understandings about dual exceptionality appeared to influence the students’ development of a positive sense of self, and thereby a sense of belonging, in the school context. In the following example, student 02B, who possesses high ability in science and
mathematics domains, but associated learning impairments affecting literacy skills, comments on his experience of being 2E in this respect. Misconceptions concerning his capabilities resulted in his placement in low-ability classes for all his subjects, rather than the adoption of a differentiated approach to provision that acknowledged his uneven learning profile. Such misconceptions concerning the capabilities of 2E students were initially assigned the tentative code feeling misunderstood. Feeling misunderstood had serious ongoing consequences for learning motivation and engagement in the school environment.

As far as maths goes, since it’s no longer the top students in the one maths class, I’m right at the high end of the class with about three others, and so we do the work very easily and then were sitting there for 15 minutes doing nothing while the others need to ask questions about how to get the answer. We’re not getting work that challenges us. (T1F C02B 04.05.16)

A lack of appropriate resourcing for dual-exceptional learning needs in NZ schools was frequently referenced in the student transcripts, as seen in this comment by student 12Z: “I think the focus has definitely been on the learning difficulty and not so much the gifts and talents” (T28F C12Z 15.10.16). Inappropriate provisioning for both areas of exceptionality often resulted in problems with motivation and engagement when teachers failed to realise a 2E student’s potential. In this regard student 21 remarked:

[I] went to another primary school in Year 4. And that should have been good because the teacher had a Bachelor of Science. But whenever we did any science she would be so controlling. She wouldn’t let me go ahead and do things even though I told her I had done it before. I had to wait and do things, so that was frustrating...a bit of a failure. And now I look at it, as I’ve gone through school I realise that was the relationship between teacher and student that was expected, but it wasn’t suitable.

(T27F C21 09.10.16)
The second feature of this focused code arising from analysis of the data thus referenced the nature and availability of learning provisions. 2E students were asked in the student questionnaire about their perceptions of usefulness of 23 commonly used teaching strategies. Findings from the descriptive means analysis of the student responses are shown in Table 5.2. Again, these findings are based purely on the reported means, as the significance of any differences between means was not investigated due to low sample size. As such, the findings represent observed trends in the data only. Participant responses for all questions and categories ranged on a Likert scale from one (not useful) to six (extremely helpful). Student responses that indicated a school did not offer a teaching strategy were coded as zero. These scores were used to calculate the number of students offered a particular strategy by subtraction from the total number of students (n=26).

The findings indicate that the 2E student participants had clear ideas about what provisions helped them learn at school. The 23 teaching strategies (column 2) were surveyed and ranked in descending order by mean with regard to their perceived usefulness, as seen in column 1 (rank number) and column 4 (mean) of Table 5.2. Standard deviations (SD) are shown in column 5. The number of responses to each teaching strategy is seen in column 3 of the table, with the variability in participant responses (from a maximum n= 26) indicating whether that strategy was used in a participant’s school; the lower the number of student responses (n), the less commonly a teaching strategy was used.
Table 5.2

Student Perceptions of Usefulness of Commonly Employed Teaching Strategies

<table>
<thead>
<tr>
<th>Rank</th>
<th>Teaching strategy</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Assistive technology</td>
<td>26</td>
<td>5.42</td>
<td>0.76</td>
</tr>
<tr>
<td>2</td>
<td>Special assessment conditions such as reader-writers and/or computers</td>
<td>14</td>
<td>5.36</td>
<td>1.34</td>
</tr>
<tr>
<td>3</td>
<td>Student-interest-based teaching</td>
<td>18</td>
<td>4.83</td>
<td>1.25</td>
</tr>
<tr>
<td>4</td>
<td>Extra time for assessments and assignments</td>
<td>17</td>
<td>4.76</td>
<td>1.09</td>
</tr>
<tr>
<td>5</td>
<td>Creativity in designing products of learning</td>
<td>19</td>
<td>4.58</td>
<td>1.61</td>
</tr>
<tr>
<td>6</td>
<td>Open-ended creative challenges</td>
<td>16</td>
<td>4.56</td>
<td>1.21</td>
</tr>
<tr>
<td>7</td>
<td>Participation in gifted and talented or learning-enrichment opportunities</td>
<td>11</td>
<td>4.55</td>
<td>1.70</td>
</tr>
<tr>
<td>8</td>
<td>Non-literacy-based teaching strategies (including kinaesthetic &amp; music-based learning activities)</td>
<td>19</td>
<td>4.42</td>
<td>1.22</td>
</tr>
<tr>
<td>9</td>
<td>Consistent use of lesson learning objectives</td>
<td>24</td>
<td>4.38</td>
<td>1.44</td>
</tr>
<tr>
<td>10</td>
<td>Flexibility in selection of content for activities</td>
<td>18</td>
<td>4.28</td>
<td>1.49</td>
</tr>
<tr>
<td>11</td>
<td>Philosophical and critical thinking activities</td>
<td>18</td>
<td>4.28</td>
<td>1.32</td>
</tr>
<tr>
<td>12</td>
<td>Self-selected pacing of learning</td>
<td>14</td>
<td>4.21</td>
<td>1.63</td>
</tr>
<tr>
<td>13</td>
<td>Flexibility in demonstrating learning</td>
<td>18</td>
<td>4.17</td>
<td>1.10</td>
</tr>
<tr>
<td>14</td>
<td>Inquiry or problem-based learning</td>
<td>21</td>
<td>4.14</td>
<td>0.85</td>
</tr>
<tr>
<td>15</td>
<td>Separate accommodation for tests/assessments</td>
<td>14</td>
<td>4.00</td>
<td>1.96</td>
</tr>
<tr>
<td>16</td>
<td>Study-skill tools</td>
<td>16</td>
<td>3.88</td>
<td>1.26</td>
</tr>
<tr>
<td>17</td>
<td>Goal setting</td>
<td>25</td>
<td>3.80</td>
<td>1.50</td>
</tr>
<tr>
<td>18</td>
<td>Metacognitive strategies</td>
<td>14</td>
<td>3.79</td>
<td>1.53</td>
</tr>
<tr>
<td>19</td>
<td>Opportunities to learn with other twice-exceptional students</td>
<td>9</td>
<td>3.78</td>
<td>1.72</td>
</tr>
<tr>
<td>20</td>
<td>Mentoring from “experts” outside of class time</td>
<td>7</td>
<td>3.71</td>
<td>2.22</td>
</tr>
<tr>
<td>21</td>
<td>Graphic organisers to plan work</td>
<td>14</td>
<td>3.64</td>
<td>1.45</td>
</tr>
<tr>
<td>22</td>
<td>Modified learning tasks (including doing most difficult first or decreasing volume of work)</td>
<td>12</td>
<td>3.58</td>
<td>1.88</td>
</tr>
<tr>
<td>23</td>
<td>Stress or anxiety reducing techniques (including counselling services and time-out cards)</td>
<td>12</td>
<td>3.50</td>
<td>1.57</td>
</tr>
</tbody>
</table>
Table 5.2 shows that the use of assisted technology was first in perceived usefulness. This was reported by all 26 students as being either extremely helpful, or very helpful, in their learning at school. Ranked second as a useful teaching strategy, was special assessment conditions, such as the provision of reader-writers and/or the use of computer technology. However, of note was the fact that only 14 students reported these as being offered at their school, with 12 students indicating these were not used. Similarly, student-interest-based teaching strategies ranked third but was only reported as being offered at school by 18 students (eight students indicating it was not offered). Extra time for assessments and assignments (ranked fourth) and freedom in creativity in designing products to demonstrate learning (ranked fifth) were reported by 17 students (not offered in schools of nine of the students) and 19 students (not offered in the schools of seven students) respectively. Interestingly, only 11 students reported having the chance to participate in gifted and talented/learning-enrichment opportunities at their schools (meaning 15 students did not have this opportunity), even though this strategy ranked at number 7 as a useful teaching strategy by those who reported its use. Of the bottom five teaching strategies, opportunities to learn with other 2E students was ranked at number 19, although only nine students reported having this offered at their school. One student, however, commented on the benefits this had for his learning in the interviews:

S: I think it was in Year 9 that I was in a stream and I hung out with a guy that worked really hard in class, so I think that helped quite a bit...I got to sit with him quite lot in class. Here we have streams, so we travelled around together in classes.

M: Wasn’t he also dyslexic?

S: Yeah—yeah, he was.

I: So that was a shared experience with someone like you?

S: Yeah, yeah. It was just luck I think. (T31 C12E 20.10.16)
Similarly, mentoring with an expert outside of class time came in at number 20, however only seven students reported having an opportunity to utilise this strategy. The use of graphic organisers (ranked 21), modified learning tasks (ranked 22) or stress/anxiety reducing techniques (ranked 23), were seen as generally unhelpful, although fewer than 14 of the 26 student participants reported the use of any of these three strategies in their schools.

Twice-exceptional students also commented on challenges presented by understandings of learning difference that influenced perceptions of fit in the school environment. Thus, appreciating learning differences appeared to impact upon the students’ development of identity, sense of belonging, and engagement, in the school setting. Some of the students remarked that sometimes the nature and extent of their learning differences, alongside a lack of understanding of the combined effects of having dual exceptionalities, meant that some schooling situations were difficult to negotiate. Student responses that spoke to the effects conceptions of learner difference had in NZ schools led to the development of the initial code developing understandings of effects. Such personal effects were often, unfortunately, negative, and included feelings of frustration that emanated from students trying to reconcile areas of high ability with learning difficulties in performance of a school tasks. For example, when asked what he felt about things that had helped him with his learning at school, student 07C remarked, “Besides learning to use my computer I don’t think there has been anything else that’s helped me” (T22F C07C 06.09.16). Student 03B also alluded to difficulties with acceptance of learning difference. In response to a question about whether he enjoyed school he stated: “Well, no, because, like, I get into trouble every day. I am sick of it” (T4F C03B 01.06.16). Student 21, who had dyslexia and was gifted and talented in the science and mathematics domains, similarly reflected on his realisation of the effects his dual exceptionalities had on learning in early primary school:
I remember you had to finish a page of writing and then you could go and play with the Lego but I never got to play with the Lego because it took me so long to do the writing. And you weren’t allowed to do one word per line. And it was always about ones’ weekend and I am like, who cares about my weekend! It was just going on the pile! (T27F C21 09.10.16)

On the positive side, special provision for 2E students had been organised in some schools that recognised the socio-emotional dimensions of dual exceptionality, so that at times of stress the students could retreat to a quiet, safe place. Typically, this was provided by a trusted educator, often a senior manager or dean. Student 02B remarked that the dean at his school, “suggested if that ever happens just to go to her office” (T1F C02B 04.05.16). However, given that senior managers or deans are often called upon to deal with non-gifted students with socio-emotional/behavioural problems, this may not be ideal, as they may not be available to support 2E students when they most need it. Additionally, due to the nature and extent of some combined exceptionalities, some students did not feel as if they could discuss learning challenges with school staff. Student 02B had commented that he did not feel comfortable approaching teachers about his learning difficulties due to his ASD, replying definitively with a “no” when asked directly about his reluctance to communicate his learning challenges. (T1F C02B 04.05.16)

There were also wider social implications resulting from inappropriate consideration of 2E student socio-emotional needs. For example, student 12Z commented on a situation where a support teacher had been being assigned to him in class against his wishes. The socio-emotional effects of both not being heard, and having a support teacher seated next to him in class, had socio-affective consequences:
S: The other kids in the class sort of generalise you as being in a group with…it has the people that, like, have disabilities and learning needs, but there are also the other people who need the same support but not for the same reasons.

I: How? Are you altogether as one group?

S: Yes. Like we all need assistance for a learning difficulty…and sometimes even the teachers look at us differently too. (T28F C12Z 15.10.16)

Consequently, many of the student participants recognised that resilience, adaptability and persistence were important skills for 2E individuals to develop, especially as the school years progressed. This was so that individual capabilities could continue to be developed, even as schoolwork became more challenging and learning conditions changed, in response to the surrounding school climates. In this regard, student 12Z also remarked:

I think when you are in school and you might not be good at something, they always think you are going to drop it. But, like, maths for example, I wasn’t really good at it but now I have started liking it. And I’ve done lots outside of school to get better at it. And if I hadn’t done this outside of school and I just left it, it would have shut off lots of doors. (T28F C12Z 15.10.16)

In more than one situation, a lack of teacher understanding of the effects of dual exceptionalities on learning, led to refusal to attend school. The following excerpt details the experience of a gifted student with dyspraxia in response to repeatedly having to complete school tasks that required re-writing of drafts of work:

S: [I was] at primary school and I wrote, you know 4 or 5 draft copies about the same boring thing, what I did in the weekend, 4–5 times. And then she went and wrote all over it in red pen! And I’m like—that took me 2 weeks to write that stupid thing and you wrote all over it in red pen!
P: He was quite upset about that, so we had to have some time off school after that.  
(T27F C21 09.10.16)

Difficulties in conceptualising twice-exceptionality, and the effects this had on learning in NZ schools, had significant impact on families, who often had to locate alternative means of appropriately providing for their children’s learning needs. Such effects will be discussed in detail in Section 5.2: Family Perceptions of Schooling.

5.1.4 Subsidiary category: Understanding-self.

The three focused codes, becoming aware, developing intrapersonal understandings, and realising dual effects, represented various aspects of the development of personal understandings about twice-exceptionality from the perspectives of the student participants. Each focused code had a dimensional range of responses appearing on a continuum representative of the students’ responses. The properties of each of the focused codes were developed from the initial line-by-line codes. The three focused codes were intertwined in relation to the other, rather than occurring in a linear-sequential fashion, as individuals created and re-created different understandings about themselves. The relationships between each of the focused codes was thus envisaged as a loop, cycling in perpetuity (Figure 5.2).

The data indicated that these developing understandings were situated, occurring in reference to a time and place, and in reflection of individual cognitive, socio-emotional/behavioural and academic capabilities and difficulties. The imagined nature of the relationships between the three focused codes thus gave rise to the development of the subsidiary category, understanding-self.
5.2 Family Perceptions of Schooling: Accepting Differences

In addition to the voices of 2E students, parent/caregiver perspectives were sought to develop greater insight into the potential facilitators and barriers to achievement faced by students with dual exceptionalities in NZ schools. These family perspectives were eventually developed into the subsidiary category, accepting differences. Accepting individual learning differences involved parents/caregivers: recognising differences between their children and their peers, sourcing information to assist with developing understandings of dual exceptionalities, and advocating for their children in the school context. Constructions of difference, that is the way parents/caregivers came to understand their children and how they managed those differences, appeared to have significant consequences for wider family life. The active, ongoing process of accepting difference was perceived by many parents/caregivers as affecting family relationships, as well as individual constructions of a
2E-student identity and capability. The subsidiary category, accepting differences, was constructed from the merging of three focused codes, these being: recognising exceptional traits, searching for appropriate provisions, and accessing expert assistance. As for understanding-self, these focused codes were developed directly from the initial line-by-line analysis of the interview transcripts. The generation of each of the focused codes will now be discussed, followed by an explanation of how these codes were subsumed into the subsidiary category of accepting differences.

5.2.1 Recognising exceptional traits.
The focused code recognising exceptional traits specifically related to research-interview questions concerning when and how parents/caregivers first became aware of their children’s learning exceptionalities, and consequently, what new knowledge and skills were required as a result of this awareness. As most parents/caregivers reported various incidents occurring early on in their child’s development, that provoked an awareness of difference, the initial codes identifying difference and early awakenings were developed from analysis of the transcripts. As there was usually more than one parent at the family interviews, the following coding system was devised to facilitate the process of transcribing: P1 = parent 1, P2 = parent 2, and S = child. The responses of parents/caregivers, regarding awareness, varied on a scale from very early (preschool-age) to late (school-age). Recognition of a child’s learning exceptionalities was typically related to social factors, such as interactions with other children outside of the immediate family, and/or birth position. Parents/caregivers reported that it was frequently other parents/caregivers who remarked on their child’s learning differences, typically in respect to area(s) of gift and talent, thus alerting them to the possibility of exceptionality:

[He was] 6 years old–because we were at school, at two schools, one public and one private, and a friend of mine said “I think your child is gifted.” Because that’s how
most mothers do it. It’s not the teachers that tell us, although we expect the teachers to tell us. And I thought, yes, he is quite brainy, but I don’t know… And she said you should get him tested. So, I got him tested and [the assessor] just wrote, yes, this child is certainly highly, highly intelligent, or extremely intelligent, or something similar, and that was it. And I thought, what am I supposed to do about this? So, we found out about the giftedness first, although we didn’t know how gifted or in what, and then a few years later the dyslexia came up. (T27F C19-21 09.10.16)

Social interactions with peers provided an important means of becoming aware of developmental differences, giving rise to the initial code *comparing with peers*. Related to this was birth position in the family (*family positioning*), which was also identified by parents/caregivers as a factor in awareness of difference:

P1: When he was 2 he was pretty onto it.

P2: Not having any other children we didn’t know whether that was normal or not. I know when we came to the first school visit here they had a whole lot of words on a sheet and he had to see how many he could identify and I think he could identify almost them all. Which apparently was quite unusual. But you don’t know when you don’t have any other kids, you don’t know whether that’s normal for 5 or for 4. (T11F C01B 25.07.16)

Birth position appeared to be used to justify recognition of developmental differences in different ways. For example, whilst the above excerpt refers to a first-born child, the following parent quote references a child positioned later in the family:

He was in childcare, because I worked, and the childcare centre was like—he’s so amazing, he’s so onto it, he does this and does that in his portfolios. They used to get excited with the stuff, and working with S, because he was, I guess, in a sense, more advanced. And they were like—he’s amazing! But I used to think, yeah, he’s the
youngest in our family, you know, nothing amazing. But on starting school, within weeks the new entrant teacher said to me that she believed S was ADHD and that I needed to get him assessed. (T9F C07L 03.06.16)

This incongruity in reasoning birth position as a factor in awareness suggested that the issue may be a deeper one of conceptualising dual exceptionality in society in the first instance. In this regard, theoretical sensitivity to, and subsequent theoretical sampling of, incidents in the transcripts concerning development of awareness, appeared to indicate that identification of one exceptionality was not necessarily linked to recognition of the other, as shown in the above excerpts. Such findings suggest that current conceptions of the apparent paradox of gifts and talents concomitantly occurring alongside learning impairments may yet need to be appropriately addressed in the education arena.

Additionally, recognising exceptional traits appeared to be influenced by gender stereotypes. Instances where social constructions of gender emerged as influential in the identification of dual-exceptional traits, were assigned the initial code *gendering influences*. For example, in one case, recognition of difference was influenced by social conceptions of “typical” boy learning behaviours, such as messy handwriting and activities like building, that diverted from an earlier awareness:

[We have] two older girls, and they are typically…I used to work for the police and so you’d see the police forms coming through and see that nice handwriting wasn’t often the realm of men. And so that S’s writing wasn’t as tidy as the girls wasn’t really a surprise, so it didn’t really raise a flag. He wasn’t doing colouring in…he wasn’t really that interested. He was more into Lego and things of that sort of nature. But when he came into Year 5 and 6, then it hit a hiatus, and it wasn’t improving. But as I say, we don’t have a classroom full of students to compare it to, and it’s all quite PC
now, so it wasn’t until, say, you see a friend’s child’s writing of a similar age. (T5F C03A 01.06.16)

Social constructions of gender that influence recognition and diagnosis of learning exceptionalities are well documented in the international literature (Bianco et al., 2011; Heller, 2013). The ratio of female to male participants in this study (as discussed in Section 4.6.2) also highlighted the issue of gendering in the process of identifying individuals with dual-learning exceptionalities in NZ society.

Recognition of dual-exceptional learning traits by parents/caregivers had significant implications for families. A child’s unique combination of learning exceptionalities required parents/caregivers to adapt to, and learn, new parenting skills as and when demanded by changing events. Incidents in the transcripts that highlighted the need for the development of new knowledge and skills gave rise to the initial code, learning through need. The following excerpt is from a parent of a gifted child with ASD and demonstrates some of the challenges faced by parents/caregivers with twice-exceptional children:

There are times, you know, these kids can be exhausting. I have three other older children but these kids take up so much of your time and energy and it’s quite exhausting. I mean, you would never put your kid in respite to have a break, but it’s almost like that because there is just no break. People are not putting their hands up to look after your child. (T9F C07L 03.06.16)

The need for better access to opportunities for parents/caregivers to learn about dual exceptionalities was a common feature in the interview transcripts, coded as seeking specialist knowledge. This was so that parents/caregivers could become better informed, and therefore make educated decisions about, suitable provision for their 2E child’s learning needs. The following comment from a parent of three 2E children demonstrates the difficulties parents/caregivers often have in accessing appropriate knowledge: “You’ve got to
be able to find stuff for yourself because there is no help, you are on your own. You just blindly feel your way through the system and it’s frustrating!” (T27F C19-21 09.10.16). All the parents/caregivers involved in this study expressed this high level of care and concern toward their children’s education. This level of concern served to highlight the socio-emotional impacts of coming to terms with the complexities of the dual-learning exceptionalities, whilst coping with family demands and social judgements of their children’s learning behaviours. Such references were assigned the initial code *acknowledging parenting fears*, and are typified by the following comment from the parents of a 2E child:

P1: We don’t know much. When you are a parent [of a 2E child] you’re pretty much hiding behind doors, you know what I mean?

I: You don’t know what’s going on?

P1: No.

P2: I think it’s hard to when you have a child like S you feel like everyone thinks something’s wrong with him, and to sort of, sort your stuff out as parents. That’s what I feel anyway…

P1: Yes.

I: So, you feel there’s a social stigma attached to this?

P2: Yes, I think so. I think often they think you’re doing something wrong in his upbringing…it’s hard though. (T11F C01B 25.07.16)

In this regard, most parents/caregivers remarked that it was happenstance that they came to be aware of, and thereby learn about, specific learning exceptionalities that affected their children. For example, in the next passage a parent describes how he was initially sceptical of a suggestion to have his son’s eyes tested for what was later identified as Irlen’s scotopic sensitivity syndrome:
We went to the guy out here who does Irlen’s testing, and I wasn’t certain about this. And he had a piece of paper and it had just streams of text on it and they gave it to S and said look at that, and it was black on white. And S said yes, it’s a river and its just running off the edge of the page. And then he started giving him these glasses, pink ones and this and that, and he said [to S]: what makes the, the letters stay on the page? And he finally got to the dark blue ones and S said these are the ones, the text stays on the page. And then he opened the blinds outside and said I want you to look and tell you what you see. Because I, up until this point, wasn’t certain about any of it, and he looked out and he said: Oh look! the letters stay on the licence plate and the tiles on the roof are all staying in place. And I then realised he was living in a world where everything was moving all of the time. (T2F C12H 18.10.16)

This incident, like other chance events, afforded the parent an opportunity to develop new knowledge about specific learning exceptionalities, and how they influenced the learning process, reflective of a process of learning through need. Clustering of these initial codes thus served as a basis for the development, via abstraction, of the focused code, recognising exceptional traits.

5.2.2 Searching for appropriate provisions.

The second focused code in this subsidiary category, searching for appropriate provision, was developed from the family interviews in response to questions concerning current school provision for dual exceptionalities, and the perceived need to advocate for specialist resourcing for exceptional learning requirements in NZ schools. The search for appropriate provision involved parents/caregivers of 2E children seeking material resources alongside supportive teaching relationships, so that their child’s learning capabilities could better be realised. References in the transcripts to the process of locating appropriate provisions were assigned the initial code providing for dual exceptionalities. Most parents/caregivers
remarked that this search was often challenging and sometimes involved decisions about schooling that went against the expectations of a community, as seen in the following passage:

I’ve found that quite personally challenging because we are going away from the norm (in this community)—where the norm is going to the local school or going to the (accepted) school and we have pulled right out of that for the reasons we just spoke about [related to dual exceptionality and school fit]. And I find that quite personally difficult sometimes. And I feel like I am having to justify that decision, but that I don’t want to justify that decision by saying these are S’s issues—rather that we find that this is the best school for him. (T28F C12Z 15.10.16)

Perceptions of social judgement were often attached to decision-making processes evidenced in the transcripts, appearing to reflect a lack of understanding of the complexities of being 2E in the wider social arena. One parent commented on social stigmas, and stereotypes affiliated with learning exceptionalities, that influenced decisions made about opportunities offered at schools:

We were invited to that seminar about G&T, it was like, oh yeah, they’re talking about other people’s kids. It was open, and anyone could go, but we didn’t want to be seen to think…there was that sense of if you’re talented, socially you are this, and we didn’t see that with S, so... (T5F C03A 01.06.16)

Parents/caregivers frequently remarked that there were extra demands on parenting 2E children, especially in regard to seeking a balance between affective aspects of schooling and the need to seek appropriate resources for individual learning needs at different schools. Such references were assigned the initial code protective positioning in reference to the need for parents/caregivers to carefully consider the consequences of decisions made from multiple perspectives. When asked about whether they would shift their 2E child from his current full
primary school to a separate intermediate school, S's parents commented, “I think if we changed him it would not be good for S,” and “Yes—here he is surrounded by people he knows” (T11F C01B 25.06.16), suggesting consistency and familiarity were important factors in decision making. The following passage relays typical concerns of parents/caregivers regarding school choice and provision for dual-learning exceptionalities:

P1: As much as sometimes labels can be misleading we understand the importance of having this before secondary school because we don’t want them to miss what he can offer...And so, our approach to secondary schools is more, why should you have responsibility for our child, rather than are you going to accept us? And certainly, we are looking at high schools already and those are the questions we’re asking—how do you cater for those groups?

P2: And P1 brought up what if he doesn’t get in because of [his dual-learning exceptionalities] and we thought in that case they’re not going to be the right school for him. (T5F C03A 01.06.16)

In some instances, inadequate provision combined with a lack of understanding in schools about the combined effects of dual-learning exceptionalities, resulted in children being withdrawn from the school system altogether. In such cases home-schooling was usually undertaken by a parent to ensure that the child had a supportive environment to help overcome the learning difficulties that had been experienced in the previous school setting. Such incidents were coded as providing home learning supports. The following conversation with a parent reveals the complexities of educating some 2E students with obvious asynchronous learning needs:

We home-schooled for a year and S thought he was doing science and actually we were learning how to copy from the board...We had lots of rewards. And he had to write what he had achieved for his reward. So, I was trying to do the spelling, the
writing, everything but all within a science context... And we were trying to do the science at university level I probably [laughter], but then going back to Year 1 for handwriting... I was trying to telescope Year 4 and 5. But basically it was just getting those [literacy] skills sorted out. (T27F C19-21 09.10.16)

Parents/caregivers also remarked on the need to provide extracurricular activities to develop areas of learning strength and/or assist their children in overcoming learning impairments, as they perceived that schools did not adequately cater for dual-exceptional learning needs. In the following excerpt, one parent comments on the daily assistance needed at home, as well as programmes outside of school, to help cater for their child’s areas of learning strength and difficulty:

[We practised] all the time, every single night. And there was a great course called The Gift of Dyslexia and I went on that course and took my husband along. And there was an intervention programme that you could buy into. And S took part... he went every day during the holidays. It was a very expensive programme, but it was great because it focused on dyslexia as something more of a positive rather than a negative. So, we did that at home, and I also made sure he went to holiday workshops and had opportunities to do his art. (T28F C12Z 15.10.16)

Other parents similarly commented upon the need for large investments of family time (and often money) involved with raising 2E children to help them realise their full potential. The next excerpt demonstrates the frustrations (classified under the initial code realising concerns) felt by some parents/caregivers when considering school provision and contrasting it to their 2E child’s specific learning needs:

During primary school and through the intermediate years his sister and I would work as his writer at home. He would tell us what to say and we would write it down as is and he’d just copy it. Because that was the easiest way... and you talk to his teachers...
and say, if you just ask him about it he’ll tell you and it’s quicker—it’s 10 seconds!

But they won’t ask. Rather than making him sit there for 2 hours trying to write something when he can’t write it! (T1F C02B 04.05.16)

In recognising dual-exceptional traits, and subsequently becoming more knowledgeable about learning differences, parents/caregivers also remarked that they found it necessary to advocate for their child’s learning needs at school to help ensure adequate provisioning. Consequently, fragments of text in the transcripts that referred to active campaigning for better learning supports, were coded as advocating for needs. For example, one parent remarked, in regard to the challenges of having a 2E child attending a public school, that:

[There are] challenges in terms of being an advocate all the time. I’ve got to be there, all the time. I have to go to these parent-teacher interviews, I have to be there—and if nothing’s happening knowing I have to go in and follow-up. (T28F C12Z 15.10.16)

Advocating was often referred to as learned skill, involving venturing into unfamiliar territory to seek better provision for exceptional learning needs from those perceived as the education professionals. Issues of funding and resourcing for dual-learning requirements, along with problems in locating knowledgeable and supportive personnel in schools, were common features arising in the transcripts. The following excerpt from a parent reflects on an incident that provided the impetuous for them to advocate for change:

Sometimes you’ve got to put your foot down, it feels like you’ve got to fight for them. And I think that’s true of not qualifying funding for [teacher-aide] hours because they are gifted and talented and people think they don’t need anything. If they had another type of disability, like a physical disability, they would find money for that. So I’ve had a few frustrated conversations around that...I’ve had to learn to push—how to do that. You don’t want to be the squeaky wheel—the one that’s whinging and moaning, but you have to. You have to be in contact with the school, especially before the end
of the year and say right let’s think about teachers and [things] like that. (T9F C07L 03.06.16)

The importance of at least one parent being actively involved in advocating for their child in the school setting was remarked upon by all of the parents/caregivers participating in the study. One parent commented that she perceived that the current school system presented many challenges for 2E children, and without a parent invested in the education of that child, they were unlikely to realise their full potential: “It’s amazing that anyone makes it through! I said to my kids, every time one starts at university, I breathe a sigh of relief. Thank God, we’ve got through!” (T27F C19-21 09.10.16).

5.2.3 Accessing expert assistance.

The final focused code in this subsidiary category was accessing expert assistance. This focused code emerged from responses to interview questions related to the reflections families had on schooling experiences, as well as from suggestions for improving provision for dual-exceptional students in NZ schools. There were several significant identified features of the parents/caregivers and student transcripts related to these questions that led to the construction of initial codes that provided the basis for the development of this focused code. These features included conflicts in the school setting that led families to seek out specialist advice regarding the effects being 2E had on, and for, learning.

The parents/caregivers involved in this study often reported that they had to seek professional advice in response to unsatisfactory or unresolved events in the school setting. Such events were assigned the initial code, addressing conflicts, which spoke to socio-emotional/behavioural aspects of parenting 2E students attending NZ schools, as seen in the following excerpt: “He got really, really uptight about Māori language—he is Māori, but he got really uptight about it. I think the teacher put too much pressure on him at the Year 8 level. I had to contact the teacher and say...back off” (T9F C07L 03.06.16). In many
instances, such circumstances arose because of a lack of clarity in school procedures regarding who to contact with specific learning concerns:

The main [difficulty] has been knowing who to talk to at school when you have a child who is not a run-of-the-mill student. Knowing what to do, who to ask...I just have to ask the teacher, [because] who else can I ask? But if the teacher isn’t interested, or doesn’t know, that’s a roadblock there. (T22F C07C 06.09.16)

The initial code, seeking expert advice, was developed to capture the wider consequences of such events. Seeking expert advice was considered by many of the parents/caregivers as a vital step toward accessing informed information about the capabilities of, and challenges faced by, their children, so that this knowledge could be passed on to schools to facilitate learning. Seeking expert advice appeared to occur in response to events that alerted parents/caregivers to significant areas of learning difference. On occasion these events were positive, arising in response to recognition of area(s) of gift and talent. However, more typically the impetuous was the identification of underlying learning problems that impacted upon achievement in the school setting. Sometimes conflicts with a school forced parent(s)/caregiver(s) into the situation of having to seek specialist advice, at their own expense, to alleviate an increasingly fractious situation, as demonstrated by the excerpt below:

P: I used to get a psychologist to work with S. I used to pay for her privately to come across and talk to S, because the school used to ring me on a daily basis and say that S was in a dark place, he so dark, he says dark things…but he didn’t want to go to school, he thought—this place sucks. I hate it. You’re all going to die. So, he’d say completely inappropriate stuff like that. So, they would call me every day at work and it was really difficult. So, I got this woman, a psychologist who specialised in kids that were gifted and I used to pay for an hour, $80 every week, for her to come over to the school and sit with S and talk through his emotions, and how to deal with his
emotions and stuff...And I did that for a good year and a half but then she moved away. And it was good, it helped. But I was reluctant to go through the youth mental health unit up here. [The school] really pushed for him to be assessed for mental health problems, but again, I worked in mental health, so I thought, my son doesn’t have mental health issues. He’s probably a bit depressed because he doesn’t want to go to school. So yeah, I dug my heels in for quite some time. And then we came here and things were still challenging. But then last year we went to the Indigo centre and got a full diagnosis.

I: And how did that help everyone’s understanding?

P: There are people, sceptics, that just believe they are naughty [expletive]. There’s a lot of that. So I actually had to pay a lot of money for that diagnosis, but I don’t feel that anyone was qualified enough to work with these types of kids. (T9F C07L 03.06.16)

This reflection demonstrates the wider family impacts of having a 2E child who feels alienated from the school system, and thus acts out socio-emotionally/behaviourally, as learning needs go unattended. It also raises awareness of the current difficulties with conceptualising students with dual exceptionalities, and, importantly, how to attend to such diverse and complex learning needs in a mainstream school environment. In almost all of the cases where specialist advice was sought, an improved outcome was achieved. However, in some cases, knowing who to seek advice from was problematic, with some referrals to professionals not achieving a constructive outcome:

P: We tried [to get a diagnosis], we tried. But in the end, we just gave up at [youth mental health unit] because they were mucking us about every 2 weeks. They would say, oh no, nothing’s wrong with him. As parents we knew something wasn’t quite right with S—it was just the triggers and things…
I: When did you first seek help there?

P: Last year. We did 5 or 6 months with them. Then we gave up—they had no toolboxes whatsoever. They just used to say—that’s not how you act S, which wasn’t helping him. It wasn’t even helping us. (T11F C01B 25.07.16)

In most cases, connecting with knowledgeable experts in the field of twice-exceptionality was reported as being more by luck than by design, as seen by this parent comment: “So I chatted to a few people and that’s when I found out about the [educational psychologist] tests, because I didn’t even know that they existed” (T31F C12E 20.10.16). These findings suggest that families need more assistance connecting with, or accessing, informed experts who can assist with developing appropriate individual learning plans for 2E students. Such incidents were assigned the initial code, developing understandings by chance.

The findings also indicated that families need support to enable the further development of informed understandings about twice-exceptionality, that help with family acceptance of difference. In this regard, parents/caregivers and the students often reflected on a lack of readily available information about dual exceptionalities.

There’s nothing out there to guide you. I just put myself out there as being educated and seeing this as my job to do this for my children. So that’s why I set up this consultancy business, for parents that have got an Ed Psych report and are thinking, right, now, what am I supposed to do now? What are my options? Because it’s really difficult to think, right, I’m home-schooling but I am not a teacher. And this is one of the big things, is that we as the public think that the teachers do the teaching, and a lot of mothers think that they just drop children off in the morning and the teachers will teach them and then they will come home. But gifted kids, and 2E in particular, that can’t happen. The mother needs to be the project manager and she needs to provide
the enrichment opportunities, and find someone to provide for the remedial, and
school is only part of the deal. (T27F C19-21 09.10.16)

Such information was considered by families to be essential to being better able to
understand the cognitive, socio-emotional/behavioural and academic needs of 2E individuals,
so that appropriate ongoing support and care could be provided to sustain family
relationships. As such, acceptance of difference was considered by participants to be
necessary to facilitating achievement in the school setting. The initial code *developing
informed understandings* was thus created to capture these reflections in the transcripts. The
following discussion was indicative of the types of problems concerning understanding that
some of the families faced:

My Dad is very judgemental and he says things like “oh, he’s never going to be
socialising.” And he looks at me and says “what are you doing to your child?” Just all
those things. He acts totally different to S too... But S’s father’s parents are really
supportive. I think they understand him…the differences. And actually, I don’t totally
understand S if I’m honest. I find it frustrating. There is a genetic pattern in the
family. [Father’s] brother is also like S—he’s extremely intelligent too. So I think it is
in the family. It makes me wonder. (T11F C01B 25.07.16)

In a few reported instances, some schools that participated in the study were shown to
actively support the development of understandings about 2E learners, as seen below:

I think, it was in Year 7 here, I went with the SENCo and one of S’s teachers to a 3-
day autism workshop, which was great. I had to take 3 days off work, but I was
willing to do that and it was great. But it was hard to get onto this course. You had a
big booklet you had to work through and we worked as a team. It was good. (T9F
C07L 03.06.16)
These findings suggest that the development of informed understandings, coupled with an acceptance of difference, was seen to be critical to developing empathetic and nurturing relationships in and between families and schools. As described above, such acceptance was perceived by families as encouraging the recognition and development of student strengths, alongside accommodations for identified learning challenges, thereby promoting successful achievement in the school setting.

5.2.4 Subsidiary category: Accepting differences.

The three focused codes, recognising exceptional traits, searching for appropriate provisions, and accessing expert assistance, represented various identified features of the development of family understandings about, and acceptance of, dual-exceptional individual difference. These codes were again intertwined in relationship with one another, as families negotiated and renegotiated different understandings about twice-exceptionality and their acceptance of difference. As for the two previous subsidiary categories, this was visually conceptualised as a process of cycling between each code in perpetuity (Figure 5.3). The findings indicated that the development of understandings about learning differences was again relative to the surrounding learning context, and to an individual’s development, especially in consideration of asynchrony between cognitive, socio-emotional/behavioural and academic realms of capability and difficulty. The relationship between the three focused codes was consequently abstracted in analysis to be developed into the subsidiary category, accepting differences.
5.3 Perceptions of School Systems: Managing Climates

Managing climates, defined as the process of negotiating access to, and appropriate provision for, 2E students in the NZ school system, developed in response to research questions regarding policies, procedures and learning accommodations relevant to 2E students at the state and school level. This subsidiary category was developed via the merging of three focused codes, leading the way, accessing appropriate care, and seeking specialist support at the level of school systems.

5.3.1 Leading the way.

The focused code, leading the way, emerged from data referencing school leadership, policies and procedures, that helped direct school provision for 2E students. As school strategic plans guide budgeting allocations and resourcing in NZ schools, the development of policies and procedures for specific student groups is necessary to help ensure the provision of equitable education resources to match learning needs. Consequently, fragments of the transcripts that referenced leading policies and procedures that directed provision, as well as key personnel
who supported the development of appropriate programmes of learning for 2E students, were coded for, and later encompassed within, this focused code.

References to school policies and procedures relevant to exceptional learners were assigned the initial code, *developing policies and procedures*, reflective of the nature and extent of many of the provided documents. As outlined in Chapter 4, only seven of the 11 participating schools supplied documents relevant to 2E students, and these were at various stages of development. No specific policies for 2E students were provided by any of the schools. Instead, policies for gifted and talented and/or special needs (referenced as learning disability) students were received. Documents concerning gifted and talented students typically included the school rationale, definition and a generic statement on the responsibilities of various staff. School rationale typically stated that the policy was established to make ongoing provision for children with special abilities (CWSA)/gifted and talented students, in line with the MoE (2007) NAG 1(c) iii, which was either directly referenced (n=2), or implied (n=5) in the documentation. School 05’s policy statement referenced individual needs programmes and was inclusive of both special-needs and special-ability students, referring to either support or extension programmes throughout.

School definitions varied but were typically multidimensional in their inclusiveness of domains of giftedness and talent in keeping with the MoE recommendations. These domains included critical and creative thinking, spiritual and/or emotional intelligence, physical/sporting ability, cultural aspects, visual and performing arts, as well as technological and academic intelligence. Only three of the schools (01, 07 and 12) directly referenced 2E students as being included within the larger group of gifted and talented. The SENCos of two of these three schools admitted that this was a recent inclusion in response to the research invitation. One school had included students with disabilities (unspecified) within their existing gifted and talented policy. When queried about this inclusion at an interview, the
SENCo remarked that this was due to a key member of staff having a special interest in the field.

Generic statements on the responsibilities of school staff broadly maintained that teachers were primarily responsible for developing credible, manageable and flexible programmes, to identify and evaluate gifted and talented students in their classrooms. Four schools (01, 07, 10 and 12) provided evidence of teacher checklists and other procedures for identifying and providing for gifted and talented students. Schools 01, 07 and 12 provided evidence of consultation with students and families, as well as peers, to assist in identifying gifted and talented students, including those who were 2E and/or underachieving. Provision for gifted learners was typically stated as being by withdrawal and/or in-class provision, often by tapping into staff strengths. Four schools referred to the need for ongoing professional learning and development opportunities for staff (01, 06, 07 and 12), although, in documentation dating back to 2008, school 06 stated that this had to occur “within resource limitations”.

Reflections on the nature and effectiveness of school policies and procedures were also provoked by interview questions, as well as questions in the teacher/SENCo surveys. Questions to parents/caregivers and teachers/SENCos in interviews inquired into their knowledge of, and information contained within, school documents relevant to 2E students. The responses ranged from being very familiar with, to having no knowledge of, school policies and procedures. Similarly, statistical analysis of the teacher/SENCo questionnaires evidenced varying degrees of knowledge about school policies and procedures. Using frequencies of response, these analyses showed that 44.4% of respondents had no familiarity with MoE policies relevant to 2E students, whilst another 16.7% reportedly had little familiarity. Similarly, a combined total of 51.8% of teacher/SENCos reported no or little
familiarity with school definitions of twice-exceptionality, whilst 61.1% had no or little familiarity with school policies or procedures that affected 2E students.

Comments in teacher/SENCo interviews often referenced a lack of policy to guide provision:

We don’t have guiding policy or procedure yet for that and this is where we need to do some work. I am head of [gifted and talented] and I have never seen school policies or procedures in regards to this, and at the moment there isn’t an avenue through which to push this—perhaps through the SENCo, but not really at the moment. (T26T/G&T C0603 15.09.16)

Some teachers/SENCos referred to recent realisation of the need for developed policies and procedures that catered for 2E students (assigned the initial code realising policy needs). This appeared to be linked to the arrival of the research invitation, which had raised awareness of the issue to the extent that some participants reported: “We are developing documentation at the moment and will definitely include twice-exceptional students in the school definitions and policies we develop” (T25DP/S C05S 07.09.16).

Parents/caregivers typically had no knowledge of school policies relevant to procedures and resourcing for 2E student needs. The following excerpt was characteristic of the responses of parents/caregivers, who all remarked that dealings with schools regarding their children appeared to be largely unstructured: “just ad-hoc really…they keep talking about it. I think the only thing they have done here really is the ability grouping” (T4F C03B 01.06.16).

Students also commented on the unstructured nature of provision for their exceptional learning needs, as seen by comments such as: “I haven’t had any planning really. Everyone here just does the same sort of things” (T23F C07D 06.09.16). Such remarks were assigned a tentative code, winging it. The consequences this happenstance approach to provision had on the realisation of learning capabilities in schools, was also remarked upon by families:
When S started high school, the school didn’t ask for anything. At Year 9 they do a battery of tests, one on reading, one’s an IQ test, one’s literacy and one’s numeracy, and they do this all on one day and that’s it—they are sorted into streams on that. And this was despite the fact that I said [to the school] I have an [educational psychologist report] that stated she was dyslexic, and they didn’t even look at it! She was just placed in [middle stream]. It’s great that they have got streams and equally lucky at this school that they don’t stream very well. (T27F C19-21 09.10.16)

Another parent remarked that a lack of willingness to recognise 2E students in school policies, and thereby equitably provide for them, stemmed from difficulties in recognising and understanding dual-exceptional learner difference in NZ schools. As such, the initial code, recognising dilemmas of learning difference, emerged, as shown in the following excerpt:

As at most schools, they find it difficult to adjust to one person. You know, because S has autism which makes it harder, not just the other learning differences...They find it harder to adjust, you know—we all like the middle of the road; the kid who has got no problems—dead easy to teach. (T1F C02B 04.05.16)

The concept of informed leadership in schools, seen as vital in addressing 2E learning needs, was a frequent finding in the parent/caregiver and teacher/SENCo transcripts. This led to the emergence of the initial code leading from informed positions. Informed leadership that directed resourcing for 2E students involved the establishment of supportive and flexible school management systems, alongside the presence of key personnel needed to direct and sustain appropriate policies, procedures and staffing. Key personnel were considered by all participants to be vital to enhancing the capabilities of 2E students in NZ schools. One parent commented: “It was that woman at S’s school, that one critical person, who picked it up and she knew what to do—incredibly fortunate” (T29F C12H 18.10.16). The need for informed
leadership within schools was also noted by teachers/SENCos with respect to an absence of such support:

[Twice-exceptional students] would be ignored unless they had a classroom teacher where that was their thing. I am good at identifying them, and I can go to the GATE coordinator and say to her, you know I’m trying this and it’s not working, to seek advice. [But] if you’ve got someone with no idea, [twice-exceptional students] just crash and burn. (T8T/Dean C0700 03.06.16)

One parent reflected on a major incident involving her 2E child that resulted in her removing him from the school due to an absence of informed school leadership, as seen in the passage below:

P: There was one major one, and that was the teacher not understanding…well he was the principal, not understanding that you can’t make S be what he’s not…He wanted S to write lots and be able to participate in everything and do all those things that S can’t do…And the fact that he thought S was thick as anything because he couldn’t answer the questions the way he wanted him to, but he wouldn’t ask S the questions. And it was affecting S, he was feeling that he was thick because he couldn’t do things the way he was supposed to be doing [them]. Like a book report, S couldn’t do it, but S could flick through the whole book and tell me what page everything was on and we talked about everything. But the principal, who was the teacher for that class, said no, he hadn’t read the book because S didn’t have all of the writing.

I: And as a parent, how did you manage that?

P: I took him out of the school because there were only three teachers and that was the principal, so you can’t do anything … so he was removed from the school.

I: You didn’t feel you could advocate for him in any other way?
P: No. I talked to him and talked to him and it just was going nowhere. And he’d say S is as thick as anything, stop pretending he’s not and that’s it. And the reports reflect the same thing don’t they S?

S: Yes.

P: And he said to S’s father that he would fix S and he would be perfect [laughter]. But I said, unless he’s doing brain surgery out the back he’s not going to fix S! (T1F C02B 04.05.16)

The impact of such conflicts, which typically arose from unsupportive school leadership, was often wide ranging and long lasting for families, as seen in the following comment from a parent:

Earlier this year [the gifted and talented coordinator] rang me and said that they had been put in charge of trying to identify these students. And I was like, thank you, thank you. I was nearly crying, I was so thankful that something was actually happening. (T22F C07C 06.09.16)

Comments like these speak to the wider socio-emotional effects dual exceptionality has, and, thereby, the importance of developing informed understandings about 2E students in NZ schools.

5.3.2 Accessing appropriate care.

The second focused code, accessing appropriate care, emerged from research questions pertaining to identification procedures and provisioning for 2E students in NZ schools. As identification directs provision for learning needs, understanding the means by which schools currently identify neurodiverse students is critical to understanding how decisions are made about who is included, or excluded, from specialist provision. In this regard, initial codes were developed from the data related to identification and provision, including recognising special needs and providing suitable accommodations. There was little variation in the
responses of the participants in this area of the research, with most remarking upon current
deficiencies in the processes involved with identifying and/or appropriately accommodating
2E students in the classroom. The findings suggest that this had significant consequences for
a 2E student’s capability to achieve.

Recognising special needs emerged from responses to questions about how schools currently
identify dual-exceptional students, including what wider contextual factors were perceived by
participants as influencing this process. Teacher/SENCos frequently remarked on social and
political factors mediating recognition of, and provision for, 2E students. Legislative issues
that directed identification, as well as funding and resourcing, were commonly referenced:

There is a lot of developed MoE policy and provision in respect to special needs
[learning disabled] students but less around gifted and talented. Twice-exceptionality
is an emerging field. If we look at the funding situation we have got ORS funding
which typically goes to people with severe physical impairments, and we have things
in place for those who are blind or deaf, but really schools are left to muddle through
on their own with those, for example, on the autistic spectrum, and that can be a real
challenge. If you’ve got someone whose high functioning autistic, yes, you’re
probably going to muddle through, but you’re not necessarily going to get the best
from them. But if you’ve got someone further down the spectrum, that’s very hard for
mainstream secondary schools…they can underachieve. I think hidden disabilities are
notoriously hard to address. (T2T/DP C0202 23.05.16)

Additionally, the inclusion of 2E students under the special-needs umbrella of MoE
legislation NAG 1 (c) iii was not considered adequate by many teachers/SENCos with respect
to recognising the complexity of dual exceptionalities for the process of schooling, which
was often referred to as “just lip service” (T25DP/S C05S 07.09.16). Identification as a
process appeared to be influenced by the current MoE focus on pulling-up” the tail of
underachieving students in NZ schools. Underachievement, in this instance, was referred to by participants as concerning students who were not achieving on academic measures of ability, rather than underachieving for their potential. This conceptualisation of underachievement again highlighted issues at the state level in understanding the effects of dual exceptionalities on the performance of academic tasks, that typically result in 2E students underperforming when compared with their potential. Many teachers/SENCo remarked on this phenomenon and the fact that current understandings about 2E students’ learning needs, typically limited access to opportunities in gifted and talented programmes:

More time is spent on students with [low-ability] learning needs because our job, if you want to put it that way, is to make them meet the standard or above, so that’s our drive...If you think about what directives come from the ministry, that’s our drive, that has to be done...So, at the moment teachers’ intuition [is used] to pick up twice-exceptional students [and to] try to sneak in children in that field [for enrichment opportunities] that aren’t necessarily achieving highly in every field. It’s recognising that their learning might be up here in one area but down here in another. (T19T C0809 01.08.16)

Analysis of the teacher/SENCo questionnaires using frequency statistics (Appendix O) showed that in respect to conceptualising twice-exceptionality, 22.2% of respondents reported having no familiarity with the concept, with another 16.7% being a little familiar (a combined total of 39.6%). Only 26% of teacher/SENCos reported being highly or extremely familiar with the concept. Challenges with how to conceptualise learning exceptionalities in the NZ school context were evidenced in the interview transcripts. Difficulties in reconciling the perceived paradoxical traits of giftedness alongside learning difficulties, appeared to lead to issues with recognition:
I think it’s a perception. And I know that for my son, the teacher would say to him: If you’re so gifted why are you going to the (enrichment) programme if you can’t even do that? So there’s that perception that if you’re gifted you should be amazing across the board—you can’t be gifted and have a parallel weakness. And teacher perception of what giftedness is, let alone what twice-exceptionality is... I mean our understanding of what giftedness is not very good. (T6G&T C07G&T 03.06.16)

Such difficulties in conceptualisation were shown to influence access to appropriate school provision, especially in respect of opportunities being offered that catered for learning strengths, as shown by the following excerpt:

Kids are either picked up because of a gift or talent so they get the extension stuff, or because of a learning difficulty, but not the two together. So the cream of the crop is up the top and ones struggling with the learning difficulties down here, but it’s the ones in the middle that we are looking at here, and they are at the national standard so they don’t fit that, and no-one has recognised that they have a this over here either, …so they are missed. (T13S C01S 25.07.16)

The following incident, from the interview transcript of a teacher, shows one of the consequences such misunderstandings have for 2E students in NZ schools, in this instance, with respect to school arrangements:

T: Old-school teachers will just see them as naughty and defiant. And there’s no changing that mind-set of: I’m not going to change the way I teach because of a kid.
I: You see those frustrations because you are a dean?
T: Oh yeah totally, my twice-exceptionals hate it. They are constantly in my room whingeing, and rightly so, about the same people. I can guarantee what it’s about before they even open their mouths. So we really do try, when we do class placements [to] avoid that clash—very much so. They are given massive consideration in our
department for where we place them…we try to timetable certain teachers out of their academic pathways. (T8D/T C07 03.06.16)

Teachers/SENCos also remarked upon the fact that in NZ, schools can define giftedness and talent at the community level of schools. This approach results in varying definitions between schools that direct identification processes, and, thereby, access to specialist programmes. Such inequities can result in individuals being identified as gifted in one school, yet not identified as such in another, setting the stage for conflict, as highlighted in the following excerpt:

Then of course you have parents that are convinced their child is gifted. And each school has their own definition, so at one school they might be, but at another they’re not. I was talking to a lady at morning tea who thinks that every child is gifted, and I didn’t want to get into an argument, she’s wrong, but I didn’t want to argue. Of course every child has strengths and weaknesses, but actually not every child is gifted. (T7T C0709 03.06.16)

A lack of clarity in MoE and school policy concerning 2E students was remarked upon by many of the participants as leading to confusion over who is identified as having special needs, and therefore who is eligible for special provision. Special provision included access to resource teachers of learning and behaviour (RTLBs) and/or teacher aides. In this respect, analysis of the teacher/SENCo questionnaires using frequency statistics, showed that 64.2% of respondents reported no to some familiarity with learning accommodations for 2E students at their school, whilst 35.8% were moderately to extremely familiar with such accommodations.

Similarly, teacher/SENCo confidence in making referrals for specialist evaluation of students suspected of being 2E was reported by 53.7% of respondents as being of no to some
confidence and 46.3% as being of moderate to extremely high confidence. Various factors were considered important in making referrals for assessment of exceptional learning needs. Behavioural difficulties in the classroom were considered by 79.6% of respondents as being moderately to extremely important, whilst extracurricular achievements were considered by 82.7% of teachers/SENCos as being moderately to extremely important indicators. Referral due to parent/caregiver nomination or concern was seen by 86.8% of teachers/SENCos as being moderately to extremely important; referral due to peer nomination by 77.4% as moderately to extremely important; referral due to performance on class tests by 62.3% as moderately to extremely important, and performance in class work or assignments by 74.1% as moderately to extremely important. Interestingly, only 59.3% of respondents thought the results of IQ or ability tests were moderately to extremely important indicators for referral. In contrast, referral due to teacher observations of performance were considered by all (100%) of respondents as being moderately to extremely important; however, only 72.5% considered the same of referrals arising from individual nomination.

With respect to identification, many parents/caregivers commented that they considered that formal identification and/or screening pathways should be introduced in NZ, but that these “should be funded, even a part fund would do for a start, better than nothing, because [currently] it’s only parents that can afford it” (T1F C02B 04.05.16). This last comment references the fact that screening for dual exceptionality in NZ is currently only available to those who have the funds to pay for it, and therefore excludes families of 2E students who cannot privately finance professional assessments. Many teachers/SENCos remarked that they considered a lack of formal identification of learner exceptionalities in NZ, led some 2E students to miss out on suitable provision for learning needs. This was often attributed to socio-emotional/behavioural issues that detracted from individual capabilities, as referenced in this excerpt from a teacher: “there’s heaps, heaps, and they’re labelled as naughty, and
they are labelled as lazy (T3OT C1205 20.10.16). The findings therefore appear to indicate that the systems and arrangements currently in operation in NZ schools, that influence identification and provision for dual-exceptional students, require further development to better attend to issues of education equity.

The emergence of comments on interview transcripts related to provision gave rise to the initial code providing suitable accommodations. Some participants commented upon the consequences that vagaries in definition and understandings currently had for 2E students in terms of resourcing to meet complex learning needs:

T: [The MoE] are not looking at the other end [gifted and talented], which, and this includes twice-exceptional students, has its own [learning] issues. And these are the kids that end up being referred to RTLB because of behaviour, but really, we are not catering for their needs.

I: How do you seek support?

T: There’s nowhere—there’s nowhere else. And even the [RTLB] service is really difficult because technically they are not supposed to work with the students but with the teachers. [Teacher aides] don’t get training for, and we don’t even get training for, how to deal with [twice-exceptional] kids. And what is available out there is very theoretical, it’s not the tin-tacks of here’s a programme, or here’s what you can do—we are floundering and at a loss. (T25DP/S C05S 07.09.16)

Challenges with identification and the inclusion of individuals with dual exceptionalities in specialist school programmes/opportunities were also noted by parents/caregivers and 2E students. One parent, in reference to her 2E son not being nominated for an enrichment programme that she considered would have assisted in developing his learning strengths, commented: “I think devising programmes that help guide these students more [is needed].
Isn’t that what the gifted and talented programme should be for? That’s what I feel” (T22 C07C 06.09.16).

Most of the participants, families, and teachers/SENCos remarked that currently, learning accommodations for 2E students were focused on learning difficulties rather than learning strengths. Such comments were assigned the initial code limited provisioning. The following comment from a teacher reflects on these issues:

I think the learning difficulties normally present more strongly and louder than the gifts and talents. And in the case of the [twice-exceptional] students I am thinking about, the signs are more visible because it’s either their behaviour or...personal habit, or being, that is the visible oddity. (T15T/DP C0107 26.07.16)

In this regard, some of the participants also noted that assigning socially value-laden terms like gifted and talented, and learning (dis)ability, challenges perceptions of individual capability in society in the first instance:

P: It is about the terminology too. S1 asked me why she was called disabled…and S2 is always laughing because at disability services at university there are his mates and they all got in the top 200 kids in NZ, but they’re disabled. They’re not disabled; there is just a learning difference. The term just perpetuates the misunderstanding.

S2: Yes, I’m severely disabled; I only have a GPA of As.

P: A lady once described it to me as only being a disability if it’s stopping you performing at school. The difficulty is in the classroom, but it’s actually just a [learning] difference. (T27F C19-21 09.10.16)

As a consequence of this focus on learning (dis)abilities, many of the research participants expressed frustration at a lack of appropriate provisioning in schools for 2E students’ domain(s) of learning strength, especially with regard to a lack of realisation of individual
potential. The MoE was called upon to take a more active role in developing national policy and procedures, as well as to encourage research, to help ensure 2E individuals were effectively identified and appropriately catered for in the NZ school system. The following excerpt is from a teacher who reflects on the loss of individual promise:

We don’t get any help for these students, none. Because they squeeze along; but you know what, they should be flying through the system! They should be doing university papers in Year 13, not scraping through NCEA. Their potential is not being met. The system is still not assisting them in this. They need funding, research [and] support. (T21S C0704 06.09.16)

5.3.3 Seeking specialist support.

Seeking specialist support was the third focused code developed within the subsidiary category, managing climates. This focused code was created in response to research questions that explored school factors specifically relating to teacher/SENCo knowledge and the nature of teaching–learning relationships. Such relationships were perceived as either facilitating or presenting barriers to schooling for 2E students. Seeking specialist support was developed following the emergence of initial codes in transcripts that highlighted issues concerning specialist understandings of asynchrony and difference in the school setting, as well as matters relevant to the establishment of supportive home–school partnerships.

Recognising and understanding asynchrony and learning difference is critical to appropriately catering for student diversity in schools. Teachers/SENCos therefore need to be knowledgeable about the presentation of student exceptionalities and the consequences these have for the teaching–learning relationship. The initial code, understanding asynchrony and difference emerged in response to concerns about the level of knowledge teachers/SENCos possessed in respect of twice-exceptionality. In this study, teacher/SENCo knowledge varied
on a continuum from individuals who considered themselves very knowledgeable, to those who remarked on a lack of knowledge about dual exceptionality and its learning impacts.

The statistical analysis of the teacher/SENCo questionnaires provided useful insight into the levels of reported understanding of asynchrony and difference in NZ schools. Of specific interest to this research was teacher/SENCo frequency of contact with, and professional knowledge about, students with exceptional learning needs. This was because individuals who have had experience with such students are often more empathetic and respectful of learning differences. While 90.7% of educators reported having some contact (either daily or weekly) with individuals with special needs, 9.3% reportedly had no contact. In respect of professional knowledge about 2E individuals and their learning needs, only 14.8% of respondents reported having some form of postgraduate qualification or had attended a professional course in gifted and talented education, whilst 37% had done the same in the field of special education. This meant that approximately 50% of teachers/SENCos had no specialist knowledge of learning exceptionalities or their effects in the classroom.

Teachers/SENCos who considered themselves quite knowledgeable, often reported having a 2E family member, as seen by the following comment: “I am aware of the term because I was introduced to it 18 months ago, but I also have a son and a daughter both who have special needs and my son is now doing quite well at Auckland University” (T2T/DP C0202 23.05.16). Such comments were ascribed the initial code of making experiential connections. Comments from teachers who admitted to little understanding of twice-exceptionality included acknowledgement that they had only recently become aware of the possibility of gifts coexisting alongside learning difficulties, as evidenced by this comment: “I’ve always been aware of gifted students only, and on the other side of the spectrum we’ve been aware of struggling students, but never thought of students having both of them together” (T18T C0806 01.08.16).
Frequently, the invitation to participate in this research project appeared to serve as an impetus for discussion about 2E students in the school setting: “when we got your invitation to participate in the research...then we started identifying some kids, once we talked about it…the quirky ones. Once we started identifying these students I realised I do have some kids in my class” (T12T C0108 25.07.16). Admission of later awareness of dual exceptionality by teachers/SENCos was designated the initial code, making recent associations. Such admissions that relate recent revelation about the condition to participation in the research, raise concerns about the current level of awareness about twice-exceptionality in the NZ school system.

The consequences of school personnel, especially those with responsibilities to gifted and talented or special-education needs students, not being fully aware of the learning complexities that asynchrony and difference bring to the school experience, were reflected in the comments of many of the families, as demonstrated by this excerpt:

He got missed for gifted and talented classes this year. His name kind of just got left off the list and when I questioned it they said well there’s no room now, the class is full. Why would we let your son in and not others? And I said, well, because you’ve known [about his twice-exceptionality] since Year 7. (T22F C07C 06.09.16)

The extent of specialist knowledge about 2E students’ learning needs in a school setting impacted upon the nature of home–school relationships. Analysis of the teacher/SENCo questionnaires using frequency statistics showed that there were various factors considered challenging with respect to the teaching–learning relationship with 2E students in NZ schools. Of these challenges, 75.5% of respondents reported academic difficulties as moderately to extremely challenging, whilst 24.5% saw these as being of no or some difficulty. Additionally, 94.3% of respondents viewed difficulties socialising with peers as moderately to extremely challenging; 76.9% perceived difficulties socialising with adults as
moderately to extremely challenging, and 66% saw difficulties in home–school partnerships as moderately to extremely challenging. The coordination of care between different stakeholders was perceived by 75.5% of respondents as being moderately to extremely challenging, and 84.9% considered understandings about socio-emotional needs and academic difficulties facing 2E students as being moderately to extremely challenging. Such concerns influenced the nature of the relationships between 2E students and their teachers/SENCos.

Parents/caregivers commented on the importance of having a teacher/SENCo that they could liaise with in the school setting: “It’s definitely important. He had a maths teacher that he really butted heads with and she wasn’t very nice to him. It affected his behaviour for the whole day. It was really important that they moved him” (T9F C07L 03.06.16). In this regard, the initial code developing supportive relationships was created in reference to the need for families to connect with supportive and understanding teachers/SENCos. This was perceived by families as vital to successfully negotiating the school system. One parent stated: “It’s been much better since we’ve been here. Once we found that one key person who believed in him, it made a hell of a difference…and she was a deputy principal. Others couldn’t be bothered” (T9F C07L 03.06.16). When queried on whether parents/caregivers and students perceived some teachers/SENCos were more understanding and supportive of students with learning exceptionalities than others, another family commented: “Yeah, and also, one in particular will talk to other teachers so they can understand how, because of the autism, to approach S [to] get what they want done” (T1F C02B 04.05.16).

However, locating supportive relationships within schools was sometimes challenging, especially with the ever-changing demands of school. One parent remarked that they had only “just found out this year, who I have to talk to, to get noticed” (T22F C07C 06.09.16). They perceived that their child had flown under the radar with regards to his education,
commenting that it was purely down to luck that 2E students were placed with a teacher who understood them. This had ongoing implications for learning because “if they don’t they are stuffed, it’s just a struggle all year, all the time” (T22F C07C 06.09.16). Learning impacts that affected home–school partnerships also referenced challenges the day-to-day challenges that school had for 2E students, as shown by the following comment from a parent:

[It took] hours, hours of time at home to do the homework really. And he also had extra tutoring at reading, in writing and in maths. And then we would spend hours sitting together at the table doing his homework. And none of the teachers at primary school would sit with me and say, look we understand this is difficult, be flexible in the ways that you approach this [homework] task. (T28F C12Z 15.10.16)

Families remarked that such efforts often went unrecognised due to a lack of understanding regarding the differences being 2E brings into the process of learning. Such comments led to the development of the initial code searching for acknowledgement of needs. Some parents reported that this made teacher comments on reports or in parent-student-teacher interviews quite difficult to bear at times, as demonstrated by this excerpt:

Sometimes some of the negative comments on his reports are a bit harsh and I think, is that really necessary? It got to the point where I didn’t want to open them. It was so negative—everything was so negative. They would give him the lowest possible mark. And it was like, what’s the point? (T9F C07L 03.06.16)

With respect to developing home–school partnerships based on sound understandings about 2E students’ learning needs, participants often remarked that a greater focus should be placed on dual exceptionalities in initial teacher education (ITE) and professional learning and development (PLD) programmes to help improve understandings in the education sector. Parents/caregivers were typically very open in their expression of need for improved teacher education to benefit the development of such relationships: “They need to have compulsory,
not optional, compulsory courses in learning differences, to teach teachers about it. They need to offer it to teachers in teachers’ college...and [to] teachers that are already trained, because out there, there are so many teachers that have no idea” (T1F C02B 04.05.16). Teachers also remarked on the need for improved education in the field to help nurture supportive teaching–learning partnerships, which were often placed in the context of the current socio-political climate:

I actually don’t think our profession has enough people. This is going to sound really terrible, [but] I don’t think we have enough people qualified to [teach] them. I don’t think we have enough people on the ground that are passionate enough about it because all our training goes into picking up the tail. (T8T/DP C0700 03.06.16)

This was an important finding as statistical analysis of the teacher/SENCo questionnaires showed that all (100%) of respondents considered classroom teachers to be moderately to extremely responsible for providing learning support for 2E students, with 98% reporting specialist teachers with gifted and talented qualifications as being highly responsible and 96.2% reporting SENCos as being moderately to extremely responsible. Only 58.7% of respondents reported counsellors as moderately to extremely responsible, 66.7% rated education psychologists as moderately to extremely responsible, and 84% rated parents/caregivers as moderately to extremely responsible. The significance of these findings for classroom teachers to enhance the development of supportive relationships with 2E students by developing understandings about asynchrony and difference, cannot be understated.

5.3.4 Subsidiary category: Managing climates.

The three focused codes, leading the way, accessing appropriate care, and seeking specialist support, represented different aspects of contextual factors at the level of the school system, involved with developing understandings about, and providing appropriate provision for, 2E
students. These three focused codes were again visualised as circuitously intertwined, as various elements within each altered in response to incidents or events occurring in adjacent spheres. This is seen in Figure 5.4. Analysis thus far appeared to indicate that the nature and extent of the ability of 2E students, their parent(s)/caregiver(s) and teachers/SENCos to successfully negotiate school systems was influenced by wider socio-political forces. These forces included state and school policies, as well as leadership, both important in recognising and providing for student diversity and difference in NZ schools. The emergence of these findings led to the development of the subsidiary category, managing climates.

Figure 5.4. Subsidiary category: Managing climates.

5.4 Relationships Between Subsidiary Categories: Development of the Core Concepts of Identity and Capability

As detailed above, the three developed subsidiary categories that emerged in analysis were representative of the three identified spheres of influence that impacted upon identification and provision for 2E students in NZ schools. Each sphere was developed from the data of the various participants, with the voices of 2E students being ascribed central importance. The
subsidiary categories, understanding-self, accepting differences, and managing climates were now conceptually mapped alongside the contributing focused codes, and outer-lying initial codes, to help develop understandings about the relationships between the subsidiary categories. This helped to ensure that the emerging theory was grounded in the data. The conceptual map is shown in Figure 5.5.

Development of this conceptual map (Figure 5.5) helped lead, by abstraction, to the concepts of student identity and capability in the NZ school system. Identity was a concept that emerged not only from the data of 2E students, but also the data of parents/caregivers and teachers/SENCos. The core concept of identity was developed from codes related to recognition of, and understandings about, learning differences and the effects these had in the school setting, as discussed above. Recognition, or lack thereof, of unique learning asynchronies and differences in particular school climates, appeared to influence 2E student development of personal understandings, reflective of theories of identity development. The findings suggest that the process of developing identity influences perceptions of individual capability in the school context, especially in consideration of current social conceptions of learning diversities and difference. Thus, the lack of recognition of, and informed understandings about, 2E students in the NZ school context, was directly connected to the ability of such students to successfully achieve and realise their academic potential.
Figure 5.5. Conceptual map of code and category relationships.
5.5 Chapter Summary

Chapter 5 detailed the emergence of the subsidiary categories: understanding-self (representing immediate personal factors), accepting difference (representing proximal family factors), and managing climates (representing distal school factors) from the data. Each of these subsidiary categories was representative of three different spheres of influence in the investigation of the phenomenon of the underachievement of 2E students in the NZ school system. The relationships between these subsidiary categories were then discussed, which led to the emergence of the core concepts of identity and capability. The emergence of these two core concepts directed further analysis, via theoretical sampling of the data, to ensure the properties and dimensions of each category were theoretically saturated. The development of student identity and capability within the NZ school system thus emerged as of central importance in the development of the emergent theory. A summary of these developments is shown in Figure 5.6.

Figure 5.6. Emergence of the core concepts of identity and capability.
The development of the theory thus far was subsequently summarised in a memo as:

2E identity and capability appear to be two concepts central to the emergent theory.

Research shows that the development of particular forms of student identity and capability influence student achievement in schools. The data from this study indicates that this process is affected by 2E students’ realisation of difference in learning abilities (understanding-self), as well as by the ability of others to acknowledge learner diversity (accepting differences) and the degree of appropriateness or “fit” of school systems/arrangements (managing climates). These factors appear to interact to help determine understandings of dual exceptionality, both personal and social in construction, that impact upon the ability of 2E students to realise achievements in schools.

Chapter 6 will discuss how identification of the core concepts of identity and capability led to the development of the core category, negotiating student identity and capability, with the properties, imagining-self and categorising-self, that underpin the final theory of conceptualising difference.
Chapter 6: Findings—Negotiating Identity and Capability in the Theory of Conceptualising Difference

Thus far, coding of the transcripts and school documents had led to the development of three subsidiary categories, understanding-self, accepting differences, and managing climates. These subsidiary categories emerged from three distinct spheres of influence (personal, family, and school) that, in relationship, appeared to influence the negotiation of 2E-student identity and capability in the participating schools.

Chapter 6 begins by discussing the dynamic process of negotiating student identity and capability relative to the surrounding learning setting. The emergence of the concept of an active process of negotiating was a critical juncture in the construction of the explanatory theory. Two distinct features of the process of negotiating identity and capability developed during analysis: an internal process of imagining-self particular to each of the 2E participants, and a socially referenced process of categorising-self (as seen in Figure 6.1). The nature and influence of different learning settings in which the process of negotiating occurred were also investigated and consequently developed to become learning climates. Three distinct learning climates were identified as a result of the research, these being, empowering, remediating, or disabling, of the development of 2E-student identity and capability. Different understandings about twice-exceptionality as a construct appeared to underpin the three different learning climates. Identification of this feature of the data, and its effect upon the deliberative individual actions of negotiating identity and capability in a learning climate, led to the development of the explanatory theory, conceptualising difference.
6.1 Negotiating Student Identity and Capability

Identification of the core category is a critical stage in analysis and the development of a grounded theory (GT), as it is the focal point around which all the subsidiary categories are clustered. A. Strauss and Corbin (1998) provide criteria for constructing a core category, including that it must: be central; appear frequently in the data; be logical and consistent with the emergent relationships between the categories constructed from the data; and be named in such a way, that it is suitably abstract, to allow the development of a more general theory that can explain variation in the data. The gerund, negotiating student identity and capability, was thus developed to represent the core category, as it not only satisfied the above criteria, but also spoke to the actions, events, and meanings, undertaken or perceived by the 2E student participants as they navigated their way through the school system. As alluded to above, identification of the process of negotiating was critical to establishing this as the core category and will now be explained.

6.1.1 The art of negotiating.

Negotiation of a successful student identity is a critical process, especially when considering the socio-emotional, cognitive and academic aspects of individual well-being. This is because failure to develop a positive sense of self can lead to underachievement and frustration, which can make life challenging, confusing, and at times distressing for 2E individuals (Arnett, 2007; Côté & Levine, 2002). Life opportunities can be limited for individuals who do not develop agentic selves and consequently lack the capacity to challenge constraints to personal well-being (Schwartz et al., 2012).

Negotiating an identity involves both intrapersonal and interpersonal discussions to develop a sense of self in comparison to others. The concept of an active process of negotiating a 2E-student identity and capability emerged from analysis of the data from the three spheres of
influence detailed in Chapter 5. For example, data from the transcripts of the 2E students referenced a focus on schooling arrangements that utilised mainstream (neurotypical) approaches to identifying gifts and talents, that meant they often missed out on enrichment-learning opportunities. This influenced the students’ development of understandings about themselves as gifted students: “They choose who they put in the top classes based on tests, which I suck at. It would be nice if more people understood twice-exceptional kids and written timed tests weren’t used as an indicator of how much we know” (Online C19 11.2016). Lack of understanding about twice-exceptionality as a construct appeared to impact upon 2E students’ perceptions of self in the school environment, affecting negotiation of a positive self-image. Comments that referenced a lack of certainty about capability to achieve within current school arrangements were common in the transcripts of the students, as evidenced in Section 5.1.1, within the subsidiary category of understanding-self. Parents/caregivers and teachers/SENCos similarly remarked on problems with current school systems and arrangements, as well as understandings about 2E learner difference. These findings were located in the subsidiary categories of accepting differences and managing climates. Contextual challenges were reported as impacting upon provision, and thereby the negotiation of a successful 2E-student identity and realisation of capability. As an example, the following comment highlights these issues from the perspective of a teacher:

Kids that are twice-exceptional, aren’t identified, they don’t have an identified learning need...I have one in my class this year. And he’s amazing and definitely ADHD, and very low at mathematics, but his oral language is amazing. His written language is poor but if you talk to him he sounds like an adult and he can have amazing conversations. He’s hands on and if you put him in a room with electronics he just likes making things and fixing things. But you know you’ve also got these [contextual] things. We haven’t identified him as being gifted, or identified him as
having a learning difficulty or need—so where does he fit? (T26T/G&T C0603 15.09.16)

The process of negotiating a sense of self in the school context therefore emerged as a prominent feature in the narratives of the participants. The visual representation of the relationships between the codes and subsidiary categories, presented in Figure 5.5, suggested this process was iterative, occurring in response to changing conditions in the surrounding environment. The previously envisaged intertwined relationships between factors was indicative of an ongoing process of negotiation between different aspects of each of the focused codes, the focused codes themselves, and, by extrapolation, the subsidiary categories. As such, diagramming provided a useful tool through which to further develop the explanatory theory. In addition to diagramming, memos and free-writing strategies were employed throughout the research to help raise the level of analysis via inference/abstraction of the data. An example of a memo created during this stage of the analysis, that demonstrates this process, is shown below:

It seems that twice-exceptional individuals are a unique student group in respect to their learning needs. On a personal level, they have different learning strengths and weaknesses that vary in nature and extent between individuals. Personal circumstances (including learning dispositions) and contextual factors (learning environments) appear to interplay to influence the expression of gifts and talents alongside learning impairments complicating identification and appropriate provision. These learning differences flow across all settings in complex ways unless special accommodations are made. This seems to influence 2E students’ capability to achieve to their potential in traditional school settings. So, what is the underlying issue facing such students in NZ schools? Findings suggests that the students/families are constantly negotiating their way through the school system and feel misunderstood in
respect to their ability to achieve. Thus, a critical issue permeating the voices of all participants is one of identity and belonging that impacts upon capability and therefore achievement. There appears to be two processes operating within this negotiation process—one internal to the student that is influenced, and influences, an external (socially-derived) process that helps to determine fit. Data suggests twice-exceptional students and their parent(s)/caregiver(s) feel disconnected from school system and that current school provisions are inequitable as they don’t recognise the complexity of the condition and its impact on learning. So, negotiating twice-exceptional student identity and capability relative to the ever-changing conditions of a learning environment is a constant process... (Memo, 03.10.16).

This memo assisted the author in both summarising the issues, and furthering the analysis, in the direction of developing the core concept of negotiating, which led to the construction of the core category. The core category was now named as negotiating student identity and capability, which encapsulated the ideas, events, and processes derived directly from the data. This final descriptive gerund reflected patterns that emerged from the initial and focused codes, and was designed to be as conceptual as possible, so that it had general reach and an analytic focus, but also abstract power (Charmaz, 2014). Thus, the naming of the core category was carefully considered to enable its description to be as accurate, yet inclusive, as possible. This was made possible by the earlier, thorough, investigation of the temporal, social and situational ranges of each of the subsidiary categories, which helped ensure theoretical saturation of each category in respect of its properties and dimensional profile. An ongoing process of memoing, free-writing, and diagramming, thus helped to strengthen confidence in the analysis of the findings regarding the importance of the process of negotiating 2E-student identity and capability in NZ schools.
Analysis of the participants’ narratives suggested that the process of negotiating involved having discussions with oneself, as well as with others, about who one is (imagining-self) and one’s place in the world (categorising-self). Imagining-self and categorising-self emerged as prominent features (later ascribed as properties) of the core process of negotiating and are discussed in Section 6.1.2. The findings suggested that this process involved navigating contextual challenges, such as teacher/SENCo understandings that impacted upon provision of appropriate learning opportunities, centred upon learner difference. Challenging causal conditions identified in the data, in association with intervening conditions (categorised in the subsidiary categories), influenced constructions of 2E-student identity, and perceptions of capability. The identification of causal and intervening conditions as features of the data, directly linked the process of negotiating to contextual features of the student’s learning environment. Such features either facilitated or presented barriers to academic achievement. Exploration of the relationships between the focused codes and subsidiary categories thus gave rise to a new concept, that of learning climates. Learning climates are defined in this research as encompassing all the personal and contextual factors that contributed to the process of negotiating 2E-student identity and capability in a setting. A visual overview of these developments (Figure 6.1) is provided below to help the reader in the following discussion.
Negotiating Id
tity and Capability
(core category influenced by conditions of the learning climate)

Identity and Capability
(core concepts emerging from contributing casual conditions)

Theory
(arising as a consequence of the process of negotiating identity and capability)

Figure 6.1. Visual overview of theory development.
In sum, Figure 6.1 shows that two concepts, identity and capability, emerged during data analysis from the relationships constructed between the three developed subsidiary categories understanding-self, accepting difference and managing climates. These relationships were considered intimately interrelated, and always negotiated in consideration of features of the surrounding learning climate. This development led to the construction of the core category, negotiating student identity and capability. The two salient properties of the core category, imagining-self and categorising-self, will now be discussed, followed by an explanation of the significance of different learning climates.


Earlier analysis of the data had directed attention to the effect different spheres of influence had on the shaping of 2E students’ learning experiences in NZ schools. The influence of personal factors (in respect of the nature and extent of dual exceptionalities and learning dispositions), family factors (in consideration of levels of acceptance and support available), and school environs (in regard to socio-political influences and school arrangements), emerged as important interrelated features of the process of negotiating identity and capability. The two properties of negotiating, imagining-self and categorising-self, developed from these personal and social features of the narratives.

Imagining-self, the first identified property of the process of negotiating student identity and capability, emerged from the focused codes located in the subsidiary category, understanding-self. These focused codes (becoming aware, developing intrapersonal understandings, and realising dual effects) had been developed from the narratives of the 2E students. The data suggested that imagining-self was a process personal to each 2E student in reference to their individual learning characteristics and circumstances, by which they developed understandings about “who” they were. This intrapersonal process appeared to be
complicated by the presence of dual exceptionalities, that interacted in complex ways to affect different domains of learning and thus academic achievement.

P: Art, S would like to do art but because of the autism has trouble looking at things in an emotional type of way. [Same with] English.

S: Yeah…

I: You find English difficult?

S: Yeah.

P: All those emotions and things… [shared laughter]. (T1 C02B 04.05.16)

The tension between individual learning strengths and weaknesses in interaction with the surrounding learning setting often created conflicts coded as incidents in the participant transcripts. An example of this tension is seen in the following excerpt from the mother of student 07L who had an IQ of 142 but associated difficulties with expression of abilities, due to, amongst other things, problems with fine motor coordination and social communication:

P: [He has] a sensory-processing disorder.

I: Is organisation difficult for him?

P: Yes, it is—very difficult. There was help earlier but now he’s in Year 10 and there’s nothing for him really…it’s just about coping. And I think he finds that hard. So sometimes he has difficulty following instructions, it’s funny…especially if he’s doing a group project and he has a portion of the project to do and if there aren’t clear instructions for what he’s supposed to be doing, it’s just a nightmare.

I: So, if there aren’t clear instructions, the project is too open, it’s difficult?

P: Yeah. So sometimes it comes down to me emailing and half the time I don’t really know who to email about that and ask…and say we’re at a loss here. And sometimes he just flips-out. (T9 C07L 03.06.16)
Vagaries in social understandings about, and appropriate provision for, dual exceptionalities complicated the process of negotiating student identity and capability. 2E students appeared to develop and redevelop understandings about themselves in different learning settings and by reflection on their personal learning asynchronies and differences. These self-perceptions were negotiated in light of perceived evaluations by others, as seen by the following comment from a student in discussing his developing understandings about his learning exceptionalities in two different school settings:

S: Its sort of, the subject that I was bad at is getting better, and the one that I was good at is getting even better.
I: So, as you come to better understand yourself as a learner, things have improved as far as your learning goes?
S: Yes. I think its improved over time. But I think it’s generally accelerated since I have been at (this) high school.
M: I think since he has moved to his new school it has contributed significantly.
S: Yes. There wasn’t as much support before. (T28F C12Z 15.10.16)

Comments such as this from students, led to the development of a connection between the intrapersonal process of negotiating identity and capability, and the socially referenced classification of self in particular learning contexts. The emergence of this link gave rise to the second property involved in the process of negotiating identity and capability, that of categorising-self.

Categorising-self was developed from the focused codes in the subsidiary categories, accepting differences (recognising exceptional traits, searching for appropriate provisions, and accessing expert assistance) and managing climates (leading the way, accessing appropriate care, and seeking specialist support). The focused codes from these interpersonal sources provided data about how individual 2E students negotiated their place in the world,
especially in recognition of areas of learning capability. In this study, the process of categorising oneself involved 2E students comparing and contrasting their developing understandings about learner difference, and their ability to achieve, with their performance in a learning setting. For example, in response to questions about the influence of dual exceptionalities on learning, students typically defaulted to commenting about their learning impairments, rather than reflecting on their learning strengths. Such comments demonstrated a focus on what the students could not achieve, rather than who they could be, or what they could capably achieve, given the appropriate conditions. The following excerpt from a student asked about his learning strengths and achievements at school, demonstrates this phenomenon:

S: Reports were never good.
I: How did that affect you?
S: Um, I don’t think it did too much. [But] back then I didn’t really like school though.
I was told a lot just to write more...I was always writing, you know when somebody said I had to copy something down, I would try to write it in the smallest form that I could.
I: Because it took you longer to physically write it?
S: Yeah. (T31 C12E 20.10.16)

In this example, as for many of the students, developing understandings about themselves as learners was achieved in reference to the perceived evaluations of others. As such, the focus on learning difficulties in the majority of the participating schools appeared to undermine many of the 2E students’ perceptions of themselves as concurrently gifted and talented. In the following excerpt, a parent reflects on their child’s negotiation of identity and capability,
based upon long-term provision for a learning impairment, but a lack of recognition for learning strengths:

   S2 just wants to be another student and doesn’t see his dyslexia as a problem. Because it’s never been viewed as a major problem for us. But he won’t put his hand up and say that he is gifted either—he just wants to fit in. (T27F C20 09.10.16)

For some of the 2E students in particular learning climates, being identified as learning (dis)abled was reinforced in such a way that some individuals appeared to only perceive themselves as learning impaired. Consequently, they behaved and achieved accordingly, to meet the low expectations of others. An example of this is seen in the following passage from a family interview discussing provision for areas of learning strength:

   I: So you say S has flown under the radar here so far?
   M: Yes, very much so.
   I: Have you been selected for any enrichment opportunities?
   S: No. I’ve pretty much been just over there...school isn’t exciting.
   M: There have been a few teachers that he has clicked with and then of course he does really well in those subjects. Because if he doesn’t click with the teacher it doesn’t happen... [And] up till now there has been nothing. So only in the last couple of months—since we got the research invitation. And I’ve said: why is he not in the gifted and talented class? He needs it; give him something he is interested in. (T22, C07C 06.09.16)

This student did not perceive himself to be exceptional with respect to his gifts and talents, even though a report from a specialist had indicated that he was. Rather he appeared to focus on his learning difficulties in response to the images reflected by others, through a process of self-categorisation. The interaction between the learning environment and the negotiation of
identity and capability had led this student to underachieve for his potential, much to the frustration of his parents.

Teachers similarly commented on the tension between the core processes of imagining-self and categorising-self, as demonstrated by the following excerpt:

   I: You mentioned earlier some negative aspects to twice-exceptional students’ behaviours?
   T: Yes, absolutely, yes. Boredom, lack of confidence and things like that. And often not just behaviours from within themselves, but because of the way others have treated them…and I think back and think that, oh, they had a pretty rough time then. It’s the bigger picture. And the other kids see them as different, weird or whatever, so they don’t get any easy time. So there are lots of kids that I think back and think, you know, they could have achieved so much more had it been recognised and had there been much more support for them to help them deal with things. They could have achieved much more success. (T13S C01S 25.07.16)

Comments such as this occurred in almost all of the teacher/SENCo and parent/caregiver transcripts, further supporting the relationship between the processes of imagining-self and categorising-self in negotiating student identity and capability in a setting. As a result of recognising this association, an arrow was placed between these two properties of the core category (as seen in Figure 5.1) to indicate this dynamic relationship. The influence of the surrounding learning climate, established earlier as an important mediator of the process of negotiating, will now be discussed.

6.2 Development of the Concept of Learning Climates

Analysis of the findings suggested that the negotiation of student identity and capability influenced, and was influenced by, personal and social constructions of dual-exceptional
learner difference. Learning conditions facing 2E students in the participating schools, identified via incidents or events in the narratives, helped set the stage for negotiating a sense of self. It was at this stage of the analysis that the idea of the combined features of an individual’s learning climate (inclusive of the immediate, proximal and distal spheres of influence) mediating processes involved in navigating an identity and perceptions of capability, was articulated. Whilst the personal learning characteristics of 2E students obviously influenced their ability to achieve academically in traditional school settings, in this research these traits were considered immutable, as individuals still possessed learning strengths and weaknesses irrespective of the nature of the interventions offered. This means that fundamentally “changing” individuals from being neurodiverse to being neurotypical was accepted as an impossible, not to mention unethical, in approach. As such, the personal characteristics referred to as part of the learning climate were considered the basis upon which appropriate academic provision should be determined in an equitable education system, as it is for non-learning-impaired gifted students and non-gifted students with learning (dis)abilities. Therefore, the focus for analysis was placed on investigating contextual conditions of the learning climate in response to 2E-student-learning requirements.

A significant finding, lending strength to the concept of negotiating a sense of self within the context of a learning climate, was that support from significant adults (referred to as people factors) appeared to mediate the effects (both socio-emotional and physical) of the process of negotiating. The following excerpt from a student demonstrates the importance of supportive significant adults:

In Year 10 there was a G&T programme. This was really good for me. It gave me the opportunity to work in areas I enjoyed. Year 11 started off quite tough. My G&T teacher and my science teacher tried to get me accelerated in four subjects but there was resistance from senior management and the process for testing if I was capable of
being accelerated didn’t seem robust enough. After a lot of debate and meetings, I have been accelerated and its great. I am doing a mix of Year 11, 12, 13 (NCEA level 1, 2, 3) plus scholarship. Being well known to the G&T teacher is really important to me as it has given me the chance to be involved in courses and programmes outside of school. (Online C16 S 11.16)

Such support typically occurred via activities such as advocating in the school setting (for example by advocating for needs), and by the provision of appropriate resources and/or in-home supports (for example, providing suitable accommodations), that influenced the socio-emotional/behavioural, cognitive and academic dispositions and development of 2E individuals. These activities had previously been identified and coded within the subsidiary categories of accepting differences and managing climates. For example, having a significant adult available to advocate during challenging times at school was important to navigating school conditions and social arrangements more easily. This was evidenced in the family interview transcripts by comments such as “I had to [advocate] for him. Because of the way they treat him. [But] I think he still really struggles to understand himself. He doesn’t really want to be seen as different or labelled I guess...he knows he’s different though” (T9F C07L 03.06.16). Without the support of significant adults, the ability of 2E students to negotiate the school system, and thereby develop a successful student identity, appeared to be diminished:

I: So twice-exceptional students who don’t have anyone to advocate for them?

P: They are stuffed; they miss out. It was only because this year, at the last interviews, that I was recommended to speak to the G&T coordinator. So, we actually got to sit down with her for 25 minutes and that’s when she said we will give him more time, and rah, rah, rah, and we are sorry he missed out [on the enrichment class opportunities] but we had other kids that also wanted to be put in there…but up till
now there has been nothing [for him]. It’s only been in the last couple of months.

(T22F C07C 06.09.16)

Comments such as this suggested that the effectiveness of the actions of significant adults was mediated by contextual factors. The importance of locating a teacher/SENCo with whom to form a supportive relationship was noted by all the families as critical to negotiating the schooling process, as noted by remarks such as: “the risk that a [twice-exceptional] child can fall through the gaps is quite high, if they swap schools or they have a disassociated teacher” (T5F C03A 01.06.16).

However, there were challenges in locating and establishing supportive home–school partnerships. Some families perceived there to be an authoritative hierarchy operating within schools, with teachers/SENCos seen as holding the positions of power, that affected their ability to effectively advocate:

P: You’ve got to be able to ask. You know often the kids think, the teacher knows what they are doing I trust them, so if it feels really uncomfortable for me it must be my problem. And a lot of the parents will also have that blind trust in teachers and say they know, and you can’t really go down there, and they think if they go down and talk to the school the teacher will be mean to their child so, whilst the principal will say that doesn’t happen, it does, so…

I: They get a mark to say they are difficult?

P: They do, and they take it out on the child. And the teachers say: oh, we are a lot more professional than that, but actually a lot of them aren’t. (T27F C19-21 09.10.16)

This idea of a power imbalance in home–school partnerships that favoured conventional schooling arrangements, had emerged earlier pertaining to issues such as school leadership (in the subsidiary category of managing climates); however, its significance in the negotiation of identity and capability was now apparent. The degree of development of understandings
about dual exceptionalities again appeared to influence the process of negotiating in different contexts. In the following excerpt, a teacher remarks upon issues of understanding and support that influence the processes of imagining-self and categorising-self at her school:

I think understanding is key. I think if teachers get it even just a little bit, it makes it a lot easier for them. It’s awfully stressful, in my perception, for the kids, because they are being pulled two ways and they often don’t understand why, and they think “I’m dumb” and that kind of thing. And because these students pick up on things that other students don’t pick up on I think that compounds the whole thing. Another child might be able to roll with it quite easily but for a [twice-exceptional] child it can really tear them up—why is this? Why can’t I do that? Why do I appear so dumb?

(T6G&T C07G&T 03.06.16)

Exploration of the inferred meaning of this comment, alongside those from other participants, was a significant turning point in the development of the nascent theory. The findings suggested that “others” conferred social identities on 2E individuals based on assumptions about their social characteristics (for example, gender and/or (dis)ability) and their relative position in a particular learning climate. This process had important implications for the negotiation of a 2E-student identity and perceptions of capability in the learning setting. People typically fit their behaviours to match what they perceive as the expectations of others as evidenced in many theories on the development of social identity, including the social identity approach (Turner & Tajfel, 1979), social-cognitive theory (Bandura, 1986) and Cooley’s (1902) looking-glass self. For 2E individuals, this can be problematic if actions taken with respect to provision of resources (or material factors) in a learning climate, target learning difficulties rather than strengths. This is because focusing on learning impairments stigmatises 2E individuals as being of low ability across all learning domains, and they may therefore underachieve for their potential. This realisation helped to explain some of the
students’ negative attitudes towards learning accommodations offered to remediate for areas of difficulty. Analysis of the transcripts clearly indicated that typical learning accommodations for 2E students focused on learning difficulties, rather than provision for learning strengths, as seen by the following remark:

I knew they had a gifted and talented programme because my daughter was in it. And the reason [S was] mucking around is because [he was] bored...it was all there! I am sure [teachers] will get more out of him if [they] just gave him a bit more help and opportunity. (T22F C07C 06.09.16)

As a consequence of this focus on “fixing the problem,” some of the 2E students actually rejected learning accommodations for learning weaknesses, and, in extreme cases (detailed earlier in Chapter 5), rejected school, as they saw these as dismissive or demeaning of their coexisting domain(s) of gifts and talents. Incidents such as this, arising from conditions in the learning climate, negatively impacted upon negotiation of a positive 2E student self-image.

The following excerpt from a family interview exemplifies this finding:

We had difficulty with at the first primary school [with] the readers. They would give S early readers that had no context you know “Joe and his Dad washed the car” so I got the National Geographic series and that was good. The kids were [also] given books too low for their reading age because they were doing the reading tests and would focus on words like they, their, and there, you know the 200 hundred most difficult words for dyslexic kids, and if you can’t master those you can’t move onto the next level—but that’s not right. They should go on, because they can do the hard words. But the teachers were following instructions and if you didn’t get more than 80% you couldn’t go on…and the result was S stating [that he believed that] “the teacher doesn't respect me; I can’t go to school if the teacher doesn't respect me.” (T27F C19-21 09.10.16)
The focus on learning deficits appears to have been perceived as a reflection of how others viewed the students—as (dis)abled—and as such, rebuffing accommodations was considered in this research as a rejection of the looking-glass image as per Cooley’s (1902) theory (see Chapter 1). These counter-actions appeared to be taken in an attempt to control outsiders’ (including peers and teachers) perceptions of 2E-student difference in a learning context.

Another finding relating to contextual features of the learning environment was the apparent development of greater awareness of learning differences over different times and places. This was described in Section 5.1.2, in the subsidiary category of understanding-self. This alert to temporal as well as contextual features of the learning environment was subsequently investigated via theoretical sampling. Awareness of learner difference appeared to be heightened during the secondary-school years, a time when the peer group becomes increasingly important. Comparison to others with respect to academic achievements, personal learning characteristics and social appearances, as the schooling years progressed, were common features of the narratives of the students. The nature of the changing school environment was commonly referred to as influential in decisions made concerning schooling arrangements:

I couldn’t send him to the Boys High, I couldn’t put him there, there’s just too many people; it’s so massive, he just wouldn’t cope. I know they struggle socially a lot of them and so in a smaller school they get to know one another a lot more. In primary school they went to another school for gifted and talented, but S didn’t like it there, he just didn’t enjoy it. He found it difficult socially. (T9F C07L 03.06.16)

Thus, the negotiation of a successful 2E-student identity and perceptions of capability, appeared to be grounded in the surrounding contextual conditions of the learning environment. This was an important finding, as neurodiverse individuals rely on supportive people and social arrangements to help them successfully navigate the world around them.
For most members of a society, social arrangements that reflect neurotypical ways of being and doing facilitate the development of social identities that embody mainstream values, actions and beliefs. For such members of society, life becomes routine and behaviours are typically adopted that don’t require them to question the surrounding social arrangements (Charmaz, 1980). It is only when conditions change in an environment, challenging neurotypical understandings, that new solutions must be sought. For 2E individuals, however, whose ways of being and doing are different from mainstream society, conditions are already challenging, and often require ongoing adaptation to new conditions. Adaptation involves constantly interpreting new situations and altering behaviours to fit expected social norms, which can lead to cognitive and emotional exhaustion. In regard to education, as schooling progressively becomes more challenging, past behaviours and coping mechanisms may fail, leading to difficulties with learning that affect the process of negotiating identity and capability.

S: It’s a bit hard with [school] work sometimes now. Because it’s like, too much work—she gives us a checklist but there’s a bit too much work for me…sometimes I get a bit distracted.

I: What things distract you?

S: Like all the talking around me. It’s a really echo-y room.

I: How do you prefer to work in class?

S: I like working by myself…it’s hard to listen to others’ ideas. (T10S C01B 25.07.16)

This student was exhibiting signs of emotional distress for which his parents had sought professional advice. Classroom arrangements in this school, including open-plan layouts, appeared to have impacted upon his ability to learn in reference to his particular combination of exceptional learning traits, which included sensory differences. Remarks such as these in
the transcripts furthered the connection between the process of negotiating student identity and capability and the conditions of the surrounding learning climate. Thus, the transcripts were revisited to investigate the features of different learning climates, which are now discussed.

6.3 Characteristics of Different Learning Climates

In this research, perhaps due to the limited number of participants, three learning climates were identified. However, in reality, it is acknowledged that any number of learning climates could potentially exist. The three identified climates were categorised as being either empowering, remediating or disabling of the process of negotiating 2E identity and capability. Each climate emerged from analysis of the focused codes and subsidiary categories detailed in Chapter 5. Characteristics of these different learning climates will now be discussed. At this stage of the analysis, a table (Table 6.1) was constructed to help visualise the relationship between each of the learning climates, the contributing focused codes (summarised as statements from Figure 5.5), and the subsidiary categories.

Table 6.1

<table>
<thead>
<tr>
<th>Subsidiary Category</th>
<th>Empowering</th>
<th>Remediating</th>
<th>Disabling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding-self</td>
<td>Successful development of understanding about learning asynchrony and difference by twice-exceptional individuals.</td>
<td>Focus on learning difficulty leads to evaluation of self as learning impaired. Learning strengths unrecognised/not valued.</td>
<td>Confusion/distress in understanding-self arising from unsupported negotiation of dilemma of learning difference.</td>
</tr>
<tr>
<td>Accepting Differences</td>
<td>Dual-exceptional traits recognised, celebrated and appropriately provided for with the assistance of experts.</td>
<td>Learning impairment determines approach and provision. Combined effects of dual exceptionalities misunderstood.</td>
<td>Exceptional traits unrecognised. No accommodations for either exceptionality. Dual exceptionality as a construct not understood.</td>
</tr>
<tr>
<td>Managing Climates</td>
<td>Key personnel determine and facilitate access to appropriate specialist support and provision for dual exceptionalities.</td>
<td>Accommodations for learning impairments only. Provisions guided by current conceptions of learning disability rather than dual exceptionality.</td>
<td>Lack of expert leadership/personnel to guide appropriate provision. Dual exceptionality not recognised as a learning condition.</td>
</tr>
</tbody>
</table>
In creating summary statements for the different learning climates, two prominent features of the data emerged. One related to the previously identified people factors, where significant adults (including parents/caregivers and teachers/SENCos), were identified as responsible for providing socio-emotional, cognitive and academic support for dual-exceptional learning needs. This feature of the data was characterised by the development of different types of teaching–learning relationships in each of the various learning climates that mediated the process of negotiating identity and capability. The findings suggested that these relationships were again influenced by the nature and extent of understandings about twice-exceptionality as a construct. The second feature of the data related to material factors. The provision of appropriate resources was similarly guided by wider social understandings about, and acceptance of, the learning needs of dual-exceptional individuals. Socio-political conceptions of learner difference thus directed the development of policies and provision that determined access to appropriate resources for 2E students. These people and material factors interacted in different learning climates to affect the process of negotiation. Each learning climate will now be described, with evidence from participants contributing to the placement of the participating schools in one of the three learning climates. It should be noted that of the 11 participating schools, one school was unable to be classified, as insufficient evidence (no school documents and only one teacher questionnaire received) was obtained to evaluate its placement in a specified learning climate.

6.3.1 Empowering learning climates.

In this research, empowering learning climates were not fully realised in any of the participating schools. Whilst all 12 of the parents/caregivers interviewed commented on the need to provide out-of-school supports (including extracurricular provisions and socio-emotional assistance) to help their children better understand their exceptionalities, none of the participants considered that NZ schools were currently able to provide the type of
education that helped 2E children to fully realise their capabilities. However, from comments in the narratives, alongside evidence from supplied documentation, two of the 11 participating schools (school codes 07 and 12) appeared to be striving to achieve the best for 2E students within the bounds of the socio-political education climate operating in NZ. The policies and procedures under development in these schools, alongside recommendations detailed in the transcripts of participants from other schools, thus gave rise to the characteristics of an empowering learning climate.

With respect to documentation, the two schools identified as being on a path to becoming empowering, considered giftedness as a multidimensional construct, able to be developed over time, representing an incremental rather than fixed-entity conception of giftedness and talent. School policies specifically referenced 2E individuals within the wider population of gifted students, indicating an awareness of dual exceptionality. The school rationales included a focus on equitable provision for individual learning needs to ensure learning opportunities were responsive, engaging and inclusive of all learners. Reference was made to the relevant MoE (2007) NEGs (National Education Guidelines) and NAGs, and there was a review process for policies and procedures at both schools. Guidelines for identification were also provided that emphasised the importance of a multi-method approach. Community consultation was encouraged. The need for ongoing opportunities for PLD, the importance of good record-keeping systems, and the ongoing evaluation of students (including the development of individualised education plans [IEPs]), were all documented as effective practices. Both schools operated a specialised department with responsibility for students with exceptional learning needs was in operation. This department had responsibility for alerting teachers to individual needs and evaluating and providing special learning opportunities (including special assessment conditions) for 2E students. However, whilst the
documentation was impressive in its coverage, the theory-in-action regarding provision, as evidenced in the narratives of teachers/SENCos and families, was still under development.

In both schools, the success of the teaching–learning relationship (people factors) and access to appropriate provision (material factors) were considered critical to optimising the capabilities and achievements of 2E students. This was evidenced in comments such as: “He is in all the high-level classes and they make accommodations for that. And the truth is he has had really great teachers by and large. It is always about the teachers” (T29F C12H 18.10.16). Such supportive relationships afforded opportunities to 2E students to help them to realise their capabilities, albeit in a restricted form, as dictated by socio-political factors and schooling arrangements. 2E students and their parent(s)/caregiver(s) interviewed at these schools reflected positively on the personal supports they were provided.

The school was incredibly good at saying, this is where he is testing along the way, and that process put him up like 4 years. So, it was a huge jump in a short amount of time. And they said that they had had similar results in many students. So, I have to give that school a huge amount of credit for being wired into all of that...we are unbelievably fortunate that the hand-off between the two schools has been so smooth and good, and both schools had an apparatus to deal with it. Here they are really positive, and they seem to have the process sorted. I think the main problem is that they are a bit under-resourced, but they are very passionate. (T31 C12F 20.10.16)

When asked in interviews about this feature of the teaching–learning dynamic as envisaged in an empowering learning climate, all of the teachers/SENCos commented on the importance of nurturing supportive relationships with 2E students: “Absolutely, that’s critical. The relationship between you and the student. Knowing their little quirks, which is often what they are, and working from there” (T19T C0809 01.08.16).
In this regard, the need to locate key personnel who could facilitate learning supports for 2E students in empowering learning climates was a prominent feature of the narratives, as detailed in the subsidiary category, managing climates. Understandings about, and acceptance of, dual exceptionality and its effects on learning was a characteristic of the schools identified as developing an empowering learning climate:

I can say that once it was positively identified, the school system (they) have tried to foster [dual exceptionalities] rather than change [them] to make [them] conform to a different model. S wanted to come here, and they said, yes, he will fit right in just fine. So that was interesting that they were very open to whatever challenges S had. (T29 C12H 18.10.16).

In respect of material considerations, access to appropriate resources (including identification procedures and programmes) and the adoption of a flexible approach, based on individual needs, were highlighted in the two schools. With regards to identification, a number of different approaches to enable the “capture” of 2E students were mentioned:

The GATE coordinator has provided a number of documents and [assessments] that all teachers have access to, which we can complete during the year and she does all the analysis of. We have things like a sociogram which we are all encouraged to complete with our classes. We have parent questionnaires and teacher questionnaires and other evaluation forms, like [Lucid] tests. I was just talking to another teacher about this yesterday, he said there are a number of negative things on the form and I said to him, that’s because sometimes the kids you are identifying are not achieving [but] it doesn’t mean they’re not gifted. And you really don’t want to miss those ones…so we have access to all those forms on our server. [And] on KAMAR we have little icons that we use to identify different things; so we have symbols for gifted and for twice-exceptional students which appear on the roll. (T7T C0709 03.06.16)
As all 2E students are unique with respect to their combination of socio-emotional, cognitive and academic learning needs, flexibility in approach to identification and provision emerged as an important factor in encouraging success in academic achievements, as well as enhancing personal well-being, in the school system.

I think there needs to be flexibility, you know, the curriculum talks about flexibility, but...sometimes teachers in schools have to work outside of the box to create a situation where that students ticks that box...to get [appropriate] support. (T30 T C1205 20.10.16)

As previously discussed, lack of funding for specialist assessment of students suspected of being 2E impacted upon identification. In response to this issue, a willingness to consider alternative methods of evaluating for learning needs was evidenced in the two schools identified as developing empowering learning climates, as seen by comments such as: “[If] we know the parents can’t [afford] it, quite often the school will help find the money. [Or] I go, look...we know that S is gifted but he has a problem. Don’t stress about the report, let’s treat him accordingly” (T21S C0704 06.09.16). This need for flexibility in provision was also remarked upon by parents/caregivers:

At college, they have been very proactive, very different, and as far as me having to phone the school and say can we have a meeting about, or what conditions are going to be in place here, the college has been very different. They have contacted me and said this is what will be happening for S; so that’s great. There is a learning support centre where they take responsibility for planning a programme too. (T28 C12Z 15.10.16).

Developing understandings about dual exceptionality that were responsive to individuals and their learning needs were common features of the narratives of all the participants commenting on the nature of empowering learning climates. Such understandings
underpinned identification procedures and appropriate provisioning for 2E students’ learning needs.

6.3.2 Remediating learning climates.
Remediating learning climates were the most commonly found, occurring in six out of the 11 participating schools (school codes 01, 02, 03, 05, 08, and 10) in analysis of the findings. Here, the focus was on provision for learning deficits at the expense of acknowledging, and providing for, strengths. Documentation supplied by four out of six of these schools (two of the schools did not supply any) did not reference 2E students specifically, although two of the schools did mention individuals with (dis)abilities (unspecified) in referring to different gifted groups. Responsibility for assessment and provision for 2E students was placed with the SENCo at these schools. The wording of policies, for example, use of the term *disabilities*, and procedures that emphasised the role of the SENCos as being responsible for such students, appeared to set the stage for provision focused on learning deficits rather than strengths.

In remediating school climates, teachers and parents/caregivers referred in interviews to policies and programmes for 2E students as being “in development,” although less formalised pathways for identifying and providing for students with learning exceptionalities appeared to be in operation. Regarding the development of, or knowledge about, policies and procedures for 2E students, participants typically remarked:

Not that I am aware of, no. If we have students that are of concern, we liaise with the SENCo and discuss individual cases in a space in our team meetings. We talk about anything unusual in terms of behaviour. Then we record this and if it becomes an ongoing problem it is referred to a leadership meeting and the SENCo will often follow-up with a call to the parents first, and they will source out whether anything needs to be done from there. (T12T C0108 25.07.16)
In respect of the nature of the teaching–learning relationship in remediating learning climates, comments in the narratives such as: “Ms T was the best for S and helped get him established. He had reading recovery, which helped, and she became very aware of his difficulty with writing and spelling especially” (T1F C02B 04.05.16), were typical. Teaching approaches that emphasised accommodations for learning deficits appeared to be grounded upon misunderstandings about dual-exceptional student-learning needs. These misconceptions influenced the nature of the teaching–learning relationship and, thereby, the opportunities offered to 2E students. Lack of recognition of individual learning capabilities was often reinforced by traditional (neurotypical) modes of assessment that helped determine access to enrichment programmes or accelerate classes. As 2E students frequently have difficulty achieving to their potential in such tests, they were often not considered for such opportunities, limiting access to appropriate provision, as discussed previously in Section 6.1.1. Thus, remediating climates influenced, and were in turn influenced by, perceptions of 2E capability based on traditional schoolhouse conceptions (Renzulli, 1986) of giftedness and talent.

In remediating learning climates, participants commented on a lack of available information about, and teacher education concerning, the field of twice-exceptionality, characterised by comments such as: “The level of teacher understanding is pretty limited” (T6G&T C07G&T 03.06.16). The need for improvements to ITE, and more PLD regarding dual exceptionalities, was referenced in the transcripts of all of the participants. Remarks referencing such improvements included: “ITE needs to be revamped. There is a heavy emphasis on the other end of the scale” (T25DP/S C05S 07.09.16), “I think that it’s an important area; it should become part of the training curriculum” (T2T/DP C0102 23.05.16) and, “it needs to be introduced alongside all the other things that we need to be aware of, so that teachers can consider it as a possibility.” (T15T/DP C0107 26.07.16). Teachers in the two schools
recognised as developing empowering learning climates also commented on this aspect of teacher education:

I think it needs to come through in the education of the teachers. I did the diploma course and the issue of giftedness came up once in a context of a forum in relation to something else. There was no real training on what it was or how to identify it or anything else. I think that needs to change; there needs to be a strong emphasis on it in teacher education programmes. (T6G&T C07G&T 03.06.16)

A reported lack of opportunity to learn about students with dual exceptionalities appeared to hinder the development of understandings about how to effectively identify and provide for such students in the classroom. This was seen in remarks such as: “I think this is the first time I’ve heard of this term as being specific and coming under the umbrella of gifted and talented” (T17S C08S 01.08.16). Teachers and parents alike remarked that misconceptions concerning the learning characteristics of 2E students presented challenges to appropriately catering for learning needs, especially with respect to gifts and talents. This was characterised by comments such as: “Most of us are unaware of the term let alone what to look for. [We need] to be better informed of this idea of twice-exceptionality” (T13S C01S 25.07.16) and:

With people not even knowing twice-exceptionality even exists, then those people are clearly not going to be catering for it. And they will generally cater to the lower [end] rather than the extension. This child is dyslexic so we will worry about that, meanwhile they’re really amazing in this but... (T7T C0709 03.06.16)

In NZ schools, SENCo’s act as gatekeepers to effective provision for all special-needs students, including 2E individuals, who have, by definition, highly complex and unique learning needs. There is, therefore, an expectation that those appointed to the role would have specialist qualifications and knowledge with which to make informed decisions about students with special needs. However, analysis of the most recent survey of SENCos in New
Zealand schools (NZEI, 2016) found that 38% of SENCos had no qualifications, experience, or professional development directly related to learners with special needs, prior to taking up the role. Additionally, nearly a quarter of the respondents stated that since taking on the role they had received no professional development, nor gained any specialist qualifications. Only 18% of respondents reported having relevant postgraduate or graduate qualifications, whilst the majority relied on PLD courses or experience in the role (NZEI, 2016). An effective means of identification and provision cannot be established from an uninformed or ill-informed perspective, as this further complicates issues facing learners with dual exceptionalities in NZ schools. The SENCos interviewed for this study were vocal in their comments on the need for more professional learning, especially regarding conceptualising and providing for the complexities of unique 2E-individual learning requirements.

I don’t know very many schools at all that are doing a good job...you have to have a school leader that places importance on [this] as well. I specifically went to some G&T sessions at the last conference, in the hope that I would come away with something concrete, but it was all airy-fairy, pie-in-the-sky stuff that I already knew, like you have [2E] kids at school and you need to cater for them, and yeah, well? We still don’t know what to do with these kids! (T25DP/S C05S 07.09.16)

Whilst teachers in these schools were concerned about providing accommodations for 2E students’ learning impairments, as this was the “pressing need” (Teacher C1004 short answers on questionnaire [SAQ]) in the classroom, many reflected upon barriers that opposed effective provision for the whole child. Often, provision of appropriate learning opportunities for 2E students was remarked upon as being due to chance factors, with individuals “often slipping through the gaps” (Teacher C1009 SAQ). Such opportunities were dependent on the availability of skilled personnel, including school leaders, who were knowledgeable about, and able to provide flexibly for, such students:
There’s a new principal this year and I think it’s something that perhaps she’s done quite well. I think she’s maybe identifying these problems or more up to date with these world things and intelligent; she seems to be that way. He’s [been placed] in a class with older children, some are his own age, but more children like him, so I think there’s a bit more balance in there. (T11 C01B 25.07.16)

Remediating learning climates were therefore again defined by the nature and extent of understandings about twice-exceptionality that determined access to provision for learning deficits, but typically neglected resourcing for learning strengths. As previously alluded to, this focus had serious consequences for the negotiation of student identity and perceptions of capability.

6.3.3 Disabling learning climates.

Unfortunately, two of the 11 schools (school codes 06 and 09) were identified as having disabling learning climates. Disabling learning climates neglect any form of identification or provision for 2E-students’ learning needs. Participants from these schools (all teachers/SENCos as no 2E students were identified), alongside families reporting challenging experiences at schools not involved in this study (online respondents), provided evidence for the development of the category: disabling learning climates. Comments that referenced these climates included: “There is nothing for these kids at school, literally nothing, and yet they still have to go” (T27F C21 09.10.16).

Documents supplied by school 06 failed to make any mention of 2E students in relevant policies and procedures. Responsibility for identification and provision for students with special learning needs was specifically stated as lying with classroom teachers. All 10 teachers/SENCos at this school who returned questionnaires stated that there were no policies or provisions in place for 2E students, with individual teachers commenting that “[Twice-
exceptionality] hasn’t been made explicit [as a concept] to teachers at the school” (Teacher C0602 SAQ) and that provision depended upon “the willingness and skill of individual teachers” (Teacher C0605 SAQ) as school-wide understandings hadn’t been developed.

School 09 did not supply any documents as they “did not have an existing definition or anything at the moment” (T20S C09S, 08.08.16). At this school, the focus for provision was described as being based on “resolution of [difficulties] as we are a PB4L and restorative practice school” (Teacher C0908 SAQ), and 2E students were not considered as “being catered for under gifted and talented” (Teacher C0904 SAQ), which revealed existing confusion regarding the concept of dual exceptionality. Consequently, disabling learning climates were characterised as having unsupportive relationships and lack of material resources, based on no or ill-conceived conceptions of dual exceptionality. Such difficulties in conceptualising and recognising 2E students’ learning needs was also referenced in the transcripts of individual teachers from other schools, as seen by the following comment:

I know for a fact that I have never written down twice-exceptional against any child’s name. I mean I have written down “struggles with relationships” or “has difficulty retaining basic facts” but never have I written down the term twice-exceptional—never. (T15T/DP C0107 26.07.16)

Remarks that referenced the frustrations of teachers who either had, or still were, teaching in disabling learning climates included:

Parents are questioning, parents are wanting answers...wanting programmes, and it’s quite frustrating being a teacher and not being able to offer anything extra because in your professional judgement you know their children are struggling and you know they would benefit from programmes. I would really like to see the parents target the ministry rather than target the teachers. I think there needs to be a big uproar in the ministry and when they come in, I question them, you know, what are you doing
about these kids, why have we still got nothing here? We are way behind, and I think teachers are just as frustrated. (T17S C08S 01.08.16)

As no 2E students had been identified at school 06 or 09, theoretical sampling of the transcripts of all the families involved in the study was conducted to locate evidence of challenging incidents that helped develop understandings about the features of disabling learning climates. This search located multiple incidents, all based upon a lack of understanding about students with dual exceptionalities. Such experiences were almost universal, occurring in 11/12 of the narratives of families, as typified by the following excerpt from a family interview:

At primary school quite a few teachers didn’t have an understanding. One teacher we really butted heads with because she insisted he sit on the mat; all children had to sit on the mat! In the end I said: where is your school policy that says he has to sit on the mat? I mean he can’t physically do it, there’s no way, because of his sensory-processing disorder. I mean, he can’t even brush his hair! Why can’t he sit on his chair? Apparently because it’s disruptive to the class…So lots of challenges— we had to learn to fight back, to advocate for him. (T9F C07L 03.06.16)

Lack of understanding of 2E-learner difference meant that challenging incidents often went unresolved, and, in the case of six of the 12 families involved with this study, ongoing conflicts resulted in the removal of their 2E children from a school. The following excerpt provides one example of a challenging incident that speaks to these features from the perspective of a parent:

I think the problem is more the teachers themselves, and probably more-so some of the older teachers. We’ve had situations where my older son has actually been, I will say, bullied in class by an older teacher, just basically disgusting. And the learning centre women were just amazing; I think his case manager really went into bat. But
there was just no chance (of any change). As I said before, I just don’t think some of these teachers get it, they might say oh, is this a real thing? (T31F C12E 20.10.16)

Incidents such as this appeared to influence 2E students’ perceptions of self, negatively impacting upon successful negotiation of identity and capability, as seen by comments in the students’ transcripts referring to, for example, feeling misunderstood (Section 5.1.3). Analysis of the findings suggested that 2E students were more susceptible to socio-emotional/behavioural problems, such as anxiety or depression, in disabling learning climates, as seen in this excerpt:

P: In Year 10, S came very close to having a nervous breakdown. Depression. I saw it... so I had to pull him out. So, what would you say, S, happened at school to contribute to that problem?
S: I just got so blah. I had a teacher and he wasn’t good, got distracted and wasn’t around. I just got so bored…it just went downhill so much, and I just got so bored. A lot of the good teachers left and the ones that came in to replace them weren’t nearly as good. (T27F C19-21 09.10.16)

Learning difficulties such as this were referenced in all of the transcripts of the families of students identified as having experienced disabling learning climates, especially if unsupportive conditions were sustained. The following excerpt from a parent was characteristic of comments that spoke to this issue: “It has taken such a long time to get dyslexia recognised, and there are so many teachers that still think, no, they’re just thick” (T1F C02B 04.05.16). In this regard, the suggestion that much more consideration of students with dual-exceptional learning needs needed to occur in NZ schools was a frequent finding, characterised by comments such as: “If we don’t know about [twice-exceptionality] then there’s nothing we can do anyway... We are focusing on bringing the tail up, but not pushing our high-ability students to be all they can be” (T7T C0709 03.06.16). As for remediating
learning climates, neglect of the learning needs of 2E students had serious consequences for successful negotiation of identity and capability.

### 6.4 Relationship Between Learning Climates and the Negotiation of Identity and Capability

Analysis of comments such as those detailed above, was critical to furthering connections between conditions of a learning climate and the process of negotiating student identity and capability. Current difficulties in understanding the influence being 2E has on the process of learning (as detailed in the findings), were suggestive of wider problems in understanding dual exceptionality as a construct in the education arena. Table 6.2 presents a summary of the emergent relationship between features of the three identified learning climates, and the process of negotiating student identity and capability.

**Table 6.2**

*Relationship Between Learning Climates and Negotiating Student Identity and Capability*

<table>
<thead>
<tr>
<th>Learning Climate</th>
<th>Processes of Imagining-Self and Categorising-Self</th>
<th>Realised Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empowering</td>
<td>Positive identity negotiation (identity achievement) where learning strengths accommodated alongside provision for learning difficulties</td>
<td>Realisation of capabilities (capability achievement)</td>
</tr>
<tr>
<td>Remediating</td>
<td>Identity negotiation occurs in light of a focus on learning impairments only. Leads to identity confusion (identity moratorium, diffusion or foreclosure)</td>
<td>Identity crisis characterised by internal conflicts in reconciling gifts with learning difficulties (underachievement)</td>
</tr>
<tr>
<td>Disabling</td>
<td>Negative identity negotiation as a result of lack of recognition of dual exceptionality as a construct (identity diffusion or foreclosure)</td>
<td>Unfulfilled realisation of capabilities (underachievement)</td>
</tr>
</tbody>
</table>

Note: The resultant identity statuses (shown in brackets within the column Processes of Imagining-Self and Categorising-Self) reflect Marcia’s (1980) expansion of Erikson’s (1968) dimensions of exploration and commitment in identity development, discussed in Chapter 1.

A conceptual model (Figure 6.2) was now developed to help envisage the particularised relationships between different spheres of influence, the processes of imagining-self and
categorising-self (as properties of the core category, negotiating student identity and capability), and the surrounding learning climate. Imagining-self was placed at the centre of the model as 2E students were the focus of the research. Categorising-self was positioned peripherally as it occurred in reference to established immediate (personal), proximal (family), and distal (school) features of a learning climate (grey background).

Figure 6.2. Relationship between different spheres of influence, properties of the core category, and the learning climate.
The unfurling Koru design, an iconic NZ image, was used to illustrate the delineated fluid connections between different spheres of influence, involved in negotiating identity and capability within a learning climate, as interpreted in this thesis.

In developing this model, consideration was given to the central issue underpinning the process of negotiating 2E-student identity and capability. Subsequent abstraction of the analysed data resulted in the emergence of a new concept that appeared to unify and encapsulate the findings—that of conceptualising difference. This core concept appeared to mediate the process of negotiating by influencing how and why individuals perceived themselves as similar or different in reflection of the images created by others. Conceptualisation was selected as the key term, as it involved developing thoughts and understandings at a level of depth and complexity that fosters contemplation on, and realisation of, the scale of human diversity that exists. As such, the process of conceptualising encourages deliberation on philosophical issues such as social beliefs and values that underpin the stereotyping, and/or stigmatisation, of minority groups in society. In this respect, conceptualisation of difference affords an opportunity to address issues of social justice by considering and challenging social norms and arrangements in operation in social organisations such as schools. Conceptualisation as an idiom was therefore considered more encompassing of the complexity of issues facing 2E students, than terms such as understanding, or recognising, difference. A new memo was constructed at this stage to summarise these thoughts:

> It appears that the heterogeneous nature of the combined exceptionalities across the twice-exceptional-student group complicates the issue of understanding of learner difference in NZ schools. 2E individuals are currently not recognised as a collective student group with a single “voice or need” like other groups. The findings suggest there is a lack of shared language/understanding in the education (and wider social)
arena concerning dual-exceptional students, making them easier to marginalise/stigmatise as a group (“putting them in the too hard basket”), adding to arguments of underrepresentation in specialised learning programmes/opportunities. So, *conceptualisation* of dual-exceptional learner difference appears to underpin issues relating to appropriate identification, provision, and realisation of achievements.

(Memo, 03.11.16)

Conceptualising difference, the emergent core concept of the developed theory, will now be discussed.

### 6.5 The Theory of Conceptualising Difference

As described earlier, exploration of the data alongside the construction of memos and diagrams, led to the emergence of codes and categories that highlighted issues related to the nature and extent of understandings about 2E-student-learning difference. These understandings appeared to mediate the process of negotiating student identity and capability relative to a learning climate. Revisiting the data to investigate this concept led to the clustering of words such as understanding, awareness, recognising, appreciating, comparing, identifying, realising, addressing and providing, that had been used in the naming of codes and categories. These gerunds infused the data of the participants at all levels of the analysis, as seen in Figure 5.5. Abstraction of this data led to the emergence of the concept of conceptualising difference as a salient feature of the explanatory theory.

As discussed in Chapter 5, different participants’ perceptions of twice-exceptionality had been investigated at the outset of the study using extant documents, questionnaires and interview data. Descriptor terms relating to, for example, recognition, knowledge and understandings of twice-exceptionality were noted early on in analysis, with specific descriptive terms or phrases used by participants helping to define the properties of what
would later become the core concept of conceptualising difference. The findings appeared to show that in the majority of cases, across all spheres of influence, conceptualisation of dual-exceptional learner differences was ill-conceived, with participants typically separating gifts and talents from learning difficulties, if dual exceptionality was recognised at all. A perception of learning strengths and impairments as being polar opposites (or learning paradoxes), appeared to be the norm. This resulted in confusion and uncertainty in identifying and appropriately catering for 2E students in the participating schools, as seen by the following comment:

T: From what I think it is, it’s where you’ve identified children that stand out in one area, but also stand out in another area. So, you might have a child that stands out because they have a label on them like autism or something, and then they also stand out because they have got a special ability in something else. So, two things about them. That’s what I think it is.

I: When did you first become aware of the concept of twice-exceptionality?

T: January 2016 [following invitation to participate in the research]. I know that the school is looking at identifying them and they asked me if anyone at the beginning of the year stood out for me, but at that stage nobody did. I really don’t know any more than that. (T14T C0102 25.07.16)

Subsequently, it was realised that the manner in which twice-exceptionality was conceptualised in different learning climates, impacted upon the process of negotiating student identity and capability. Perceptions of similarity and difference to others, which were socially referenced constructs, influenced the ability of 2E individuals to successfully achieve to their potential in a setting. Table 6.3 shows different conceptions of dual-exceptional student difference developed from the data, in reference to each of the three identified learning climates.
Table 6.3

Relationship between Learning Climates and Conceptions of Difference

<table>
<thead>
<tr>
<th>Learning Climate</th>
<th>Conceptualising Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empowering</td>
<td>Dual exceptionality as a construct understood based on current research. Learning strengths and difficulties recognised and appreciated as having complex effects on the process of learning.</td>
</tr>
<tr>
<td>Remediating</td>
<td>Dual exceptionality as a construct not well understood. Focus on remediation for learning impairments. No provision for learning strengths.</td>
</tr>
<tr>
<td>Disabling</td>
<td>Dual exceptionality as a construct not understood. No provision for learning strengths or impairments.</td>
</tr>
</tbody>
</table>

The process of constructing Table 6.3 led to the idea that successful negotiation of student identity and capability in a learning context necessitated social recognition of, and understandings about, the co-existence of dual exceptionalities. At this stage of the analysis, it was clear that dual exceptionality as a construct needed to be reconceptualised. This was necessary so that current challenges that limit 2E-student academic potential in achievement could be better understood, and, therefore, overcome. By reconceptualising the two exceptionalities as a unified construct, learning strengths and difficulties were not considered as opposites, positioned at either end of a continuum, as often referenced throughout the findings. Re-conceptualisation had the potential to promote a re-think of identification procedures and provisions in schools, currently focused on remediation for learning impairments if dual exceptionalities are recognised at all. As part of this process, dual exceptionalities were understood as omnipresent and omnipotent personal characteristics. However, their combined effects influenced, and were influenced by, features of the surrounding learning climate, as established in analysis of the findings. This implies that the expression of dual exceptionalities is, therefore, modifiable by adaptations made to salient contextual features of a learning climate. Consequently, the following model of
conceptualising difference was abstracted from analysis of the data (Figure 6.3). A Mobius form was adopted as it was considered an appropriate symbolic representation of dual exceptionalities in all their complexity. The model represents the unification of gifts and talents with learning difficulties in 2E individuals. An explanation of Mobius forms and their characteristics is included in Appendix P.

Figure 6.3. Unified model of conceptualising difference.

As already established, the negotiation of identity and capability occurs in reference to a time and place (representative of different learning climates). In this research, this was envisaged as the above Mobius form being divided at two different locations (one representing supportive, empowering climates and the other remediating or disabling climates) along its surface. In empowering learning climates, gifts and talents are visualised as unified with learning difficulties, to produce unique ways of being and doing that are celebrated and valued. As such, individual capabilities are able to be realised, providing that personal learning dispositions (such as interest and motivation) are supportive. This is demonstrated in Figure 6.4 (exceptionality unification) by dividing a Mobius strip directly down its centre. The resultant continuous loop is representative of a whole-person approach to recognition and provision, that encourages successful negotiation of student identity and capability within an empowering learning climate.
Conversely, in learning climates that are unsupportive (remediating or disabling) of learning diversities, an unconstructive entanglement of the two exceptionalities occurs, resulting in difficulties in realising individual capabilities and, thereby, negotiating positive student identity. This is demonstrated in Figure 6.5 (exceptionality entanglement) where the Mobius strip is sectioned one third of the way along one border (representing a focus on learning impairments), resulting in an entanglement of gifts and talents with learning difficulties that is destructive, rather than constructive, to the realisation of learning capabilities and achievement. In this scenario, any learning provisions that are provided focus on remediation for learning difficulties, rather than simultaneous recognition of, and provision for, gifts and talents. The subsequent polar positioning of learning strengths in one loop and learning impairments in the second loop, pulling away from one another yet always entwined, creates a barrier to successful negotiation of student identity and capability in that learning setting.

*Figure 6.4. Exceptionality unification.  Figure 6.5. Exceptionality entanglement*
The findings of this study thus suggest that by reconceptualising twice-exceptional student difference in terms of the unification of learning strengths with learning difficulties, the capabilities of 2E students can better be realised. This re-conceptualisation considers that rather than one exceptionality being masked by another, an ebb and flow of the capabilities of 2E individuals occurs on a continuum, relative to the features of a learning climate. By re-visualising individuals with dual exceptionalities in such a way, conditions in a learning climate can be modified to become more supportive of 2E individuals. This would help to optimise the means by which successful development of 2E-student identity and capability, and thereby academic achievement, transpires. It would also inform transformative changes in the approach to teaching 2E students. As such, the two models, one being the different features of the learning climate (Figure 6.2), and the other the re-conceptualisation of twice-exceptionality as a construct (Figure 6.3), were merged to create a new visual model of the process of negotiating student identity and capability, as seen in Figure 6.6. In Figure 6.6, the learning climate has been merged alongside features involved in the process of negotiating 2E-student identity and capability (detailed on Figure 6.2) within the background Koru.
Re-conceptualisation of dual exceptionality was placed in the foreground of this model, as it formed the basis upon which the conditions of the learning climate were established. The model suggests that by adjusting social conceptions of, and understandings about, the capabilities of 2E individuals, changes to the learning climate can occur to better support (and empower) the learning achievements of such students in NZ schools.

**6.6 Chapter Summary**

Chapter 6 explored the construction of the core category of negotiating student identity and capability in the explanatory theory of conceptualising difference. Two properties of the process of negotiating were identified: imagining-self, an intrapersonal process emerging from the data of the 2E students; and categorising-self, an interpersonal process occurring relative to personal perceptions of the judgement of others. The findings showed that the process of negotiating student identity and capability was influenced by conditions in the
surrounding learning climate. Further analysis led to the emergence of three distinct learning climates, although in reality it was acknowledged that any combination of climates could exist along a continuum, from supportive to unsupportive conditions. Following examination of the features of particular learning climates, a unifying concept, conceptualising difference, emerged from the data to become the core concept of the explanatory theory. A Mobius form was used to communicate the importance of conceptualising difference productively (shown by unification of gifts and talents with learning difficulties, rather than the binary positioning of exceptionalities) with regard to the negotiation of 2E identity and capability, if progress is to be made in developing more supportive learning conditions for 2E students. The developed model helps to explain why current understandings of dual exceptionality as a construct need to be reconsidered, so that transformative change in the approach to teaching 2E students in the NZ school system can occur. Chapter 7 will discuss the explanatory theory in detail, linking the findings to existing literature, including theories of identity development and the theoretical framework of the capability approach.
Chapter 7: Discussion

This chapter discusses the findings presented in Chapters 5 and 6, integrated with relevant literature, that led to the construction of the explanatory theory, conceptualising difference. Preceding the discussion there is a recap of the issues facing 2E students in NZ schools, along with a reminder of the research question and structure of the thesis. This overview is provided as an aide-mémoire to assist with reading the chapter.

The discussion details development of the explanatory theory, beginning with the core concepts of identity and capability, identified early on in analysis. The process of negotiating is examined, this having emerged as a critical activity in the development of 2E-student identity and perceptions of capability in a setting. The influence of different learning climates, representing significant features of an individual’s lived experience instrumental in guiding learning behaviours, is then considered. Relevant literature concerning theories of identity development and issues of inclusion in the school setting are woven within this discussion, as are the entwined core-category processes of imagining-self and categorising-self. The negotiation of identity and capability in reference to others is reflective of the constructed nature of grounded theory (GT; Charmaz, 2006). In adopting a constructivist approach to GT, understandings about a phenomenon are grounded upon “how, when, and to what extent the studied experience is embedded in larger and, often, hidden positions, networks, situations, and relationships” (Charmaz, 2006, p. 130). The extant literature thus helps to both support the findings of this study, whilst the study findings also modestly expand upon the contexts under which these theories are currently applied.

To conclude the chapter, the explanatory theory of conceptualising difference is discussed, integrated with the theoretical framework of the capability approach. The capability approach, a conceptual framework that can be used for the assessment of individual well-
being and the evaluation of social structures and arrangements (Sen, 1985), emerged in analysis as a relevant theoretical construct through which to examine the findings of this research. Again, this was in keeping with constructivist GT, in which any theoretical framework adopted by a researcher has to be justified “in explaining [the] grounded theory and discussing the contribution it makes to knowledge in your professional area” (Birks & Mills, 2015, p. 120). As such, the capability approach provided a conceptual lens through which dual-exceptional learner difference came to be understood in interpreting the findings.

7.1 Revisiting the Research Issue, Aim and Objective

2E students present a conceptual paradox in respect of possessing gifts and talents alongside learning impairments that complicate the teaching–learning relationship. Such students are often considered idiosyncratic (quirky) or anomalous in their ways of being and doing, and, as such, are typically overlooked for enrichment or accelerated learning opportunities. This is because they don’t fit normative social conceptions of what gifted and talented student should “look like.” As a result, it is usually their learning difficulties that are highlighted by school systems, if dual exceptionality is recognised at all. A sole focus on support for learning impairments comes at a cost, as it fails to recognise individual identity, celebrate difference, enhance personal agency, or build capacity in domains of learning strength. As such, accommodations that only target learning difficulties present a barrier to equitable education provision for 2E students. Such exclusionary practices, in part, help to determine an academic path that is more likely to end in underachievement when compared with potential (Taket et al., 2009), with low self-belief in capability negatively influencing personal well-being.

Currently, this dilemma of 2E-learner difference is attributed to individuals, based on a biopathological approach emanating from the medical model of disability, rather than in reference to, and in consideration of, social ideologies and arrangements (Terzi, 2008).
Government policies tend to be directed toward changing individuals or groups to conform to the social norm rather than valuing or celebrating differences inclusively (Waitere-Ang, 2005). This is reminiscent of an assimilationist approach (Banks, 2008), and as regards education, is characterised by schools not being required to consider and appropriately modify practices to include those with learning neurodiversities. This is because provision is based on the understanding that schools are socially neutral and, as such, unbiased, with current arrangements not favouring any one group (Waitere-Ang, 2005). However, as seen in the findings of this study, this approach typically fails students with dual exceptionalities.

Sternberg (2007) argues that personal interests and goals tend to push individuals to seek out environments that are suited to their unique gifts and talents, as part of a need to belong. For 2E individuals, this can see them underachieving and/or dropping out of a school system they perceive as unsupportive of their learning needs, to seek alternative life paths that recognise and celebrate their unique ways of being. Currently no state organisation is specifically tasked with resourcing, evaluating or monitoring the outcomes of educational policies or practices that affect 2E students in NZ schools. The MoE does not collect any statistics on prevalence, identification processes, or the effectiveness of school programmes, and neither does it monitor how 2E students achieve academically or socio-emotionally as a result of the totality of their school experiences. This lack of empirical data currently renders issues facing such students invisible.

Prompted by these concerns, this research sought to investigate why 2E students typically underachieve for their potential in the NZ school system. In doing so, it examined how 2E students negotiate the process of learning, and how this influences their capacity to achieve in schools. By examining multiple perspectives on these issues, the study sought to answer the focus research question: How do twice-exceptional students negotiate identity and capability within the New Zealand school system? Constructivist GT was employed as a methodology,
and the theoretical framework of the capability approach adopted as a conceptual means through which to derive nascent theory using extant documents and participant narratives.

As previously established, 2E individuals often struggle to achieve to their potential in NZ schools. The findings of this research argue that this is due to a conceptualisation of 2E-learner difference that influences, and is influenced by, the process of negotiating identity and capability in a learning climate. The key features of the developed theory are as follows:

- Twice-exceptional identity and capability are the two concepts central to the emergent core category. The negotiation of identity and capability help to determine student achievement in the NZ school system. The process of negotiating identity and capability is influenced by twice-exceptional students’ realisation of difference in learning abilities (understanding-self), as well as by the ability of others to accept difference (accepting differences) and the degree of flexibility and suitability in school systems/arrangements (managing climates). These factors interact to influence conceptions of difference, and thereby the ability of twice-exceptional students to achieve in schools.

- The process of twice-exceptional individuals negotiating student identity and capability involves the reciprocal processes of imagining-self and categorising-self in a learning climate. These intertwined, continuous happenings influence the envisagement of a sense of self in reflection of changing personal circumstances and contextual conditions. Supports, as well as challenges, faced by twice-exceptional students in the NZ school system, help to define the conditions under which the negotiation of identity and capability occur. Ongoing negotiations influence, and are influenced by, conceptions of twice-exceptional student difference in particular learning climates.
• Conceptualising difference is the culminating theory emerging from analysis of the data. The theory helps to determine, via the construction of differing conceptions of dual exceptionality, the capacity of twice-exceptional students to successfully negotiate identity and capability to achieve in a learning climate. As such, the need for more equitable provisioning for gifted students with learning difficulties in NZ schools is justified. Realisation of equity in provision helps address issues of social justice by recognising the unique complexities associated with the condition in the school context. It is argued that the ability to re-conceptualise twice-exceptional students in NZ schools as first and foremost having learning strengths, rather than only learning deficits, assists with the development of positive identity and perceptions of capability. This re-conceptualisation ultimately influences realised achievements.

These key features of the explanatory theory, which explore the phenomenon of underachievement of 2E students in NZ schools, will now be discussed.

7.2 Negotiating Twice-Exceptional Identity and Capability

The process of negotiating identity and capability influences individual perceptions of what is, and what can be realised, in a time and place. As discussed in Section, 1.8, researchers such as Tajfel and Turner (1979) argue that people have multiple identities, some of which are selected by individuals for development, whilst others are imposed by surrounding contextual conditions. The conditions under which such negotiations take place are therefore important to consider when investigating inequalities between groups in a society. In this research, development of 2E-student identity was shown to occur via a dynamic relationship between various intrapersonal (grouped within the subsidiary category, understanding-self) and contextual factors (classified with the subsidiary categories, accepting differences and
managing climates) that impacted upon capacity to achieve. The development of a successful student identity including positive perceptions of capability, were revealed to be critical for 2E individuals with respect to realising their learning potential in NZ schools. Specific factors identified in this study as influential in the negotiation of 2E-student identity and capability will now be explored.

7.2.1 The influence of social conceptions of giftedness.

Neurotypically gifted students are usually able to negotiate a successful academic self-concept (identity and capability) and sense of belonging, because their gifts and talents are recognised and valued by society (McCoach & Siegle, 2003; Renzulli, 1982). However, the findings presented in this thesis indicate that when considering 2E individuals, the success of this negotiation process is less assured. This is because 2E students’ areas of high ability often remain hidden, and thus not provided for, in part due to constraining socio-political factors. Socio-political restraints identified in Chapters 5 and 6 include social awareness and understandings, individual beliefs, school leadership and arrangements, and teacher education programmes, that influence conceptions of dual exceptionality as a construct. The findings of this research reveal that the current focus on normative “schoolhouse” forms of giftedness (Renzulli, 1982), being more easily identified by teachers, resulted in a lack of realisation of other types of intelligence, such as socio-emotional or creative forms often demonstrated by 2E individuals. Failure to celebrate alternative forms or expressions of giftedness and talent impacts upon 2E students’ negotiation of identity and capability in the school setting.

Neurotypical social conceptions of academic forms of giftedness reinforce stereotypes about what is valued within a society. Such stereotypes can negatively influence 2E individuals’ development of identity, agency, and perceptions of capability to achieve. The findings of this study show that in the participating schools there was an emphasis on provision of support for domains of learning (dis)ability, rather than for area(s) of learning strength. This
complements the conclusions of earlier research on 2E students in the NZ school setting by Sturgess (2011). As detailed in Chapter 5, this deficit-approach negatively influenced the development of a sense of self-worth and belonging, often estranging 2E students and their families from the school system and the pursuit of further academic endeavours.

7.2.2 The development of self-esteem.

Self-esteem, developed over time in part by experiencing success in a setting, is described by Berk (2012) as an emotional, evaluative component of an individual’s identity, which influences thoughts, actions and behaviours. For most of the 2E participants in this study, challenging conditions faced in a learning climate impacted upon their ability to achieve to their potential. This made successful progression through the NZ school system increasingly difficult, especially as high-stakes assessments direct future learning opportunities.

Consequently, as work demands increased, lack of academic success, when compared to potential, negatively impacted upon the development of positive self-esteem. Continuing lack of success influenced individual perceptions of capability, which further influenced engagement and motivation in the school setting. For some student participants, intrapersonal learning characteristics such as a lack of resilience, persistence, and adaptability, in the face of challenges, complicated the development of positive self-esteem.

The findings of this study regarding the development of self-esteem add to those of research by McAdams and Olson (2010), who recognise the importance of an individual’s core learning dispositions and motivational constructs, alongside the construction of a coherent narrative, that help create a sense of purpose to life. Learning dispositions, constructs and narratives (that emerged in the construction of the subsidiary category, understanding-self) were found in this study to influence the manner in which challenging conditions were negotiated by 2E students. Students who exhibited positive learning dispositions and motivations appeared to be more comfortable in their learning capabilities. However, those
students who had not yet successfully developed intrapersonal understandings about dual exceptionality appeared to be less positive in describing their learning capabilities, perhaps reflecting lower self-esteem. Such negative perceptions of capability in a learning context also influenced a student's desire to engage and persist with a task. In this study, the process of developing an authentic personal narrative thus appeared to direct intrapersonal understandings about, and personal dispositions towards, learning.

Regarding 2E students developing positive self-esteem (and self-efficacy) in the NZ school setting, this research highlights the tension between knowing personal capabilities and being able to demonstrate them in a school system that typically focuses on remediation for difficulties in performing “valued” tasks. The greater the disparity between capability and performance in a learning climate, the greater the socio-emotional/behavioural risk for 2E individuals in terms of the development of self-esteem. 2E students’ capacity to influence conditions in a learning climate therefore appeared to be critical to the development of positive identity, agency and perceptions of capability in a setting.

7.2.3 The development of personal agency.

An individual’s development of agency, emanating from personal attributes such as self-esteem, an internal locus of control, ego strength, and resilience (Bandura, 1999), was found in this study to influence the process of negotiating identity and capability. 2E students who appeared to have developed strong personal agency relative to contextual learning conditions, were found to better be able to adapt to the ever-changing demands of schooling. This finding emerged in Chapter 6 from the comments of student participants from the two schools identified as being on their way to developing empowering learning climates. Families with children attending these schools remarked on the supportive nature of home–school partnerships that facilitated learning, and thereby the development of positive identity and personal agency. However, in schools identified as remediating or disabling of 2E students’
learning needs, lack of personal agency appeared to inhibit the development of a sense of who the students were, and what they could be (their negotiated identity and perceptions of capability), resulting in ongoing learning challenges. In such schools, unresolved conflicts with staff about the appropriateness of learning provisions were common, often resulting in a sense of helplessness and exclusion. Such findings are supported by those of researchers such as Schwartz et al. (2012), who found that individuals who lack agency often experience frustration and find life challenging, confusing, and, at times, distressing.

7.2.4 Negotiation of identity status and competencies.

As this research set out to examine why 2E students typically underachieve in the NZ school system, an exploration of how these students realise identity and capability relative to a learning setting was critical. The findings of this feature of the investigation were detailed in Chapter 6. Further analysis resulted in the construction of different identity statuses (defined in this research as commitments to understandings about personal and social learning characteristics) and competencies (defined as personal learning proficiencies) of the 2E student participants in consideration of their schooling experiences.

Marcia’s (1980) identity statuses, arising as a result of expansion of Erikson’s (1968) dimensions of exploration and commitment, are useful in the following discussion as they support the findings of this study. As detailed in Section 1.8, Marcia (1980) established four identity statuses: achievement (commitment following exploration of alternatives), moratorium (exploration with no firm commitment), foreclosure (commitment without extensive exploration) and diffusion (general apathy toward addressing identity issues) (Schwartz et al., 2012). In this study, these four identity statuses emerged in analysis in relation to the three learning climates, as shown in Table 6.2. Each of the identity statuses had significant implications for the development of individual capability and, thereby, achievement. In developing Table 6.2, the negotiation of identity was shown to be shaped by
an interplay between intrapersonal and contextual factors, represented by the processes of imaging-self and categorising-self. Intrapersonal factors reflected the unique learning characteristics and dispositions of 2E individuals, which were considered immutable, but modifiable, by conditions in a learning climate. Contextual factors, importantly including interpersonal factors, were thus realised as highly influential in negotiating 2E-student identity and capability relative to a learning climate.

Analysis of the study findings also alluded to the significance of personal learning proficiencies that influenced the negotiation of 2E-student identity and capability. Proficiencies that emerged in analysis of the data included resilience; persistence; adaptability; the ability to locate, establish and maintain supportive relationships in a learning climate; and the continued development of personal identity and interests. These skills were reflective of those referred to in research by L. Strauss and Cross (2005), as discussed in Section 1.8. L. Strauss and Cross (2005) developed five interrelated identity competencies: buffering (management of discriminatory encounters), code-switching (fluidity of movement in and out of mainstream contexts), bridging (establishment and maintenance of social relationships between different social groups), bonding (experiences that determine affiliations to a group) and individuality (sustenance of personal identity and interests outside of differences). The findings of this research connect and add to these competencies by developing them in consideration of the complexity of dual exceptionalities.

In the following discussion, L. Strauss and Cross’s (2005) competencies are considered alongside the findings relating to the development of personal learning proficiencies in the negotiation of identity and capability in this study. For clarity, the terms before the forward slash represent the findings of this study, whereas the terms after the slash reference L. Strauss and Cross’s (2005) interrelated identity competencies.
7.2.4.1 Resilience and adaptability / Buffering and code-switching.

In this research, the ability of 2E students to negotiate challenges (resilience) and adapt to the changing conditions of a learning climate (adaptability), appeared to influence their perception of capability as learners. The development of resilience and adaptability in 2E students in response to their schooling experiences was thus reflective of L. Strauss and Cross’s (2005) identity competencies of buffering and code-switching (as defined above). Both concepts were seen in the data of the 2E student participants, located within the subsidiary category, understanding-self, in Chapter 5. Supporting evidence was also found in the transcripts of parents/caregivers and teachers, located within the subsidiary categories, accepting differences and managing climates, also discussed in Chapter 5.

Resilience requires the development of protective factors and strategies (G. Gallagher, 2005), like the ability to adapt to changing circumstances to overcome difficulties in a context. Such difficulties include a lack of social awareness of, and informed understandings about, the complexity of the educational needs of 2E students. Different socio-emotional/behavioural responses to challenging contextual situations were referenced in the narratives of the participants in the present study. Individual students, in reflection of their personal characteristics and circumstances, had varying responses (forms of adapting to) to these challenges. These experiential encounters impacted upon the negotiation of student identity, and perceptions of capability in a learning climate, and had significant consequences for the well-being of the students and their families. For example, comments in the narratives (Sections 5.1.3 and 5.2.2) that referred to feeling misunderstood led, in several cases, to a period of home-schooling. This involved a parent/caregiver developing educational knowledge, dealing with legal requirements set by the MoE, and adapting to new financial pressures and the socio-emotional challenges of schooling a child at home. Resilience and
adaptability were thus skills required not only by 2E individuals, but also the family as a whole.

The findings of this research showed that resilience and adaptability are important concepts in considering how 2E students negotiate identity, agency and capability in different learning climates. Resilience and adaptability can therefore be used as a lens through which the complexities and issues faced by 2E individuals can be viewed. For a few of the 2E students in this study, adversity promoted resilience and the development of processes that overcame learning difficulties. Such processes often created innovative ways of interpreting and undertaking tasks. However, for many of the student participants, the challenges presented by their learning (dis)abilities in schools proved to be a significant risk factor in the development of resilience and adaptability, irrespective of whatever protective attributes their giftedness provided, a finding supported in research by Werner (2000).

This thesis argues that it is the provision of meaningful learning opportunities that is key to developing resilience, and thereby adaptability, in the face of changing contextual conditions. For 2E students, these experiences have to be carefully selected and enacted to ensure they are appropriate in catering for the combined effects of dual exceptionalities. As such, remediating or disabling learning climates, that either focus on accommodations for learning impairments, or fail to identify, and therefore neglect, the learning needs of 2E individuals entirely, have serious consequences for the development of resilience and adaptability.

Analysis of the narratives of the 2E students in this study showed that they often attempted to contest the perceived paradoxical aspects of their capability to learn in schools, the success of which was dependent on supportive contextual factors. The interaction between multiple risk factors in a learning climate, such as an absence of family and/or school supports, combined with intervening socio-political conditions, appear to increase the risk of failure in successfully developing learning capabilities. Conversely, protective factors provided by
families and schools, as seen in the findings relating to the construction of an empowering learning climate, appeared to work in combination to modify the effects of risk by evoking positive adaptations in individuals, which promoted resilience. Such findings add to those in the NZ context by Ballam (2013) and support international studies by researchers such as Luther, Sawyer, and Brown (2006). The findings of this study, therefore, show that the effects of risk factors on the process of negotiating student identity and capability were dependent on the nature and extent of the interactions amongst all the factors found in a learning climate.

7.2.4.2 Establishing supportive relationships / Bridging.
The importance of supportive relationships in the negotiation of successful 2E-student identity and capability in a learning climate was a finding evidenced throughout the transcripts of all the participants (as discussed in Chapters 5 and 6). References in the data to the location, establishment, and maintenance of supportive social relationships in a learning climate, were comparable to L. Strauss and Cross’s (2005) identity competency of bridging (as defined in Section 7.2.4). Such relationships were seen to be an important mediator of academic achievements and personal well-being. Access to appropriate learning opportunities, both in and out of school, based upon supportive, encouraging relationships, were considered pivotal to the successful negotiation of student identity and perceptions of capability. This finding again adds to the research by Ballam (2013), who also found a need for NZ schools to nurture informed, enriching relationships between teachers and gifted students. Such relationships are currently constrained by the MoE’s socio-political lapse in focus on gifted education. In this study, an absence of supportive relationships with teachers/SENCOs and/or school leadership was found to have significant implications for 2E students’ academic, socio-emotional, and cognitive development. As such, the need for a significant adult to address issues in provision by advocating for learning needs in a school
setting was a frequent finding. Advocacy was often perceived as presenting an opportunity to teach others about the unique issues that face 2E students in regard to learning.

7.2.4.3 Learning with like-minded others / Bonding.

The nature of learning opportunities available to 2E students influences their development of learning capabilities. The opportunity to learn with like-minded peers was not a teaching strategy commonly offered, or indicated as preferred on the student questionnaire; however, one student did reference the benefits that a chance class placement with another 2E student had on his learning (detailed in Section 5.1.3). Such an opportunity was considered similar to L. Strauss and Cross’s (2005) identity competency of bonding (defined in Section 7.2.4).

Whilst there were not many examples of positive learning opportunities such as this in this study, where learning capabilities were developed alongside gifted peers, the benefits of such opportunities were obvious in terms of personal well-being. However, an absence of a clearly articulated conceptualisation of twice-exceptionality, combined with an associated lack of discourse in the education and wider social arenas about the construct, appeared to limit this form of provision. This appeared to influence the 2E students’ negotiation of identity and capability, as the perceived stigma attached to placement with low-ability students for remediation for learning difficulties, rather than in conditions that provided opportunities to develop learning strengths, influenced their sense of belonging in a learning climate.

The findings of the quantitative analysis of the student questionnaires showed that accommodations that supported learning difficulties, such as the provision of assistive technology, were the most frequently utilised strategic tools employed by the schools. These learning supports were also ranked as highly useful by the student participants. The student participants did not consider learning strategies that promoted the use of tools such as goal setting, graphic organisers, or study skills, useful for learning, even though these strategies are often utilised by schools. Interestingly, teaching strategies that focused on learning
strengths, such as participation in gifted and talented or learning-enrichment opportunities, although considered to be very useful to learning from the students’ perspectives, were not offered by the majority of the participating schools. This was an interesting finding, as research by Riley and White (2016) demonstrates that for gifted students, belonging in a context is influenced by the nature and extent of engagement with like-minded peers. Their findings show that affording students the opportunity to connect with others of high ability allows for the development of identity congruence, and subsequently a sense of belonging in the school setting, through the sharing of interests and cognitive challenges. In this study, 2E students also appeared to favour the use of creative, open-ended challenges focused on interests, although these were also not reported as commonly used by schools. When these results are considered in light of the findings from the teacher questionnaire that show a quarter of surveyed teachers were unaware of any useful teaching strategies for 2E students, the low frequency of use of some of these teaching strategies is more clearly understood.

Unsupportive climates that failed to provide opportunities for the development of gifts and talents were identified in Chapter 6 as being remediating or disabling, rather than empowering, of learning capabilities. The findings clearly showed that the current approach to provision for students with dual exceptionalities in the participating schools focused on learning impairments, if exceptionalities were noted at all. This approach divests 2E students of the opportunity to learn and form friendships with other gifted individuals who may face similar learning challenges in the school context. This situation creates a barrier to the negotiation of positive student identity by limiting realisation of learning capabilities.

7.2.4.4 Opportunity to pursue valued goals / Individuality.
The study findings that referenced opportunities available to 2E students to pursue valued goals were considered comparable with L. Strauss and Cross’s (2005) identity competency of individuality (defined in Section 7.2.4). Such opportunities, which support the development
and maintenance of personal identity irrespective of individual learner difference, were found to be important in the negotiation of 2E student capability. The research showed that opportunities to pursue valued goals were often serendipitous, occurring by happenstance in conditions that typically reflected limited understandings about 2E students’ schooling needs.

Analysis of the transcripts of participants highlighted the need for greater recognition of learning interests to promote motivation and engagement in the process of learning, so that individual capabilities could better be developed. In this regard, the student participants and their parent(s)/caregiver(s) often referred to conflicts with teachers and/or school management concerning academic potential versus capability to achieve, within the operating constraints of school systems. The findings in Sections 5.1.2 and 5.3.2 showed that in many cases, conflicts based on a lack of individualisation for learning needs resulted in withdrawal from school so that a period of supported learning could occur at home. In these situations, the lack of development of an individual education plan in consideration of dual-exceptional learning needs, was perceived as having contributed to a breakdown in psychological well-being. Mothers were typically tasked with providing education support for their 2E children at home. This required the investment of considerable time and effort to locate appropriate resources and attend to legal requirements involved with home-schooling in NZ. Such an experience was detailed in an excerpt from the mother of a 2E child in Section 5.2.3, in reference to a lack of guidance and support for parents/caregivers in negotiating the NZ school system. The degree of commitment required to access appropriate provision meant that parents/caregivers had to develop their own understandings about the language and policies related to the field of twice-exceptionality and education. Such understandings were found to be hampered by a lack of readily available resources. This finding is supported and adds to studies by researchers such as Dare and Nowicki (2015), who found that
parents/caregivers of 2E children require access to knowledge and resources to be able to successfully fulfil a support and advocacy role.

7.2.5 Conclusions regarding the negotiation of identity and capability in a learning climate.

As established in Chapters 1 and 2, 2E students have different ways of being and doing that set them apart from their neurotypical peers. A 2E individual’s diverse neurobiological pathways to learning can present challenges for teachers, who, in NZ, are typically focused on “fixing” learning difficulties (to “pull up the tail”), rather than developing areas of learning strength. As discussed above, this focus influences the negotiation of identity, affecting personal agency and perceptions of capability in the school setting. The findings of this study suggest that 2E individuals require appropriate learning opportunities, such as support from knowledgeable experts, to be able to envisage themselves positively as students, especially in relation to their gifted peers. The way in which dual exceptionality as a construct was conceptualised in a learning climate emerged as critical in determining the nature of the learning opportunities offered. Misconceptions that highlighted learning impairments typically led to a focus on what 2E students could not achieve, rather than what they were capable of achieving, if afforded appropriate opportunity.

The need for meaningful opportunities to learn and develop deeper understandings about the phenomenon of dual exceptionality was a common feature in the transcripts of participants. Lack of identification of individual capabilities in a learning climate inhibited development of gifts and talents. This was shown to have detrimental socio-psychological effects as 2E students were unable to realise their potential within the constraints of schooling arrangements that underestimated or ignored their learning potential. These findings concerning personal well-being complement studies by researchers such as Dole (2001), who found that being 2E has significant psychological implications for the negotiation of identity,
including the development of socio-emotional/behavioural disorders. Such difficulties were a common feature in the narratives of almost all the participants in this study. Identity development was thus shown in this research to be influenced by an interplay between intrapersonal characteristics, including personal learning dispositions and socio-emotional/cognitive schemas and narratives (identified in research by McAdams and Olson, 2010, as discussed in Chapter 1), and contextual factors (as shown in studies by researchers such as Dole (2001) and Schwartz et al. (2012), also discussed in Chapter 1).

Gifted theorists such as Gagné (2013), Renzulli (2003) and Tannenbaum (1986) also consider the interplay between personal characteristics and contextual factors to be key to the realisation of individual potential. Gagné’s (2013) conception of intrapersonal catalysts grounded upon biological (genetic) basements (as seen in his expanded model of talent development, discussed in Section 1.1) was particularly relevant to the findings of this research. This was because the personal learning characteristics and dispositions of the 2E students in this study were shown to act in complex ways to effect expression of learning exceptionalities relative to the conditions of a learning climate.

Complex relationships between intrapersonal and contextual factors create a multitude of potential outcomes for individuals. Bloom (1985) argues that “no matter what the initial characteristics (or gifts) of the individuals, unless there is a long and intensive process of encouragement, nurturance, education, and training, the individuals will not attain extreme levels of capability in these particular fields” (p. 3). Bloom (1985), like Gagné (2013), Renzulli (2003) and Tannenbaum (1986), recognises the importance of “chance” factors in the development of individual capabilities. Chance factors identified in this research include positive initial learning experiences, support from significant others, and the provision of learning opportunities that aided in the discovery and development of gifts and talents. Recognition of, and informed understandings about, dual exceptionality that influenced
provision of identified chance factors, therefore emerged as significant in negotiating identity and capability in the analysis. This was seen in the construction of the subsidiary categories, understanding-self, accepting difference and managing climates, discussed in Chapter 5. Social constructions of learner difference affected 2E students’ perceptions of schooling and, thereby, their negotiation of identity and capability in a learning climate.

7.3 Imagining-Self and Categorising-Self in a Learning Climate

As previously discussed, in this study the intrapersonal characteristics of 2E individuals were considered absolute; however, their effects were considered modifiable in response to conditions found within a learning climate. Such conditions importantly included the presence of understanding, supportive adults. Social attitudes towards, and judgements of, learner difference in a setting, were influenced by conceptions of dual exceptionality as a construct. These reflected social constructions were perceived by 2E students as being either supportive or unsupportive of learning exceptionalities, which impacted upon the personal process of negotiating identity and capability. These findings reflected the conclusions of studies by researchers such as Sam and Berry (2010) and Schwartz et al. (2010). In this research, whether a learning climate was empowering, remediating or disabling of the learning needs of 2E students (based upon differing social conceptions of dual exceptionality), had significant implications for the development of identity and capability. This was seen in the emergence of the two properties of the core category, imagining-self and categorising-self. These properties were constructed via abstraction from the subsidiary categories, understanding-self, accepting differences and managing climates, as discussed in Chapter 6. In this research, imagining-self referenced internal conversations about “who one is,” whereas categorising-self referred to the negotiation of social positioning regarding “one’s place in the world.” Both processes occurred in reference to one another and in reflection of the images created by society (Schwartz et al., 2012).
Analysis of the data in Chapter 6 showed that conceptions of learner difference influenced the way in which 2E individuals realised their social location (categorising-self), and thereby perceived their ability to achieve (imagining-self) in a learning climate. Categorising-self and imagining-self involve developing a sense of self, or social identity, in reference to others in a particular setting. The negotiation of a social identity was an important finding (as discussed in Section 6.1.2), appearing to be especially critical during the adolescent years. This finding supports those of studies by identity theorists such as Erikson (1968), Marcia (1980) and Schwartz et al. (2012). Development of a social identity has been found in research to influence achievements, social relationships, perceptions of self-worth and personal well-being (Beyers & Seiffge-Krenke, 2010; Luyckx et al., 2005; Phinney & Ong, 2007; Schwartz et al., 2009; Schwartz et al., 2011). In this research, abstraction of the findings showed that the process of negotiating identity influences, and is influenced by, social conceptions of learner difference as a construct. Such conceptions are grounded upon socio-political/cultural ideologies that provide the foundations upon which educational policies and practices in a society are based (Adams et al., 2005; Bourdieu, 1986; J. Clark, 2005; Codd & Openshaw, 2005; Waitere-Ang, 2005).

Social identity theorists, such as Tajfel and Turner (1979) and Bandura (1986, 1999), emphasise the importance of cognitive processes on the development of a social identity. Bandura’s social-cognitive theory is relevant to this study in that he examined the constructs of motivation and learning in the education of students. Bandura shows that individuals with high self-efficacy have high expectations for themselves with respect to achieving valued goals, this being important for personal well-being. As regards the effect the process of schooling had on the development of 2E student self-efficacy in this study, quantitative analysis of the student questionnaires suggested that as a group, these students did not consider themselves to be particularly academically, socially or emotionally efficacious. This
finding concurs with that of researchers such as Assouline et al. (2010), Dole (2001) and Kalbfleisch (2009, 2014) and is concerning, as the capacity to achieve is influenced by individual perceptions of capability, identity and agency in a setting. Unfortunately, as discussed in Chapter 5, due to low participation rates further analysis of this aspect of the student questionnaire was not possible, as results lie outside reasonable levels of confidence, with the margin of error for such calculations too high.

7.3.1 Reciprocity between spheres of influence.

In developing social-cognitive theory, Bandura (1986) demonstrates a reciprocal triadic relationship between the individual, surrounding context, and resultant behaviours. In this study, a similar triadic relationship emerged in investigation of the characteristics of the 2E students (individuals), realisation of learning achievements (behaviours), and the conditions of a learning climate (surrounding context). The relationship between these three features of the data is shown in Figure 7.1.

![Figure 7.1. Relationships between features of a learning climate.](image-url)
Personal factors, the capability to realise achievements and environmental influences, were shown in Chapter 5 (during exploration of the relationships between the focused codes in a subsidiary category), to influence one another in an iterative fashion. The effect of this dynamic relationship was envisaged in the explanatory theory via development of the conceptual model, negotiating student identity and capability, in Figure 6.6. The model shows that negotiation of identity and capability are reflections of the way in which individuals perceive themselves in relation to others in a learning setting. As discussed, this negotiation process is dynamic, with individuals creating and recreating an imagined-self, influenced by wider sociocultural and political factors that help them to categorise themselves. As shown by the findings, such negotiations occur in reference to past schooling experiences, and in reflection of intrapersonal characteristics and circumstances, to regulate future behaviours and relationships in a setting. These findings concerning identity and capability negotiation add to those by researchers such as Ballam (2013).

In respect of negotiating identity, research by Biddulph, Biddulph, & Biddulph (2003) found that alongside ethnicity and cultural differences, learning (dis)abilities significantly impact upon expressions of achievement in gifted and talented individuals. Such tensions between ability and performance, as demonstrated in this research, must be acknowledged to allow for fulfilment of potential via provision of appropriate learning opportunities. Jackson and Warin (2000) observe that individuals often revert to internalised thoughts and behaviours (including neurodiverse behaviours) when challenged in a setting, and these intrapersonal characteristics can conflict with the expectations of a learning climate. Such conflicts were frequently referenced in the narratives of the families involved in this study. Thus, the negotiation of identity and capability within particular learning climates can complicate relationships between 2E students and others. This is especially significant in schools, where
2E students may have to assume different “hats,” in reflection of multiple dimensions of themselves, in an attempt to negotiate the changing conditions of a learning climate.

7.3.2 The influence of gender.

One significant example of negotiating multiple aspects of identity found in this study, was that of the influence of gender. Social constructions of gender and gender roles in society influence identification of giftedness and learning difficulties. Many students identified as being 2E, including the student participants in this study, are male. Females have historically been underserved by school systems, in part due to the traditional role of women in society. Social gendering often results in gifted potential and learning difficulties going unrecognised in females, due to different approaches to socialisation found between the genders. In this regard, the findings of this study support those of Lovecky (2004) who found that more boys than girls are referred for assessment for giftedness even when the children are from the same family, with demonstrated gifted potential. Norwich (2000) also found significant gender differences in examining the number of students with special-education needs receiving support, alongside the provision of inappropriate interventions provided to mitigate individual learning problems. Both studies raise issues of gender equity in education practice.

In the current NZ school climate, where resources are limited, these findings imply a need for informed decisions around identification and allocation of resourcing. Such findings concur with those of researchers such as Norwich (2000) who argue that current social biases appear to distort identification processes and provisioning for students with special needs in favour of males.

7.3.3 The importance of negotiating social identity.

Tajfel and Turner’s (1979) social identity theory (SIT) is also relevant to this discussion of negotiating 2E-student identity and capability, as it links three cognitive processes (social categorisation, social identification and social comparison) to the social positioning of
individuals in in- or out-groups in a setting. Of particular interest to this research is that in SIT, group membership is dependent upon the personal circumstances of individuals (including personal learning traits and dispositions), and such circumstances may involve social prejudice or discriminatory actions against a group that excludes them from full participation in society.

In this study, the findings indicate that the interplay between the processes of imaging-self and categorising-self, involved in negotiating identity, influenced decisions made regarding social positioning (social categorisation). This, in turn, influenced constructions of a social identity (social identification) via comparisons of similarity or difference to others (social comparison). In SIT, belonging to a favourable in-group (broadly represented in this research as neurotypically gifted students reflecting social norms) resulted in the construction of a “satisfied” social identity; however, association with an out-group (in this research, 2E students) resulted in construction of a “dissatisfied” social identity. Thus, in applying SIT to this study, the negotiation of an individual 2E-student identity was influenced by perceptions of group membership, with individual self-esteem being either enhanced or diminished by social constructions of group standings in a learning climate.

As a particular group’s social positioning influences capability in a setting, affiliation with an out-group has serious consequences for realisation of achievement. The findings of this study that indicate that 2E students are currently underrepresented in gifted and talented programmes due to a focus on learning difficulties (as discussed in Chapter 5) are therefore significant. This is because 2E students placed under such learning conditions come to be associated with, and thereby emulate as they identify with, an out-group of lower ability, rather than an in-group of high ability, echoing Tajfel and Turner’s (1979) SIT. The findings from the parent/caregiver narratives (also discussed in Chapter 5), referencing frustrations in trying to advocate for 2E children in a school system typically focused on learning deficits,
provide further evidence of this issue. Such findings concur with that of research by Schultz (2012) and Crim et al. (2008), who found that 2E students typically do not receive appropriate opportunities to develop learning capabilities due to a focus on provision for learning impairments. These conclusions speak to the need for 2E students to be included in appropriate enriched programmes of learning to help nurture and develop gifts and talents. Such an approach would help to enhance the negotiation of a positive student identity. Provision of such enriched learning opportunities would help to attend to not only cognitive and academic needs, but also the social and socio-emotional aspects of the schooling experiences of 2E students. These findings reflect those of researchers such as Baum and Novak (2010), Baum et al. (2014), and Foley-Nicpon et al. (2017).

As establishing positive social identity is important to psychosocial well-being, self-efficacy in the academic setting is impacted by perceptions of self-worth (Baum & Olenchak, 2002; Foley-Nicpon, Rickels, et al., 2012; Moon & Reis, 2004). A repeated focus on what 2E students can’t do, at the expense of a focus on what they can, impacts upon negotiation of identity, perceptions of capability and thus personal achievement. In this regard, the findings of this study showed that a lack of understanding about dual exceptionalities in unsupportive learning climates had significant impact upon not only individuals, but also the families of 2E students. Mothers were typically charged with advocating and providing extracurricular supports for their 2E children, requiring considerable investment of time, energy and often money. Many participants reflected upon the consequences that lack of social understanding of dual exceptionality had on learning in traditional schools. Developing informed social understandings about gifted students with learning difficulties, at all levels of the school system, was heralded by all participants as a necessary step toward better catering for 2E students. Inclusion in a supportive school system based on informed conceptions of dual exceptionality, thus emerged as a salient feature of the theory of conceptualising difference.
7.4 The Theory of Conceptualising Difference

Twice-exceptional students comprise the most “misjudged, misunderstood and neglected segment of the school population” (Barnard-Brak et al., 2015). As such, it is accepted that they typically underachieve for their potential, defined as an observed discrepancy between an individual’s actual capability and realised achievements (Assouline et al., 2010; B. Clark, 2002; Kalbfleisch, 2009, 2014; Reis et al., 2014; Reis & McCoach, 2000; Siegle & McCoach, 2009). This is either because their learning difficulties only are acknowledged, or neither exceptionality is identified (Barnard-Brak et al., 2015), to the detriment of provision for learning strengths. This is not an inclusive practice. As achievement on performance assessments typically guides provision in NZ schools, support for learning difficulties becomes the focus for intervention. However, recognising underachievement in 2E students is complex as it is multifaceted, complicated by the presence of area(s) of high ability alongside varying learning difficulties (Hands, 2011), resulting in uneven learning profiles.

Given that realisation of personal capabilities in an inclusive education setting is dependent on individuals being able to recognise and then capitalise on learning strengths, difficulties in establishing what underachievement in 2E students “looks like” is not only detrimental to the development of gifts and talents, but also to the successful negotiation of identity and capability. The following discussion introduces the theory of conceptualising difference and examines issues of inclusion and capability associated with its construction.

7.4.1 Challenges in conceptualising difference.

As shown by the findings of this study, current problems concerning educational inequities facing 2E students emanate from difficulties in conceptualising the construct itself. Studies by Baldwin, Baum, et al. (2015), Kalbfleisch (2004, 2009, 2014) and Moon and Reis (2004), demonstrate that lack of a shared vision and language, by which to meaningfully discuss and research the phenomenon of twice-exceptionality, underpin this issue. Therefore, a new
theory, the theory of conceptualising difference, is proposed here. It is argued that having a theory centred on exceptional learner difference, helps neurodiverse students to achieve to their potential in the school system. The theory is grounded upon a conception of the unification of exceptionalities, represented here by the term, *diff-capable*, rather than the use of language that suggests polarisation of learning strengths (gifts and talents) and difficulties (disabilities) as the prefixes, *dual* or *twice*, tend to do. The term *diff-capable* unites the two exceptionalities as one construct, with their combined influence being considered to effect, in multifarious ways relative to the conditions of a learning climate, the expression of an individual’s capabilities. This is seen in Figure 7.2 in which the current perception of learning strengths and weaknesses, positioned at extremes on a continuum, is contrasted with the re-conceptualisation of *diff-capabilities* utilising a Mobius loop.
Figure 7.2. Reconceptualising diff-capabilities.

Given that the personal characteristics of diff-capable individuals vary in nature and extent, it is the expression of these characteristics in response to features of the surrounding learning climate that emerge as significant in the process of negotiating identity and capability. As the personal traits of individuals are inherently part of who they are, conditions in the learning climate were explored to determine the manner in which the process of negotiating proceeds. In exploring conditions of a learning climate, it emerged that the way in which significant adults conceptualise diff-capable individuals is critical to issues of acceptance and inclusivity that influence negotiation of identity and capability. This, in turn, helps determine the capacity of diff-capable students to realise valued achievements. Conceptualisation of learning differences in different learning climates was therefore shown to underpin issues of equity in addressing learning needs. Section 6.5 demonstrated that the way in which dual exceptionality was conceptualised, provided the basis upon which decisions were made at the classroom, school and state levels, concerning policy and provisioning. In empowering learning climates (Table 6.3), conceptualisation of difference was envisaged as being inclusive of all learner diversities, with provision focused on opportunities to develop
learning strengths, and support for learning deficits occurring in response to need. However, in remediating or disabling learning climates (Table 6.3) either no acknowledgement of difference, or only recognition of learning impairment(s), occurred, which limited the capacity of the students to achieve to their potential. The findings showed these latter two climates to have serious academic, cognitive and socio-emotional/behavioural consequences for diff-capable students.

In sum, the findings showed that the ability of students to negotiate identity and capability is contingent upon conditions found in particular learning climates, which influence realised achievements. The nature of, and interactions between, personal characteristics and circumstances, help to determine learning outcomes, with these effects shown to be highly malleable by contextual conditions. This finding is in agreement with modern gifted theorists such as Kaufman and Sternberg (2008). The conceptualisation of diff-capable students in a learning climate set the conditions in which negotiations occur. Thus, negotiation of identity and capability in diff-capable students influences, and is influenced by, conceptions of learner difference. This is represented by the processes of imagining-self and categorising-self in the theory overview (Figure 5.1). Different ways in which “others” conceptualise learning differences provide the conditions for a range of potential outcomes for the process of negotiating identity that have significant consequences for individuals. The following model summarises these findings.
Figure 7.3. Conceptualising difference: The process of negotiating identity and capability in diff-capable students.

It is therefore argued that reconceptualising diff-capable students as having learning strengths first and foremost, promotes negotiation of positive identity to encourage realisation of capabilities and achievements in the school setting. In this way, such students are able to thrive, rather than just survive, the school system. This conclusion supports, and is supported by, findings of studies by researchers such as Baum and Novak (2010), Foley-Nicpon et al. (2017) and Ruban and Reis (2005). Provision of appropriate opportunities to enhance individual capabilities in a learning climate thus becomes a matter of social justice, centred on issues of equity and inclusion in the school setting.

7.4.2 Issues of inclusion in conceptualising difference.

Inclusivity is the standard approach to educating children in NZ schools. It requires schools to cater for learner diversities by employing teaching and learning strategies that
appropriately provide for all students to increase participation in the schooling process (Banks, 2008; Kearney et al., 2008; Selvaraj, 2016). The common finding in this research, of difficulties with identification of diff-capable children in the school system, presented challenges to appropriately including and providing for such students. Often the use of separate protocols to identify students as either gifted or having learning difficulties does not consider the interaction of one exceptionality with the other, and therefore fails to effectively detect diff-capable individuals (Reis et al., 2014; Trail, 2011). Difficulties with identification are complicated by various and vague understandings of the concept of dual exceptionality. Understandings about diff-capable students differed between and within the participating schools and raised socio-political and ethical concerns in regard to issues of equity in provision. These findings were in agreement with the conclusions of NZ studies by Riley and Bicknell (2013), Riley et al. (2004), and Tapper (2012), and international studies by researchers such as Krochak and Ryan (2007), Montgomery (2003), Ruban and Reis (2005), and Winebrenner (2003) concerning assessment, provision and inclusion of diff-capable students in schools.

In regard to identification, in this study, parents/caregivers typically initiated the process of obtaining a diagnosis for perceived disparities between performance and capability in children. Barriers to inclusion identified in this research therefore included socially constructed beliefs and/or stereotypes about the mutual exclusivity of gifts and talents and learning difficulties in individuals. As a result of such misconceptions, diff-capable students were typically not referred by schools for enrichment opportunities, a finding in keeping with research by Schultz (2012) and Trail (2011). This is despite the fact that studies have shown that when appropriate interventions for both areas of exceptionality are provided, there are beneficial effects, both academically and psychologically (Ruban & Reis, 2005).
Inclusion of students with learning exceptionalities in the school system is complicated by the assignation of education labels, a finding seen in Sections 5.2.2 and 5.3.2. Students identified as having learning difficulties (a common focus in NZ schools where labels are used to determine access to provision) are often denied the opportunity to become independent decision makers. This is because the assigning of a label that identifies a child as having a learning (dis)ability often has the effect of lowering achievement expectations. One of the examples of this, seen in this study, was that of student 07L, who, whilst having an IQ of 142, was identified on entry to school as having learning difficulties, which then became the focus for provision. A focus on learning impairments often leads to a denial of personal capability, which in this study was shown to have serious consequences for the negotiation of a positive student identity. These findings echo those of researchers such as Devecchi et al. (2014) and Taket et al. (2009) who conclude that labels confer social meanings that can act to marginalise, isolate and disenfranchise individuals or groups. The assignation of labels, especially those inferring (dis)ability, can thus predetermine social positioning and therefore capacity for action, which may act to demotivate individuals, as evidenced in the comments of students such as student 07C. Similar findings have been seen in research by J. Gallagher (1972), Bianco (2005), Bianco and Leech (2010), and Missett et al. (2016).

With respect to the effect labelling had on students in this study, the findings aligned with Lo’s (2014) GT study of the effect of labelling practices on twice-exceptional students. Lo (2014) found that when identified, 2E students construct an implicit theory of their dual labels structured on the “social context that carries an explicit theory about, and educational policies related to, the labels” (p. 286). Lo (2014) considers “the more an individual knows about him- or her-self, the more likely positive adjustments in behaviour will occur” (p. 287). In the current study, the student participants appeared to construct intrapersonal understandings about themselves and their capabilities in reflection of conditions found in
their surrounding learning climate. In this regard, the lack of apparent support for, and inclusive practices concerning, diff-capable students in remediating and disabling learning climates (discussed in Chapter 6), is concerning. The conditions found in these two learning climates are founded upon inadequate understandings about the construct of dual exceptionality, which have significant implications for diff-capable students negotiating identity, agency and capability.

The Pygmalion effect, where the expectations of others affect an individual’s behaviour, was also evidenced in this study. The majority of the diff-capable students reported not being included in learning-enrichment opportunities that they perceived would have helped support the development of area(s) of high ability. They considered this due to others' judgements of them as being learning (dis)abled, rather than co-currently gifted and talented. This finding concurs with that of other studies, by researchers including Davis et al. (2011) and Bianco (2005), that found that stereotyped perceptions about the nature and incidence of giftedness influence the willingness of teachers/SENCos to refer diff-capable students for enrichment programmes. Again, this reflects difficulties in conceptualising dual exceptionality as a construct. In this study, many of the diff-capable students rejected the perceived image of (dis)ability by acting out or removing themselves from unsupportive school climates. Some also reacted unconstructively by diminishing their academic achievements in domains of learning strength to match the lowered expectations of others.

The findings of this study also demonstrate that exclusionary practices that deny capability often occur, despite the provision of supportive documents (such as educational psychologist reports) that highlight individual learning needs. Failure to adequately consult and involve young people and their families in critical decisions regarding schooling results in feelings of marginalisation (Rose & Shevlin, 2004) in a system that is supposedly tasked with enhancing individual learning potential. Common behaviours exhibited by diff-capable students in this
study, as a result of a lack of understanding of learning needs, include: frustration; learned helplessness; lack of engagement with, and enthusiasm for, school; difficulties with organisational and social skills; and acute sensitivity, which impacted upon inclusion, and thus achievement, in the school context. Such findings are also referenced in studies by researchers such as Assouline et al. (2010); Moon and Reis (2004), Nielsen (2002); Townend et al. (2014), and Ruban and Reis (2005). This places diff-capable students at risk of developing negative perceptions of capability, affecting academic self-concept and psychosocial well-being (Barnard-Brak et al., 2015; Townend & Pendergast, 2015), especially if conditions in a learning climate reinforce disparities between capability and performance.

7.4.3 Conceptualising difference and the nature of relationships.

In regard to inclusion, the findings of this research showed that supportive relationships based on sound understandings of learning needs were critical to developing the academic capabilities and socio-emotional well-being of diff-capable students. This finding corresponds with those of a study by Wang and Neihart (2015) who found that the academic achievements of diff-capable students are influenced by the nature of relationships with others. These relationships influence, amongst other things, motivation and engagement, use of learning strategies, and academic self-efficacy, all of which impact upon realised achievements. In NZ, appropriate learning opportunities for gifted students have been found, in a study by Riley and Bicknell (2013), to be dependent on individual teachers or small teams within schools who are knowledgeable and committed to providing for gifted students, this being due to limited funding, resources and support.

The findings of this study show that teachers and SENCos were considered highly important supporters of the achievements of diff-capable students. In contrast, school counsellors were considered by fewer than 60% of respondents to be important supporters. School counsellors
are acknowledged in international research as having an important role in providing socio-emotional supports for diff-capable students, especially as regards building capacity in understanding the effects dual exceptionalities have on learning (Reis & Colbert, 2004). A study by Yssel et al. (2010) found that 61% of diff-capable students experience socio-emotional problems that affect their ability to achieve in the school context. In this study, some form of socio-emotional/behavioural difficulty was reported by the families of all of the diff-capable students who had experienced remediating or disabling learning at some stage during the schooling years. Behavioural idiosyncrasies, alongside learning asynchronies, can act to isolate and ultimately exclude diff-capable individuals in learning climates that are unsupportive of diff-capable individuals. Thus, consideration of the multiple dimensions of individuals (academic, cognitive and socio-emotional) was a significant finding, one that would help to ensure a sense of belonging within the school context.

Research by Newman (2004) has shown that ignoring the entirety of learning needs of diff-capable students has negative effects on the development of capabilities in the school setting, and life in general. In this regard, Reis and Ruban (2005) promote the use of multiple, flexible approaches to enhance capabilities, and thereby inclusion, including the provision of interventions for learning difficulties, talent-development opportunities and socio-emotional supports, based upon informed understandings about dual exceptionality. Studies by researchers such as Baum and Owen (2004), Baum et al. (2014) and Neihart (2008) thus encourage the use of comprehensive education plans for diff-capable students. Such plans facilitate understandings, and thereby relationships, between students, families and teachers/SENCos. However, the findings of this study indicate that IEPs are seldom developed for diff-capable students in NZ schools. This is concerning, because, as discussed in Chapter 2, research by Baum and Owen (2004) found that when education plans are implemented for diff-capable students, the students are better able to “emulate the social,
emotional, and academic characteristics of gifted students without disabilities rather than non-gifted students with learning disabilities” (p. 226). The conclusions of this research support the adoption of IEPs for diff-capable students to help ensure not only appropriate provision and evaluation, but also the promotion of supportive relationships in the school setting, in light of differences in learning need.

7.4.4 Conceptualising difference and social justice.

A socially just education system should afford opportunities to all individuals to enhance personal capabilities. As such, schools can be seen as settings that include “social context and relationships [that] can enlarge or constrain individual capabilities for education and in education; personal and relational differences set conditions for capabilities” (Walker & Unterhalter, 2007, p. 9). Adopting this perspective, personal differences refer to student attributes and dispositions such as exceptionalities and motivation, whereas relational differences include factors such as economic or social advantages afforded to groups. Such differences can become inequalities if human diversities are not celebrated by inclusion in a specific context (Terzi, 2005).

The findings of this study suggest that to enable diff-capable individuals to realise their capabilities in schools, a change in social arrangements to advance awareness of, and understandings about, dual-exceptional learning needs is required. This is a matter of social justice. As the nature and extent of relationships in a learning climate influence access to, and the availability of, appropriate education opportunities, the advancement of specific policies that direct understandings about, and provision for, diff-capable students, is critical to empowerment. These findings are consistent with those of studies by Bianco (2005) and Rowan and Townend (2016), who found that teachers often felt unprepared to teach students with learning diversities. As such, specific policies for diff-capable students need to be developed, to establish a definition, funding, goals and objectives, alongside programmes of
 provision, professional learning, and systems of evaluation to ensure accountability (Long et al., 2015).

In this research, various perspectives were sought to develop understandings about how best to assist schools in developing effective practices for identifying and providing for diff-capable students. The findings of Chapters 5 and 6 showed that all the participants considered there was an urgent need for MoE intervention and guidance with respect to appropriate provision for diff-capable students in NZ schools. The development of specialised methods of assessment for dual exceptionalities, alongside appropriate funding and provisioning for individuals, was called for, so that individual capabilities could be enhanced to promote the development of positive student identity, achievement and personal well-being. These findings aligned with the guidelines for promoting inclusive practices in schools provided by the National Twice-Exceptional Community of Practice (2014) discussed in Chapter 1.

7.4.5 Conceptualising difference and issues of identity and inclusion.

In the school context, access to knowledge and opportunities to expand individual capabilities is vital to the development of personal agency so that individuals can pursue valued goals in life. Researchers such as Watts and Bridges (2006) and Sturgess (2011) argue that self-reflexive identification and self-understanding are key factors critical to debates on accessibility in education, as they influence the development of learner identities, which are grounded in wider social discourses. Social conceptions of learner difference, including acceptance of diversity and positioning in a society, inform individual beliefs about ability, performance and well-being, infusing ideas about who individuals are as beings (Nussbaum, 2000).

Watts and Bridges (2006) propose three types of social positioning, these being: individuals or groups who are initiated into society by their families or by possessing accepted and
valued skills and knowledge of society; those who aspire to be included; and those classified as outsiders, who do not possess valued knowledge and skills to achieve and fully participate in society. The outsiders and those aspirant to inclusion, which includes many diff-capable students, perceive their lack of academic and social suitability and success as segregating and isolating (Watts & Bridges, 2006). This affects development of positive identity and negatively impacts future aspirations and life-plans. As these individuals progress through the school system, they often come to view the distance between what they hope to achieve and the barriers to achievement, as insurmountable. This leads them to contemplate alternative paths that may direct them away from traditional academic routes. These students require assistance to help with the expansion of their capabilities, so that they have the opportunity to pursue valued outcomes. This requires re-thinking of traditional schooling arrangements to be more understanding and inclusive of the learning needs of diff-capable students.

The concept of inclusive education has been assimilated, almost without question, into rhetoric concerning education practice for individuals with special learning needs (Norwich, 2000). However, the adoption of inclusion as an axiomatic premise raises pedagogical concerns regarding foundational ideologies and conceptions of inclusion in NZ schools. Inclusion, like equality or justice, is an abstract concept and therefore “cannot be simply applied to the many areas and contexts of teaching and learning...this is because, like equality, there are different aspects and features of what is meant by inclusion and inclusiveness” (Norwich, 2000, p. 9). Inclusion is multidimensional and often associated with debates on individual rights and responsibilities, as well as issues of social justice and provision. However, there are different conceptions of, and ongoing debates about, what educational inclusion means. Whilst one interpretation might focus on physical location and sameness in curriculum provision, via promotion of social acceptance of diversity and integration/assimilation into traditional learning environments, others focus on provision of a
“continuum of support and services to match the continuum of special needs in every school” (UNESCO, 1994, p. 61). In this latter conception, there is a “right to participate and a right to respect, [but] there is also an implied right to individually relevant learning” (Norwich, 2000, p. 10) reflecting the responsibility of schools to be flexibly responsive to diverse learners needs. Thus, researchers such as Norwich argue that whilst there has been increased discussion concerning inclusive education practice, this has not yet fully translated to shared understandings in meaning.

Schools require information and direction regarding individual rights and school responsibilities with respect to the learning needs of diff-capable students. Such understandings are based in a shared conception of diff-capable-learner difference. There is increasing pressure on schools to be held accountable for both educational practices and learning outcomes for students (Lee et al., 2004). Neoliberal policies and increased marketing of schools (now run like businesses) generate concerns that there is less tolerance for diversity than before, especially for students with complex learning needs (Norwich, 2000; O’Neill & Nash, 2005). This has been complicated by the introduction of mainstreaming students with special needs, which addresses locational aspects of inclusion, without considering wider problems of managing appropriate provision (Norwich, 2000). The situation is further complicated by the fact that special-needs and gifted and talented education are generally considered as separate entities, with little research or shared dialogue connecting the two domains (Evans, 2000).

A recent study by Selvaraj (2016) of inclusion in NZ secondary schools found that, following desegregation of education for students with special learning needs, inclusion has been approached from the perspective of how students would fit into schools, rather than considering how schools might adapt processes and procedures to better accommodate exceptional students. Selvaraj (2016) notes contradictions in providing inclusive education
whilst also separately acknowledging special-education needs. Problems in conceptualising key differences between educational equality (sameness in provision) and equity (just provision in consideration of personal or social circumstances; Cochran-Smith et al., 2016) compound issues of inclusion, and influence perceptions of capability and access to appropriate learning opportunities. Despite the recent MoE _Statement of Intent 2014–2018_ that promotes inclusive education practice in schools, Selvaraj’s (2016) findings show that the mechanism of distribution of resources for special-education needs is unclear to stakeholders. This is because various interpretations of, and commitments to, the practice of inclusion exist in NZ schools. This is especially concerning when considering the combined influence of school boards of governance, the local community, and the diverse beliefs and attitudes of teachers charged with implementing inclusive policies in the classroom.

The findings of the current study reveal that pedagogical concerns, such as the level of knowledge and skill (based upon informed conceptions of difference) required to address the needs of diff-capable students, help determine the nature and extent of inclusion within a learning climate. Issues of resourcing, including differentiation of curriculum to more appropriately address learning needs, and changes to assessment protocols to allow for expression of capability, were commented upon by all participants, as discussed in Chapter 5. School organisation and management (including decisions about, and the availability of, PLD), classroom supports (such as teacher aides, access to counsellors and educational psychologists), alongside ITE programmes, were all remarked upon as requiring change. This is so that teachers/SENCos can be better informed about learning differences, to better assist diff-capable students in realising their potential to achieve. Such transformative change needs to address _how_ children learn in the first instance. Such knowledge importantly includes understanding basic neuro-biological processes involved in learning, so that weaknesses in skills such as executive functioning, reading etc., can be recognised and addressed in schools,
and understandings about the nature of giftedness can be developed. The need for more effective professional learning for teachers at both the pre- and in-service levels concerning giftedness echoes the findings of studies by NZ researchers such as Bevan-Brown (2006), Bicknell (2009), Delaune and Tapper (2015), Munn (2016), Newton (2009), Sturgess (2011) and Tapper and Riley (2015).

Parents/caregivers, as well as teachers/SENCos, participating in this study called for more family involvement in decisions regarding change. Study participants also noted the potential for external agencies, such as the Dyslexia Foundation and Autism New Zealand, as well as specialists in gifted education, to be included in developing appropriate programmes for diff-capable students. A new approach to the education of diff-capable individuals was thus called for within the narratives of all the participants, as evidenced in the findings in Chapter 5 and 6. This approach is one where learning strengths are highlighted first and foremost, but in acknowledgement of area(s) of learning impairment. Such an approach is based on informed conceptions of diff-capable-student difference.

7.4.6 Conceptualising difference and the capability approach.

The capability approach (discussed in Chapter 3), provides a framework upon which to theorise about fundamental issues facing diff-capable learners. It acknowledges the vastness of human diversity that exists, and, as regards education, argues for inclusion of all students in schools, so that they are afforded freedom of opportunity to pursue valued outcomes. The following discussion connects literature based upon the capability approach, to the theory of conceptualising difference.

Within a capability approach framework, individual exceptionalities are considered as part of the spectrum of human diversity that exists, and as a component of the metric used for the assessment of well-being (Terzi, 2008). Equally important is the ability of all people to
actively participate and be heard in political discussions about the design of social policies aimed, amongst other things, at inclusion (Terzi, 2008). The centrality of the concept of diversity promotes an egalitarian positioning of exceptionalities on a human continuum. This approach helps to ensure that individuals with special learning needs are included, rather than excluded, in the education system. In considering issues of learner diversity in this way, the capability approach allows individual and social factors to be considered in interplay, overcoming either/or arguments of causality, and therefore responsibility, for provision. Causality is, rather, reconsidered in terms of the role it has in regard to impairment, and on the exercise of freedoms to achieve valued beings and doings (Terzi, 2008). The capability approach provides a basis on which, in a multidimensional and relational way, to consider special-education needs in terms of social justice, that is sensitive to, and reflective of, the complexity of human diversity and social arrangements that exist. As the findings of this research established the effect of the connection between individual learner diversities and the surrounding learning climate on the expression of achievement, the capability approach was considered as an appropriate framework through which to examine issues concerning the education of students with diff-capabilities in NZ schools. In adopting this approach, the conceptualisation of learner difference thus becomes an issue of equity in education practice, rather than a separate consideration of special need and provision.

Currently, school systems and arrangements are governed by conflicting aims to either treat all learners the same, or to cater for individual needs and thereby differentiate. This dilemma of difference captures the problem of identifying and classifying students with special-education needs and determining how best to distribute limited resources to meet the education entitlements of all students (Terzi, 2008). The debate, as previously discussed in Chapter 3, is grounded upon opposing medical (individual) and sociological (social model) perspectives found in studies of disability and special needs. However, this polar positioning
is an artificial construct, as individual and social elements are necessarily intertwined. They
cannot, therefore, be held accountable as sole causal factors but must be viewed in entirety as
an evaluative set, relative to one another. Difficulties in defining the nature of the relationship
between individual and social factors are based upon difficulties in conceptualising diff-
capabilities as a construct. This results in widespread inequalities in provision, especially in
terms of recognition and resourcing. For example, the findings of this study show that diff-
capable students, parents/caregivers and teachers/SENCos all have difficulties in recognising
and understanding the implications being diff-capable has for learning in schools. This is in
part due to current societal beliefs about the apparent paradox of gifts and talents coexisting
alongside areas of learning difficulty in individuals.

Such misconceptions are complicated by the nature and extent of the heterogeneities in
learning strengths and difficulties that arise in individuals, the expression of which are
influenced by conditions of the surrounding learning climate. Vagaries in defining diff-
capabilities at the state level, with differences in characterising and providing for diff-capable
students at the local level of schools, further complicate recognition and appropriate
provision. Subsequent differences in approach to conceptualising diff-capabilities in schools
create disparities in accommodating diverse learning needs. This is especially true of
inclusion in specialist-enrichment programmes or learning opportunities to cater for learning
strengths. A state focus on learning difficulties, rather than on learning capabilities, typically
results in the underachievement of diff-capable students in NZ schools. This is shown to have
serious and potentially life-long consequences for the negotiation of a positive identity and
perceptions of capability in diff-capable individuals. Thus, the complex interplay between
individual and social factors on the ability of diff-capable students to achieve in NZ schools
is evidenced in the findings of this research.
At the state political level, consideration of the theoretical ideal of treating all individuals the same (equally) presents a dilemma in addressing the individual needs of students. By reconsidering this problem in terms of the opportunities available to individuals to achieve well-being, as seen in the capability approach, the issue becomes one of a matter of social justice. Since learning difficulties and remediating/disabling learning climates have immediate (for example, motivation and engagement) and future (life opportunities) implications (Sen, 1992), addressing the complex learning needs of individuals who have gifts and talents alongside learning difficulties becomes important for equitable provisioning for needs. The effects of the dominant sociocultural operating arrangements on individuals who operate outside of social norms, especially in respect to recognising, identifying, evaluating and providing for exceptional learning needs, must therefore be acknowledged. The capability approach provides a conceptual basis on which to address current substantial and pervasive inequalities in schooling arrangements, as it allows the relational aspects of the debate concerning the dilemma of difference to be considered alongside the political aspects of social justice (Terzi, 2008). In applying this framework to this research, diff-capable students would be afforded appropriate opportunities to participate in learning opportunities designed to strengthen area(s) of gift and talent, alongside provision for learning impairment as a matter of social justice. Individual differentiation for learning needs thus becomes standard operating procedure, rather than a special provision. Again, this is based on a conception of learner difference that views learning exceptionalities as part of the continuum of human diversity.

The dilemma of difference with respect to education is addressed within the capability approach via the re-conceptualisation of learner exceptionalities in terms of functionings and capabilities. Functionings are defined as what individuals are able to realise as achievements in a context, whilst capabilities are the opportunities/ability to achieve desired functionings
(Watts & Bridges, 2006). These terms help to reveal the difference between outcome and potential. As seen by the findings in Chapter 5, currently, schools typically focus on functionings (outcomes) to assess individuals for eligibility to partake in specialist learning opportunities; however, this does not provide all the information needed to determine whether outcomes are equitably achieved (Sen, 1992). A focus on achievement in standard assessments of learning does not reveal the conditions (or capability sets) of individual students. This is an important consideration for diff-capable individuals who are affected in various ways by learning exceptionalities in performance of tasks. Thus, adopting a sameness in approach to identification and provision for such students is inequitable, as it acts to disadvantage and exclude neurodiverse individuals (Walker & Unterhalter, 2007).

In the capability approach, a restriction in an individual’s ability to realise achievements caused by a (dis)ability narrows the entire set of possible outcomes (functionings) accessible to that individual, and thereby restricts their available range of capabilities (Terzi, 2008). This narrowing is considered relational in nature, as it includes both individual characteristics and contextual arrangements. It therefore represents a vertical inequality, as it affects future capabilities (Terzi, 2008). However, if individuals with special-education needs are reconceptualised in terms of their full potential and ability to realise outcomes in light of their different ways of being, then appropriate provision would be a matter of social justice, rather than occurring by happenstance, as often evidenced in the findings in Chapter 5. This is because recognition and provision for diff-capabilities would not be grounded in predetermined social ideals of normality (Terzi, 2008). For example, dyslexia is an individual trait that affects the achievement of basic functionings, like reading and writing, thus impacting on future capabilities. This condition constitutes a learning difficulty for an individual in the schooling system, where literacy skills are paramount. If no school accommodations are provided, the individual's ability to achieve is restricted because of the
impact of the dyslexia on learning, resulting in a (dis)ability in this context. This means that the individual is limited in their capability or potential, especially if coexistent gifts and talents are unattended to.

Adopting a capability approach thus affords opportunity for analysis of the relational aspects of an individual’s specific learning needs and the conditions of a learning climate. This occurs alongside an assessment of the ability of individuals to convert specific resources into functionings, to realise achievement in that setting. This is important, as individuals convert resources into achievements in different ways, which vary in effectiveness. Thus, in adopting this approach, analysis of opportunities and achievements is not focused solely on cause, but, rather, consideration is given equally to all factors, both individual and contextual, in the analysis metric (Terzi, 2008). By adopting a capability approach, school systems can be evaluated to see how they facilitate and/or produce barriers to the achievement of diff-capable students in consideration of their atypical ways of being. Changes to the design of school curricula, and the development of specific teaching and learning pedagogies to enhance the opportunities available to diff-capable students, can therefore be better investigated by employing a capability framework.

In considering the critical role that schooling plays in expanding the life prospects of individuals, the provision of additional, differentiated learning resources for diff-capable students is justified by the capability approach. These resources require tailoring to the specific requirements of individuals, as it is not what they are provided with, but rather what they are able to do with them (representing efficiency in conversion of resources), that makes the difference in enhancing personal capability. This is why the voices of diff-capable students must be heard in decision making designed to address schooling concerns. Current limited resourcing arrangements in NZ schools tend not to account for the multitude of human learning diversities that exist, and thus schools typically do not consider
heterogeneities in assessing relative advantage or disadvantage in their school systems. The
capability approach considers both the design of institutional arrangements, as well as
individual diversities, in assessing the capabilities and well-being of individuals in society. It
therefore provides a wider informational basis on which to critique issues of social justice
and equitable education provision for students with diff-capabilities.

7.4.7 Conceptualising difference and relational inclusion.

As an alternative to current education practices that often fail to consider the full range of
children’s capabilities, Dalkilic and Vadeboncoeur (2016) propose a model of relational
inclusion grounded upon the capability approach, necessary to promote well-being and
agency via the “development of equitable education practices” (p. 8). The model is founded
upon five core principles relevant to inclusion in the context of schools: context- and culture-
responsive inclusive practices, holistic child-focused inclusive pedagogy, inclusion as a
spectrum of practices, inclusion as increasing participation in democratic classrooms and
societies, and relational ontological practices (Dalkilic & Vadeboncoeur, 2016). The first two
principles emphasise the need for empathetic and respectful relationships between all
stakeholders, built upon sound and specific understandings of individual diversities to ensure
appropriate provision. These principles accord with the findings of this research, which found
the centrality of the nature of relationships established in a learning climate to be influential
to the process of negotiating identity and capability. Dalkilic and Vadeboncoeur state that the
aim of relational inclusion in this regard is to remain “mindful of the culture and context in
determining which practices will expand on the capabilities of children for them to obtain
valued functionings” (p. 9).

Dalkilic and Vadeboncoeur’s third principle argues that the promotion of a spectrum of
inclusive practices moves away from unhelpful polar arguments of inclusive/exclusive
methods, or typical vs atypical children, to reframe these on a continuum. This need was
echoed in the findings of this study, in which learning strengths and difficulties are considered unified, requiring new approaches to evaluation and provision to address issues of inclusion. Dalkilic and Vadeboncoeur consider that decisions concerning provision should be based on a holistic evaluation of how systems either facilitate or present barriers to the realisation of valued achievements under set conditions, which include recognition of individual functionings. When this principle is applied in this research, diff-capable students are accepted as requiring individual assessment for learning needs to determine the nature and extent of unified learning strengths and weaknesses. Assessment would help ensure the provision of a range of appropriate learning opportunities to promote valued achievements in the school setting. For example, gifted students with heightened sensory sensibilities would benefit from provision of a “sensory-space” to which they can retreat if the social demands of schooling become overwhelming. Within this space they might access resources that enable them to pursue valued functionings and thus enhance their learning. Such a space may also benefit many neurotypical students at various times. School systems and arrangements therefore need to be examined to promote inclusion via the establishment of a spectrum of practices that help ensure equity in provision for students with learning diversities.

Dalkilic & Vadeboncoeur’s fourth principle states that inclusion in democratic classrooms that promote increasing social participation and value diversity in the capabilities of individuals, opposes practices that negate children’s personal attributes in favour of compliance and sameness. This is a principle that resonates with the findings of this research. Celebration of learner difference should be promoted in schools to enhance the personal well-being of all students. This is a significant goal, and one worthy of pursuing given the number of innovative contributions to the world made by individuals now considered to be diff-capable, including Albert Einstein, Leonardo da Vinci and George Washington. Celebrating diversity is important, especially in light of the recent findings of UNICEF’s *Innocenti*
Report (2017) that highlights NZ’s high rate of youth suicide, a reflection of the well-being of our children. The World Health Organisation (WHO; 2014) identifies key risk factors for suicide. These include: societal factors, especially stigma around mental health differences; local community factors, such as discrimination against specific groups; relationship difficulties, including isolation; and individual factors, including personal characteristics and dispositions. These factors have all been raised in discussion of the findings of this study (Chapters 5 and 6), suggesting that diff-capable individuals are at higher risk in this regard.

The final principle of the model of relational inclusion represents the foundation upon which the four other principles are grounded, proposing that current education practices based on individualism are exclusionary and therefore inequitable. Dalkilic and Vadeboncoeur (2016) therefore argue for the adoption of relational practices that involve co-construction of teaching and learning opportunities between student, family, and educator, to enhance individual capability, agency and well-being. This principle was also echoed within the findings of this research, in Section 6.3.1, which discusses the importance of personalising learning experiences in consultation with families, in relation to empowering learning climates. A focus on capability and achievement was reported by all research participants at schools identified as becoming empowering. Whilst the responses of teachers/SENCos from the participating schools revealed that they considered co-construction of teaching–learning experiences as an ideal way to nurture supportive teaching–learning relationships, they reported that pedagogical constraints create barriers. These barriers included the organisation and management of schools (especially at the secondary-school level), time constraints brought on by high-stakes assessments of learning, and limited access to expert knowledge and resources to effectively attend to learning diversities. These findings were discussed in Section 5.3. Underpinning these challenges at all levels of schooling, and in consideration of
all spheres of influence, was the issue of conceptualising difference that emerged from analysis of the findings in Chapter 6.

Adoption of the principles of relational inclusion necessitate changes to current education practices. Such transformational change is necessary to extend understandings about capability in consideration of the combined effects of individual characteristics and circumstances, and the conditions of a learning climate. The findings of this study indicate that such changes need to be directed by legislation that promotes greater understandings about, and strength-based approaches to, the education of diff-capable students. As such, a new capability learning climate is proposed, developed upon findings of studies by researchers such as Baum et al. (2014) who examine critical elements needed to create supportive learning environments for diff-capable students, and discussed in Section 7.5.

7.5 Conceptualising Difference in a Capability Learning Climate

In consideration of the discussion detailed above, Table 7.1 presents an overview of the characteristics of a capability learning climate constructed in reflection on the findings of this research. Within this learning climate, it is envisaged that the development of learning strengths, and thereby learning achievements, would be promoted. The conditions within the capability learning climate are founded upon the re-conceptualisation of diff-capable students as having unified learning exceptionalities. It is argued that the development of a capability learning climate would help optimise conditions for the successful negotiation of diff-capable student identity, agency and capability in schools, thus enhancing the development of personal well-being. Table 7.1 outlines the conceptualisation of diff-capability in the education arena, alongside appropriate school provision and subsequent realised achievements, as envisaged in a capability learning climate.
Table 7.1

**Theory of Conceptualising Difference: Characteristics of a Capability Learning Climate**

<table>
<thead>
<tr>
<th>Conceptualisation of Diff-Capable Students</th>
<th>School Provision</th>
<th>Realisation of Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus on capabilities (using the unified model of conceptualising difference) that considers what the students are capable of being and doing, provided appropriate learning opportunities are made available. 2E student voice is central in this conceptualisation.</td>
<td>Based on a re-conceptualisation of learner difference as a unified construct. Understanding is that diff-capabilities typically lead to significant learning asynchronies that result from the fluid movement (ebb and flow) of exceptionalities together.</td>
<td>Recognised as developing in response to an ebb and flow of diff-capabilities relative to the conditions found within a learning setting. Features of a setting include: subject/topic, teacher relationships, support networks, self-understanding, personal cognitive factors and learning dispositions.</td>
</tr>
</tbody>
</table>

Such opportunities include:

- Specialist assessment by experienced experts to inform understandings and provision for individual learning needs.
- Development of specific policies and procedures at state level (guided by NZ-based research) to help inform schools and policies/procedures. This would help schools in developing appropriate teaching–learning practices for diff-capable learners. School registers need to be established and shared with MoE so that diff-capable students can be researched to better understand their academic, cognitive and socio-emotional needs.
- Inclusion of specialist course in education for pre- and in-service teachers/SENCos to inform teaching practice.
- Establishment of specialist teams (experts-in-schools) to guide appropriate provisioning and the development of IEPs, register etc.
- Appropriation of resources at state level to address diff-capable-student needs as a priority learner group in schools. Includes financial, technological, material and social resources.

Provision based upon:

- NZ-based research in NZ schools.
- Specialist assessment that directs the provision of appropriate learning opportunities in consideration of learning strengths (first and foremost) and the fluid relationship between diff-capabilities.
- Development of specific school policies and procedures for diff-capable students in recognition of their unique, complex learning needs.
- Alternative modes of presenting content, process and product in learning employed to promote individual achievements.
- IEP development for every diff-capable student. Needed to guide, develop and evaluate success of academic programmes. Includes consideration of socio-emotional/behavioural and cognitive differences alongside academics.
- Development of specialised teams (in learning hubs) to support diff-capable students as diff-capable students (not as low-ability or neurotypical-gifted). Require specialised approach to teaching and learning that includes specialist teachers, counsellors, and senior management/leadership at schools.

Achievement of diff-capable students optimised in conditions where provision is directed by specific policies/procedures that recognise diff-capable students as gifted individuals first and foremost, whilst also acknowledging impairment(s) that impact upon expression of learning strengths. It is acknowledged that individuals achieve different learning outcomes even when provided the same resources. Thus, adopting a capability approach to schooling helps establish conditions under which diff-capable students have greater capacity to succeed if the focus for learning is placed on opportunities or freedoms to pursue valued goals (selected from within domains of learning strength), rather than provision of (limited) resources or the evaluation of learner outcomes. Such an approach helps to attend to matters of equity and social justice in the NZ education system, which is responsible for the development of every students’ learning potential (NZC document).
7.6 Concluding Comments

This chapter began by reviewing the research issue, aim and objectives, and locating the findings relating to the process of negotiating diff-capable-student identity and capability in a learning climate. The theory of conceptualising difference was then introduced and discussed alongside literature based on the framework of the capability approach. Whilst the capability approach does not provide a full theory of educational justice, it does assist in theorising about fundamental egalitarian issues facing learners with special-education needs. These issues include the right to equitable educational opportunities as needed for the “formation and expansion of other capabilities,” including the development of a positive student identity and personal agency (Terzi, 2008, p. 145), both of which are required to promote full participation in the school setting. Dalkilic and Vadeboncoeur’s (2016) model of relational inclusion, grounded upon the capability approach, was then discussed with respect to its applicability in addressing the learning needs of diff-capable students in the NZ setting.

Characteristics of a capability learning climate were then proposed, within which it is envisaged that the successful negotiation of 2E-student identity, and perceptions of capability, would be promoted to help realise academic achievements and personal well-being.

This chapter argued that education systems and arrangements should be designed so that they provide equitable entitlements and considerations to all students. Whilst there is little debate about social injustices that arise from socioeconomic, cultural or gender differences, equalisation of disparities that arise from differences in individual abilities (including gifts and talents and/or learning impairments) are inherently problematic, and therefore controversial (Terzi, 2008). However, by bringing the issue of academic underachievement, and the contributing challenges facing diff-capable students in NZ schools, to the fore in this research, it is hoped that more equitable provisioning can be established moving forward.
Transformational changes in the approach to the education of diff-capable students must be grounded upon shared, informed conceptions of diff-capable-student difference. As such, the findings of this study have important implications for future research, policy development and professional learning arrangements at both the pre- and in-service levels. Each of these aspects will be discussed in Chapter 8, Conclusions.
Chapter 8: Conclusions, Limitations and Recommendations

This thesis began with a review of the literature pertaining to the phenomenon of underachievement of gifted students with learning difficulties in the NZ school system. The aim of this research was to examine why diff-capable students currently underachieve, whilst the underlying concern was that the NZ school system is currently inequitable in its approach to addressing the learning needs of such students. Consequently, the theory of conceptualising difference was constructed to help explain the phenomenon of underachievement in diff-capable students in NZ schools. This concluding chapter presents a summary of the thesis and its limitations, as well as a case for transformational change in the schooling of diff-capable students. The capability approach and relational inclusion are reviewed with respect to their applicability to addressing such change in schools. Recommendations for further research based on these findings are then examined.

8.1 Thesis Summary

The aim of this research was to develop an explanatory theory concerning the almost paradoxical phenomenon of the underachievement of gifted students with learning difficulties. As discussed in Chapter 1, the thesis arose from observed disparities between achievement in performance and the actual potential of this group of highly capable students in NZ schools. A search of the existing literature (Chapter 2) showed that whilst there are increasing numbers of international studies concerning this phenomenon, in NZ there is currently very little original, empirical research concerning diff-capable students. This study was thus designed to help address this issue. A constructivist grounded theory (GT; Charmaz, 2006) approach was subsequently employed to assist in developing nascent theory. Whilst conducting a literature search is often frowned upon by grounded theorists, it was useful in
this study, to examine where current gaps in the literature lay in regard to this field. The research was therefore original in its application of a GT approach to research the underachievement of diff-capable students in the NZ setting.

Early exploration of the collated data drew attention to issues of diff-capable-student identity and capability in different learning climates that influenced achievements. Learning climates in this study are defined as comprising both the characteristics and circumstances of individuals, and the contextual conditions of their surrounding environment. Both individual and contextual factors in interplay were found to influence the negotiation of identity, and perceptions of capability, to realise personal achievements. A focus question was thus devised: How do twice-exceptional students negotiate identity and capability within the New Zealand school system? Four sub-questions further supported and directed the investigation:

1. How do twice-exceptional students become aware of, and negotiate their own understandings about learning differences?
2. How do parents/caregivers of twice-exceptional children come to recognise, become knowledgeable about, and seek appropriate provision for their children’s schooling needs?
3. How do NZ schools currently support twice-exceptional students in learning?
4. How does the nature and extent of the support offered to twice-exceptional students in NZ schools influence the negotiation of student identity and capability?

The ability of diff-capable students to successfully negotiate identity and capability relative to the conditions of a learning climate, therefore became the core category under investigation in the development of the theory of conceptualising difference. Two properties involved in negotiating identity and capability emerged in analysis, these being the dual processes of imagining-self and categorising-self relative to others. The interplay between these dual processes was shown to influence the construction of a social identity. As shown
in Chapter 1, the negotiation of social identity is complex and heavily influenced by socio-political constructions of difference by a society. Literature from identity theorists connects the success of negotiating social identity to attainment in achievement and fulfilment of personal well-being in a setting. Chapter 2’s exploration of the literature thus focused on studies of issues of diff-capable-student underachievement, identity, capability and inclusion in schools.

The study was further directed by the realisation that difficulties with conceptualising diff-capable students in schools and wider society underpins issues of identity, capability and inclusion, which present barriers to realised achievement. The need to seek justice for diff-capable students in a system that purports to be supportive of developing every individual’s learning potential, subsequently inspired the development of a model to help re-conceptualise, and thus promote, full participatory inclusion of diff-capable learners in NZ schools. This model is based upon a conception of learner difference that celebrates diversity by focusing first and foremost on areas of gift and talent, rather than learning difficulties. This strengths-based approach is in keeping with the findings of studies by researchers such as Baum and Novak (2010), Foley-Nicpon et al. (2017), and Ruban and Reis (2005).

The theory of conceptualising difference was thus founded upon the framework of the capability approach (as discussed in Chapter 3) that examines what individuals are able to be, and able to do, within the constraints of operating social arrangements. The capability approach earned its way into the thesis as it provides a conceptual normative framework for the assessment of individual well-being, the design of social policies and the analysis of social change proposals (Sen, 1985, 1992). The analysis of opportunities or freedoms to achieve well-being allows for evaluation of not only personal circumstances, but also socially constructed and reproduced norms that impact upon the capacity of marginalised groups, such as diff-capable students, to realise their potential in a social setting. The connection
between the current underachievement of diff-capable students and schools as organisations of the state, was therefore better able to be examined by employing a capability approach. As the personal learning characteristics of individuals are founded in biological basements (Gagné, 2013) that are accepted as immutable, but malleable, by features of the surrounding environment, the phenomenon of underachievement was explored in light of the reality of limited possibilities in existing social arrangements in schools for diff-capable students (Watts & Bridges, 2006). As such, the need for more equitable provisioning in reflection of the unique combination of learning strengths and weaknesses was argued as necessary to address issues of social justice in the education of diff-capable students.

The research gathered multiple perspectives in the education of diff-capable students to provide a wide informational base upon which the explanatory theory was grounded. As discussed in Chapter 4, it employed a constructivist GT (Charmaz, 2006) to explore perceived barriers and facilitators to the achievement of diff-capable students in the participating schools. Constructivist GT is based upon a relativist ontological position from which reality is perceived through the discourses and actions of its constituent members (Charmaz, 2006). Reality is, therefore, perceived as subjective, being a fluid concept that is constantly renegotiated by individuals and society. In this study, a critical realist ontological stance was assumed, which acknowledges that a pre-social (located behind socially influenced and, therefore, subjective) reality exists, but that it is only ever partially accessible to researchers (Braun & Clarke, 2013). This stance provided a platform from which to explore and challenge underlying social structures that help to determine individual capabilities. It thus supported the claim made that differentiated learning opportunities are required by, and justified for, diff-capable individuals, to help them realise their considerable learning potential. Epistemological concerns were addressed from a constructivist perspective. Constructivists challenge the notion that knowledge is an objective reflection of
reality, rather considering that knowledge is generated through the process of research, influenced by surrounding discourses and socially constructed systems of meaning, which are subject to change (Braun & Clarke, 2013). This meant that a critical approach was taken to data analysis, in reflection of the multiple interpretations of the truth that exist.

Chapter 4 also detailed research methods and included a discussion of the embedded mixed-methods approach employed in this study. This involved the initial collection of quantitative data, which was then used to support the qualitative findings that provided the framework for the study. Methods of data creation were outlined, including the selection of the study sample and participants, as well as the forms of data used for analysis. As a GT approach had been selected, the constructivist GT process was explained, followed by a discussion of issues of trustworthiness, credibility and transferability of the findings.

Chapters 5 and 6 examined the findings of the study. Chapter 5 explored early analysis of the data and the construction of the subsidiary categories of understanding-self, accepting differences and managing climates that emerged from the coding of the transcripts, and school documents, and the statistical analysis of the questionnaires. The relationships constructed between the subsidiary categories at the end of this chapter led to the development of the core concepts of diff-capable student identity and capability within the setting of the NZ school system. Memoing throughout data collection and analysis allowed for further development of these concepts via abstraction of the data. The process of negotiating identity and capability was therefore determined to be related to the nature and extent of understandings about diff-capabilities. Such understandings were both personal and social in construction and influenced the ability of diff-capable students to realise their capabilities, and, thereby, achieve to their potential in schools.
Chapter 6 further developed the core category of negotiating student identity and capability from the findings of Chapter 5. The emergence of the concept of an active process of negotiating was a critical juncture in the construction of the explanatory theory. Two distinct features of the process of negotiating emerged: an internal process of imagining-self particular to each of the twice-exceptional participants, and a socially referenced process of categorising-self. The result of the interplay between these two processes gave rise to the development of a social identity. Different learning settings in which the process of negotiating occurred were investigated.

The nature and influence of different settings were consequently developed in Chapter 6 to become “learning climates.” Learning climates captured the actions and effects not only of the school setting, but also factors outside of this locale, including the home supports and socio-political factors. Whilst, in theory, a multitude of different learning climates exist, in this research three distinct climates were identified, these being empowering, remediating or disabling of the development of diff-capable student identity and capability. A common underlying feature, conceptions of learner difference, that underpinned recognition and provision for students with diff-capabilities, emerged in analysis of these learning climates.

The explanatory theory of conceptualising difference thus emerged from investigation of intervening conditions that influenced the phenomenon of diff-capable student underachievement in NZ schools. A new model was proposed in Chapter 7 (Figure 7.3), based upon the unique properties of a Mobius form, that helps circumvent problems arising from the current polar positioning of gifts and learning difficulties on a continuum. This served as a visual reference by which to imagine the learning differences of diff-capable students as a unified construct. It is argued that it is only in this way that transformative change in the approach to teaching diff-capable students can occur. Transformative change importantly includes teacher and SENCo education concerning the neurobiological
mechanisms and pathways to learning. Without such knowledge, teachers/SENCos are ill-prepared to recognise and provide learning accommodations for combined area(s) of gift and talent and learning impairment, in diff-capable students. This was evidenced in analysis of the findings of this study. Transformative change has to be directed by legislation at the state level to establish socially just policies and practices that address the learning needs of diff-capable students in NZ schools. Without such direction, schools will continue to inadequately provide for, and therefore be inequitable or exclusive of, the learning needs of such students. This perpetuates their cycle of academic underachievement in traditional schooling contexts.

In sum, the underachievement of diff-capable students was considered to be directly related to, and malleable by, the conditions of a learning climate. Analysis of the research data in Chapters 5 and 6 established that the conditions in remediating or disabling climates were inequitable/exclusive of the learning needs of diff-capable students. The argument that there is reason to suspect that the NZ school system is inequitable with respect to addressing such needs is therefore confirmed. In this regard, the case for transformational change in the approach to the education of diff-capable students in NZ schools is validated as a matter of social justice.

8.2 The Case for Transformational Change

Diff-capable students present a paradox with respect to possessing gifts and talents alongside learning impairments. Typically, as confirmed in the findings of this research, it is learning weaknesses that are highlighted by the school system, as they present an affront to established norms of operating and achieving in schools. In our competitive school system, where credentialing via assessments based on literacy and/or numeracy skills controls access into lucrative careers, impairments in verbal-linguistic or logical-mathematical processing, executive functioning or sensory-motor inputs, heavily impact upon an individual’s ability to
demonstrate capability commensurate with performance. This doubly penalises diff-capable students, first by having a learning impairment viewed as lying outside of “normal social operating parameters,” and secondly by assessing in such a way that further disadvantages them with respect to showcasing gifts and talents (Terzi, 2008).

To overcome current (deficit) thinking about learning differences, the teaching profession needs to examine the way it thinks about what is considered ability, what is construed as (dis)ability, what is “different,” and how to cater for diversity in schools (Waitere-Ang, 2005). Adopting an emancipatory view of difference allows for opportunities to celebrate and affirm learning diversities as positive; however, since the power to effect such a change lies in the hands of the privileged in charge in a society, marginalised groups such as diff-capable individuals seldom get a voice in such discourse (Hicks & Gennerett, 2011). This means they continue to be stigmatised by social systems and arrangements set up to reaffirm the mainstream norms. Waitere-Ang (2005), amongst others, argues that traditionally the problem of difference has been attributed to individuals, rather than imparting blame on social organisations, with policies from state sources often oriented toward changing the individual or group to fit the “norm,” rather than working on methods to value or celebrate differences inclusively. This is reminiscent of an assimilationist approach (Waitere-Ang, 2005). Using this approach, schools are not required to review and modify practices and policies, based on the understanding that they are socially neutral and, as such, unbiased, their current practices not favouring any particular class or group (Kumashiro, 2002; Waitere-Ang, 2005). This acts to further isolate and marginalise minority learners.

Positive change demands the creation of learning climates that resist stigmatisation of, and prejudice against, those who are different. This necessitates the establishment of professional learning communities committed to critical reflection and change. Consultation with diff-capable individuals is critical to understanding, and thereby overcoming, the limitations
emanating from normative meta-narratives that provide the foundations upon which individuals think about the world and those who operate in it (Taket et al., 2009; Waitere-Ang, 2005). Misunderstandings about what is best for a marginalised group often arise from a lack of consultation by those occupying positions of authority, however well-intentioned the original sentiment. This impacts upon relegated groups who lack the cultural capital to challenge their social identity and status, positioning them as outsiders due to their differences (Taket et al., 2009; Watts & Bridges, 2006).

Individuals develop social identities via interactions with their surroundings, learning how to behave in socially acceptable ways and assimilating the values and beliefs of society through the day-to-day exchanges shared with others (Banks, 2008). Diff-capable students are typically positioned outside of mainstream norms and are therefore marginalised by the nature of social interactions that are reproduced and reinforced in social organisations like schools. The findings of this research showed that most diff-capable students are aware from an early age that their learning exceptionalities make them different. Parents/caregivers were shown to play an important in supporting and encouraging diff-capable children in navigating these differences in different settings such as schools. Without this support, such students are at high risk of underachieving, which impacts upon the development of personal well-being and can limit future life opportunities. However, parents/caregivers cannot facilitate alone. Teachers, special-education consultants and SENCos, in partnership with the MoE, must all play a part in enabling, rather than disabling, diff-capable students, by committing resources to identifying, evaluating and developing effective programmes of learning, rather than reinforcing existing barriers to school success. Such barriers exist in many forms and are outlined by Hicks and Gennerett (2011) as including: reflection without action; change without activism, to remedy the underlying social injustices; progress without emancipation, to overcome oppressive practices; relationships without accountability, to challenge
underlying oppressive ideologies; and technical participation without emotional embodiment, in commitment to overcoming injustices.

Kumashiro (2002) reflects on these barriers by noting that the problems that exist are ones of repetition, that is “when educational practices, perspectives, social relations and identities remain unquestioned” (p. 68). Such barriers act to reproduce and reinforce the status quo, rather than challenge existing structures and arrangements to provoke transformational change (Hicks & Gennerett, 2011). By keeping these barriers in mind, we are better able to critically examine issues of privilege and marginalisation, and transform new knowledge and understandings into practice. Hicks and Gennerett (2011) argue that persons socialised into dominant and privileged ways of being have different challenges, and thus different learning needs, to those who are marginalised in society. Thus, it is only by meaningfully involving diff-capable individuals in research that we can better understand their learning differences and needs.

The privileged group in society should be the party that seeks to overcome current societal assumptions about those who view the world differently, as they hold positions of power and as such can effect necessary change. However, sustainable change can only arise from mutual respect derived by consultation with all groups to establish a relationship of shared understandings, responsibility, and caring for one another. Such understandings should be founded upon principles of individual capability, rather than (dis)ability.

8.3 The Capability Approach and Education Equity

Education systems and arrangements must be designed so that they provide equitable, that is, fair and just (not to be confused with equal, which infers sameness; Cochran-Smith et al., 2016), entitlements and considerations to all, as a matter of social justice. Whilst there is little debate about addressing social injustices that arise from socioeconomic, cultural, or gender
inequalities, the equalisation of natural disparities that arise from differences in individual (dis)abilities and/or gifts and talents are inherently problematic and controversial (Terzi, 2008). Whilst the capability approach does not provide a full theory of educational justice, it does assist in theorising about fundamental egalitarian issues (based on the philosophical belief that people are born equal in social and political worth) facing learners with special-education needs. These issues include the right to an equitable education as needed for the “formation and expansion of other capabilities” (Terzi, 2008, p. 145) including the development of personal agency required to promote full and effective participation in society (Sen, 1992).

Currently, in NZ, resource-based approaches to providing for students with special-education needs fail to address the varying abilities of individuals to convert available resources into opportunities. Since inequitable provision leads to inequalities in the development of individual capability, agency and well-being, this failure limits full and effective participation in wider social and political spheres, further reducing opportunities for those with special needs to challenge discriminating policies or arrangements (Sen, 1992; Terzi, 2008). This reinforces pervasive social inequalities between learners with special needs and the mainstream group, which, in turn, affects present-day functioning as well as future life prospects. Sen (1992, 2005) and Nussbaum (2000) recommend that through an assessment of individual capability, meaningful opportunities can be made available to those with differential needs. These opportunities require consideration of individual socio-emotional, cognitive and physical needs, and institutional structures and arrangements, as well as local and national policies and regulations required to promote the exercise of educational freedoms.

With respect to achieving equitable outcomes, the capability approach argues for a threshold level of fundamental educational entitlements that allow people to achieve the levels of
functioning necessary for effective participation in society (Nussbaum, 2000). This is a matter of justice for all individuals. However, students with special-education needs have different capabilities, as well as functioning limitations, which can result in difficulties in achieving such fundamental levels. It therefore follows that these individuals require additional and differentiated opportunities and resources to achieve to a level commensurate with their peers (Nussbaum, 2000). It should be noted that the lower threshold for opportunities to enhance effective functioning in society should not limit provision of opportunities for high achievement for individuals with gifts and talents. Indeed, promotion of such capabilities is necessary, both intrinsically for personal well-being, and instrumentally for the benefit of society (Terzi, 2008). This is because the promotion of academic excellence, creativity and innovation can result in advancements that benefit the less fortunate. Effective educational provision for individuals with high capability is therefore not only important for society, but also a matter of social justice. Thus, the capability approach recognises the need for diff-capable students to receive schooling supports and opportunities that address the entirety of their unique learning needs. This approach to differentiated provisioning would help to ensure the full inclusion of diff-capable students in NZ schools based on an understanding of equity, rather than sameness, in provision.

The five principles of the model of relational inclusion proposed by Dalkilic and Vadeboncoeur (2016) provide a platform, grounded upon the framework of the capability approach, from which to address issues of equity in education for diff-capable students. Its focus on inclusion as context- and culturally responsive practices; holistic, child-focused pedagogy; a spectrum of practices; increasing participation in democratic classrooms and societies; and relational ontological practices, help to promote meaningful belonging in schools for those with learning exceptionalities. Adoption of these principles of inclusion would assist in developing the capabilities of diff-capable students in the schooling context.
8.4 Research Limitations

This research acknowledges a number of limitations in its construction. Firstly, there was a limited response to the call for participants. The majority of invited schools did not respond to the research invitation, even after follow-up emails were sent. Of those who did decline, proclamations of not having any students who fitted the sample criteria were common. The sample size was therefore disappointingly small, given the original aim and scope of research sample sought from throughout NZ. This limited the generalisability of the findings to other schooling contexts outside of those included. This could have been due to research apathy (due to schools being inundated with requests for involvement in research), lack of awareness of diff-capable students, sensitivities around identifying students for inclusion in the study, or concerns regarding teacher/SENCo workloads in schools.

Secondly, the design of the research required that the initial approach be made through schools. There were, therefore, layers of school authority that had to be negotiated before access to teachers/SENCos, diff-capable students and their parents/caregivers could be gained. This meant that research paperwork had to pass along a chain of people, beginning with principals and boards of trustees (to gain consent for school participation), before it reached the SENCo who had to agree to act as a facilitator for the research. Consequently, there were a number of stages at which consent could be declined, before even reaching the targeted participants whose experiences and perspectives were being sought in this study. This design thus limited access to research participants.

Thirdly, the complexities of establishing a valid and consistent selection criterion for diff-capable students meant that there would have been a number of students who were potentially eligible to participate but who missed out due to difficulties with identification at the level of schools. Issues concerning the availability of verifying specialist reports (a
private cost to families in NZ), and the inherent difficulties of identifying gifts and talents alongside learning impairments, meant that some students would not yet have been identified as diff-capable. Such issues are founded upon difficulties in conceptualising diff-capabilities as a construct, with its impacts upon learning, especially in respect of underachievement, going unrecognised.

Fourthly, the inclusion of gifted and talented students within the special-needs group defined in NAG 1 (c) iii (MoE, 2015) was problematic in application in this research. At the practical level of schools, such a classification appeared to confuse the issue of identification and provision for diff-capable students. Many teachers/SENCos appeared to be unfamiliar with the notion of gifts and talents occurring alongside learning impairments, let alone this being classified by the MoE under special-needs groups. In identifying diff-capable students, this research specified that they appear on a school register to avoid any potential confusion or distress surrounding a sudden alert to an individual’s learning exceptionalities. Subsequently, it was found that diff-capable students were not included on either the SENCo register or gifted and talented register. This was again complicated by conceptions of diff-capability and underachievement and spoke to issues of inclusion in the school setting. This meant that the overall coordination of care for diff-capable students was potentially not synchronised between those in positions of authority in schools that controlled access to learning supports and opportunities.

Finally, the nature of this research as a constructivist GT study involved an interpretation of the findings that acknowledges the perspectives brought to the study by the researcher. The construction of the questionnaires and interview questions thus would have been influenced by such perspectives, borne through personal experiences. As such, the research findings are subjective rather than objective in reflection of their analysis and conclusions. In keeping with the abductive reasoning approach employed in this study, such conclusions were
obtained through inference to seek the best explanation for the data at hand. This reasoning was considered sound as it was found to be the best possible explanation for the available data set (via theoretical sampling and saturation of categories), which allowed for construction of the explanatory theory. Additionally, as a novice grounded theorist, the process involved in constructing nascent theory was new. This undoubtedly influenced the nature and direction of the research. However, close attention to the process of constructivist GT as outlined by Charmaz (2006) helped to ensure research credibility was maintained throughout the research process.

8.5 Research Recommendations

The recommendations that emerged from this study are multifarious and feed into the development of a capability learning climate as detailed in Table 7.1. First, with regard to future directions for research, there are many avenues to pursue in the NZ context as few original empirical studies exist. This is especially true of research that concerns the underachievement of diff-capable students in NZ schools, the impact this has on the negotiation of identity and perceptions of capability, and the consequences such issues have for future life achievements. Given the recent UNICEF (2017) and WHO (2014) findings concerning the well-being of NZ children, especially considering the high suicide rate amongst NZ youth, such research should include recommendations for the establishment of a register to track diff-capable student achievement and well-being during the schooling years. In this way, an examination of the vulnerabilities of diff-capable students, including the challenges they face in schools, can be undertaken to help develop suitable interventions that address their complex learning needs. In regard to research, the voices of diff-capable students and their families should be central to informing the construction of future policies and procedures aimed at improving learning provision, and, thereby, the academic achievement and well-being of this gifted-student subgroup.
Socio-political policies and ideologies that establish and maintain the status quo in this country should also be investigated as a matter of urgency as to the role they play in creating barriers to diff-capable student achievement. Following this, new policies and procedures grounded upon a re-conceptualisation of diff-capable learners could be developed from studies examining effective programmes of learning. To achieve this, research is required that furthers the re-conceptualisation of diff-capable students, as first and foremost capable of achieving in innovative and creative ways that lie outside of mainstream norm. Such studies would help prompt society to critique current constructions of human diversity to become more welcoming of learner difference.

New MoE directives could subsequently be developed to include appropriate funding and resourcing (both personal and material) as directed by knowledgeable experts. This would help to ensure that at the local level, schools would have access to information and resources to effectively provide for diff-capable students. In addition to these changes, teachers/SENCos should receive both pre- and in-service professional learning on the neurobiological mechanisms of learning, so that students with learning exceptionalities (gifts as well as impairments) are better able to be identified and early interventions planned. Improved professional learning would help to optimise the provision of opportunities for the development of learning capabilities, alongside supports for learning impairments, as per a capability approach. Individual education plans that consider the complexities of the interaction of exceptionalities should be used, both as a living document to guide provision, and as a means to evaluate planned interventions in respect of appropriateness and effectiveness in achieving valued goals. In using individual education plans, the voices of 2E students and parents/caregivers that are so critical to establishing the conditions in which learning capabilities are enhanced, can be heard and valued in the school setting. Such changes in the education sector are necessary to ensure fair and equitable provision for diff-
capable students as individuals with complex learning requirements, as directed by the vision and principles of the New Zealand Curriculum document. The promotion of transformational changes in provision thus becomes a matter of social justice that considers differentiated learning opportunities to be an issue of equity for students with diverse learning needs.

Additionally, the diff-capable students and their families in this study remarked upon the current lack of information about learning exceptionalities available in the community. As information is essential to directing informed advocacy, access to knowledgeable experts and informative resources is essential. Without such resources, diff-capable individuals and their families can only navigate blindly through a schooling system that currently appears to fail to help them realise their potential as gifted and talented students. This has serious consequences for the negotiation of student identity, perceptions of capability, realisation of achievements, and development of a sense of personal well-being as valued members of society. The development of appropriate resources alongside the dissemination of information aimed at supporting 2E individuals and parents/caregivers is thus recommended.

8.6 Chapter Summary

Chapter 8 reviewed the construction of the thesis starting from Chapter 1, where contributory literature and concepts were introduced alongside a focus research question. This focus question sought to examine why diff-capable students currently underachieve when compared with their potential, based on an underlying concern that the NZ school system is currently inequitable in its approach to the education of such students. This argument was dissected throughout the following chapters by exploration of the data that led to the development of the explanatory theory of conceptualising difference. A case for transformational change to schooling arrangements was then presented. The capability approach and issues of education equity that encompass relational inclusion were then
examined. Following this, research limitations and recommendations for further research were addressed, which included suggestions for a change in approach to the education of diff-capable students. It is hoped, by presenting these recommendations and suggestions, that further examination of the complex issues facing diff-capable students can occur. Such research is necessary to help evoke meaningful change in regard to the process and outcomes of educating students with diff-capabilities in NZ schools.
Appendices
Appendix A: Student Questionnaire Participant Information Sheet

Student Questionnaire Participant Information Sheet

Dear Student,

Please find enclosed an invitation to participate in a University of Auckland research project. I would be grateful if you could review and consider the following information in anticipation of giving consent.

**Project Title:** Twice-Exceptional Learners in New Zealand Schools.

**Name of Researcher:** Susan Ng (Doctoral student, Faculty of Education and Social Work, Auckland University).

**About the research:** There is very little information available in New Zealand about the numbers of, and provisions for, twice-exceptional (gifted and talented with learning difficulties) students in schools. In this research project 250 New Zealand primary, intermediate and secondary schools have been invited to find out more about the learning needs of twice-exceptional learners. Twice-exceptional students and teachers from throughout New Zealand will be asked to complete a questionnaire as part of this process.

**How will the research work?** Invited schools will be asked to give the researcher permission to examine documents about their policies and programs for twice-exceptional students. The participating schools’ Special Education Needs Coordinator will then be asked...
to select up to 10 teachers to complete a confidential questionnaire. The Special Education Needs Coordinator will also be asked to send letters of invitation, participant information sheets, and questionnaires, to twice-exceptional students and their parent(s)/caregiver(s) at the school. The questionnaire will also include an invitation and RSVP for a possible follow-up interview with the researcher. This interview will take place at the student’s school at a pre-arranged time. The questionnaire and interview request forms will be separated out from each other by a co-investigator to ensure confidentiality of the questionnaires before the paperwork is passed on to the researcher. All participant information sheets emphasize the voluntary nature of participation in this research for all invited parties. A summary of the findings of the research will be available to participants who indicate on the consent form that they wish to receive a copy, by December 2018.

**Research invitation:** I would like to invite you to take part in this research project, but before you sign the consent form please consider each of the points listed below:

1. Discuss this invitation with your parent(s)/caregiver(s).
2. Feel free to ask further questions about the research before making your decision (my contact details are listed below).
3. If you would like to take part in the questionnaire, please fill in and return using the prepaid self-addressed envelope provided.
4. If you would also like to participate in an interview, please complete the interview consent form and return with the questionnaire using the prepaid self-addressed envelope provided.
5. You can withdraw from the research at any time without giving a reason.
6. You can withdraw, without giving a reason, your data within 6 weeks of the collection date otherwise it will be included in the research.

**Use of data:** All collected information and transcripts will be stored securely on the Faculty of Education, University of Auckland campus for 6 years, after which they will be destroyed. Once all research findings are finalized they will be reported in my Doctoral thesis, which may be published or used for professional presentations or publications in the future.

**Confidentiality:** This is a mixed-methods research project, and although all schools and participants will be referred to only through the use of pseudonyms, it may be possible to identify participants by the characteristics of individuals or schools, or by the identity of the
researcher. Therefore, whilst making every effort to ensure confidentiality, I am not able to fully guarantee this. Additionally, please note that if any incidental issues come to light, such as bullying, normal school procedures regarding referral to the Dean or Senior Team Leader will be followed. As part of this process a conversation with the student will be held prior to a referral being made.

Contact details: If you have any questions please contact:

**Researcher:** Susan Ng, Doctoral Student, Faculty of Education and Social Work, University of Auckland.
Email: sswa008@aucklanduni.ac.nz

**Research Supervisor:** Dr. Catherine Rawlinson, Senior Lecturer, School of Learning, Development and Professional Practice, Faculty of Education and Social Work, Auckland University.
Email: c.rawlinson@auckland.ac.nz
Phone: 09 623 8899 ext 48736

**Research Supervisor:** Associate Professor Mary Hill, School of Learning, Development and Professional Practice, Faculty of Education and Social Work, Auckland University.
Email: mf.hill@auckland.ac.nz
Phone: 09 623 8899 ext 48630

**Head of School:** Associate Professor Lorri Santamaria, School of Learning, Development and Professional Practice, Faculty of Education and Social Work, Auckland University.
Email: l.santamaria@auckland.ac.nz
Phone: 09 623 8899 ext 46353

For any queries regarding ethical concerns you may contact, the Chair, The University of Auckland Human Participants Ethics Committee, The University of Auckland, Research Office, Private Bag 92019, Auckland 1142.
Phone: 09 373-7599 ext. 83711
Email: ro-ethics@auckland.ac.nz

Approved by the University of Auckland Human Participant Ethics Committee on 21st December 2015, for 3 years.
Reference number: 016294
Appendix B: Student Participation Information Pamphlet-Questionnaire

Student Participation Information Pamphlet-Questionnaire
(Double sided A4)

If you or your parents have any questions, your parents can contact these people:

Susan Ng
Doctoral Student
School of Learning, Development and Professional Practice,
Faculty of Education and Social Work, Auckland University
Email: sswn008@aucklanduni.ac.nz

For any questions regarding ethical concerns your parents may contact:

Dr. Mary Hill
Associate Professor, School of Learning, Development and Professional Practice, School of Education, Auckland University.
Email: m.l.hill@auckland.ac.nz
Phone: 09 623 8899 ext 48630

The Chair,
The University of Auckland Human Participants Ethics Committee,
The University of Auckland, Research Office, Private Bag 92019 Auckland 1142
Phone: 09 373 7599 ext 83711
Email: ro-ethics@auckland.ac.nz

Participant Information Sheet
For Students

Dr. Catherine Rawlinson
Senior Lecturer, School of Learning, Development and Professional Practice, School of Education, Auckland University.
Email: c.rawlinson@auckland.ac.nz
Phone: 09 623 8899 ext 48736

Approved by The University of Auckland Human Participants Ethics Committee on … for three years,
Reference Number:

Research Study:
Twice-Exceptional Learners in New Zealand Schools.
Researcher: Susan Ng

Associate Professor Lorri Santamaria, School of Learning, Development and Professional Practice, Faculty of Education and Social Work, Auckland University.
Email: l.santamaria@auckland.ac.nz
Phone: 09 623 8899 ext 46353

Research Study:
Twice-Exceptional Learners in Twi...
Hello, my name is Susan Ng. I am a Doctoral student at the Faculty of Education and Social Work at Auckland University.

I am also a teacher and want to learn more about how New Zealand schools support twice-exceptional students with their learning.

If you would like to be a part of my research study please:

1. Fill in the enclosed student questionnaire.

2. Put both the questionnaire and the interview invitation form in the self-addressed envelope and post back to me.

I would like to do some research to find out what you think about the support your school and your teachers give you to help you to learn in the classroom. To do this I would like you to complete a questionnaire and send it back to me in the envelope provided. There is also an option to possibly have an interview with me in person at your school. Please fill-in the interview request form if you and your parent(s)/caregiver(s) would like to meet with me, and send this back in the envelope with the questionnaire.

There are some important things you need to know:

1. Your questionnaire answers are confidential and you will be given a made-up name so no-one will know who you are in my study when I write it up or talk about it.

2. If you change your mind you can pull out of the study and if you agree to an interview you can ask me to stop recording you at any time.

3. Your principal has given me permission to do this study. If you take part, or do not take part, it will not affect you in any way at your school.

4. Your parents have been given some information about my research study. Please talk to them so you understand what will happen and they are sure you want to take part.

The people helping me with my study are Dr. Mary Hill and Dr. Catherine Rawlinson.

Thank you for helping me to find out more about students like you!
Appendix C: Questionnaire Consent form for Student Participants (over 16)

This form will be stored securely, separated from other data on the University of Auckland premises, for a period of 6 years.

**Project Title:** Twice-Exceptional Learners in New Zealand Schools.

**Name of Researcher:** Susan Ng (Doctoral student, Faculty of Education and Social Work, Auckland University).

I have read the Questionnaire Participant Information Sheet. I understand the nature of the research and why I have been invited to participate in the research. I have had the opportunity to ask questions and have them answered to my satisfaction. I also understand that my participation is voluntary and the decision to participate or not participate will not affect my academic standing at my school in any way.

- I agree to take part in this research.
- I understand that the research will take place between February 2016 and December 2016.
- I understand that I am free to withdraw, without giving a reason, during the research time outlined above, and to withdraw, without giving a reason, any data collected within 6 weeks of that data being collected.
- I understand that the findings of the research may be published and will be communicated in clear and appropriate language relevant to research communities, groups and individuals.
- I am aware that whilst every effort will be made to protect the identity of individuals and schools, confidentiality cannot be guaranteed, as the researcher is an educator in New Zealand with a specialist interest in gifted and talented education.
- I understand that data gathered in the research, including word documents and sound files will be transferred onto memory sticks and stored securely at the researcher’s
home in a locked box to be later stored at the University of Auckland, Faculty of Education and Social Work campus for 6 years, after which all data will be destroyed.

- I understand that the Principal and Board of Trustees acknowledge the school’s assurance that participation or non-participation in this research project will not affect my student grades.
- I wish/ do not wish (please delete one) to receive a copy of a summary of the findings of the research, which will be available by December 2018.

Name: ________________________________

Signature: ________________________________

Date: _________________________

Approved by the University of Auckland Human Participant Ethics Committee on the 21st December 2015, for 3 years. Reference number: 016294
Appendix D: Student Assent Form for Questionnaire
(under 16)

Student Assent Form for Questionnaire
(for students under the age of 16 years old)

(This form will be stored for a period of 6 years)

Research Study: Twice-exceptional Learners in New Zealand Schools.

Researcher: Susan Ng

- I have talked about taking part in this research with my parents.
- I know that my principal has given permission for this study and that if I take part, or do not take part, it will not affect me at school in any way.
- I would like to take part in Susan Ng’s research into the learning experiences of twice-exceptional students in New Zealand schools and I understand what is involved.
- I give Susan Ng permission to use my confidential answers to the questionnaire in her research write-up, publications and presentations.
- I know I can change my mind without giving a reason and pull out from the research at any time.
- I understand that my questionnaire information will be used in the research unless I withdraw permission for it to be used within 6 weeks of it being collected.

Full name: ______________________________________________________

First name ____________________________________________ Last name ____________________________________________

School name: ______________________________________________________

Signed: ______________________________________________________

Date: ______________________________________________________

Approved by the University of Auckland Human Participants Ethics Committee on 21st December 2015 for three years.

Reference Number: 016294 Code:
Appendix E: Student Interview Participant Information Sheet

Dear Student,

Please find enclosed an invitation to participate in a University of Auckland research project. I would be grateful if you could review and consider the following information in anticipation of giving consent.

**Project Title:** Twice-Exceptional Learners in New Zealand Schools.

**Name of Researcher:** Susan Ng (Doctoral student, Faculty of Education and Social Work, Auckland University).

**About the research:** There is very little information available in New Zealand about the numbers of, and provisions for, twice-exceptional (gifted and talented with learning difficulties) students in schools. In this research project 250 New Zealand primary, intermediate and secondary schools have been invited to find out more about the learning needs of twice-exceptional learners. Twice-exceptional students and teachers from throughout New Zealand will be asked to complete a questionnaire as part of this process. Additionally, a sample of up to 15 twice-exceptional students and their parent(s)/caregiver(s) as well as 15 teachers from throughout New Zealand will be invited to participate in an interview to explore twice-exceptional students’ schooling experiences, which will assist in identifying barriers and facilitators to learning achievement.
How will the research work? The interview will take place at your school at a pre-arranged time. The interview will be recorded using a digital recording device, which can be turned off at any stage, without giving a reason, should you or your parent(s)/caregiver(s) request this. The interview will not last any longer than 1 hour. You will be offered an opportunity to review a written transcript of the recorded interview to edit, as required, within 6 weeks of the transcription of the interview taking place. You will need to return any changes to this written version of the interview within 2 weeks of receiving it otherwise the original written version will be used. Your decision to participate in this research project is voluntary. A summary of the findings of the research will be available to participants who indicate on the consent form that they wish to receive a copy, by December 2018.

Research invitation: I would like to invite you to take part in this research project, but before you sign the consent form please consider each of the points listed below:

1. Discuss this invitation with your parent(s)/caregiver(s).
2. Feel free to ask further questions about the research before making your decision (my contact details are listed below).
3. If you would like to take part please sign the interview consent form and have your parent(s)/caregiver(s) sign their consent forms and return these using the prepaid self-addressed envelopes provided.
4. You can withdraw from the research at any time without giving a reason.
5. You can withdraw your data, without giving a reason, within 6 weeks of the collection date otherwise it will be included in the research.

Use of data: All collected information and transcripts will be stored securely on the Faculty of Education, University of Auckland campus for 6 years, after which they will be destroyed. Once all research findings are finalized they will be reported in my Doctoral thesis, which may be published or used for professional presentations or publications in the future.

Confidentiality: This is a mixed-methods research project, and although all schools and participants will be referred to only through the use of pseudonyms, it may be possible to identify participants by the characteristics of individuals or schools, or by the identity of the researcher. Therefore, whilst making every effort to ensure confidentiality, I am not able to fully guarantee this. Additionally, please note that if any incidental issues come to light, such as bullying, normal school procedures regarding referral to the Dean or Senior Team Leader
will be followed. As part of this process a conversation with the student will be held prior to a referral being made.

**Contact details:** If you have any questions please contact:

**Researcher:** Susan Ng, Doctoral Student, Faculty of Education and Social Work, University of Auckland.
Email: sswa008@aucklanduni.ac.nz

**Research Supervisor:** Dr. Catherine Rawlinson, Senior Lecturer, School of Learning, Development and Professional Practice, Faculty of Education and Social Work, Auckland University.
Email: c.rawlinson@auckland.ac.nz
Phone: 09 623 8899 ext 48736

**Research Supervisor:** Associate Professor Mary Hill, School of Learning, Development and Professional Practice, Faculty of Education and Social Work, Auckland University.
Email: mf.hill@auckland.ac.nz
Phone:09 623 8899 ext 48630

**Head of School:** Associate Professor Lorri Santamaria, School of Learning, Development and Professional Practice, Faculty of Education and Social Work, Auckland University.
Email: l.santamaria@auckland.ac.nz
Phone: 09 623 8899 ext 46353

For any queries regarding ethical concerns you may contact, the Chair, The University of Auckland Human Participants Ethics Committee, The University of Auckland, Research Office, Private Bag 92019, Auckland 1142.
Phone: 09 373-7599 ext. 83711
Email: ro-ethics@auckland.ac.nz

Approved by the University of Auckland Human Participant Ethics Committee on 21st December 2015, for 3 years.
Reference number: 016294
Appendix F: Interview Consent Form for Students

This form will be stored securely, separated from other data on the University of Auckland premises, for a period of 6 years.

**Project Title:** Twice-Exceptional Learners in New Zealand Schools.

**Name of Researcher:** Susan Ng (Doctoral student, Faculty of Education and Social Work, Auckland University).

I have read the Interview Participant Information Sheet. I understand the nature of the research and why I have been invited to participate in the research. I have had the opportunity to ask questions and have them answered to my satisfaction. I also understand that my participation is voluntary and the decision to participate or not participate will not affect my academic standing at my school in any way.

- I agree to take part in this research.
- I understand that the research will take place between February 2016 and December 2016.
- I understand that I am free to withdraw, without giving a reason, during the research time outlined above, and to withdraw, without giving a reason, any data collected within 6 weeks of that data being collected.
- I understand that I will be interviewed and my response recorded.
- I understand that there will be an opportunity for me to review the interview transcript within 6 weeks of the transcription of the interview taking place.
I agree to my voice being recorded and these recordings being transcribed by the researcher.

I understand that I can ask for the digital audio recording device to be turned off at any time, without giving a reason, during the interview.

I understand that I will be given a copy of the transcript from the interview to review and edit as required.

I understand that I need to make any changes I see as necessary and return the written interview transcript within 2 weeks of receiving it or the original written version will be used in the research.

I understand that the findings of the research may be published and will be communicated in clear and appropriate language relevant to research communities, groups and individuals.

I am aware that whilst every effort will be made to protect individuals’ and the participant schools’ identities, confidentiality cannot be guaranteed, as the researcher is an educator in New Zealand with a specialist interest in gifted and talented education.

I understand that data gathered in the research, including word documents and sound files will be transferred onto memory sticks and stored securely at the researchers home in a lock-box to be later stored at the University of Auckland, Faculty of Education and Social Work campus for 6 years, after which all data will be destroyed.

I understand that the Principal and Board of Trustees acknowledge the school’s assurance that participation or non-participation in this research project will not affect my student grades.

I wish/ do not wish (please delete one) to receive a copy of a summary of the findings of the research, which will be available by December 2018.

Name: _______________________________
Signature: _____________________________
Date: ______________________________

Approved by the University of Auckland Human Participant Ethics Committee on the 21st December 2015, for 3 years. Reference number: 016294
Appendix G: Parent/Caregiver Questionnaire Information Sheet

Please retain this sheet for your information.

Dear Parent/Caregiver,

Please find enclosed an invitation to be involved in a University of Auckland research project. I would be grateful if you could review and consider this information in anticipation of giving consent.

**Project Title:** Twice-Exceptional Learners in New Zealand Schools.

**Name of Researcher:** Susan Ng (Doctoral student, Faculty of Education and Social Work, Auckland University).

**About the research:** There is very little information available in New Zealand about the numbers of, and provisions for, twice-exceptional (gifted and talented with learning difficulties) students in schools. In this research project 250 New Zealand primary, intermediate and secondary schools have been invited to find out more about the learning needs of twice-exceptional learners. Twice-exceptional students and teachers from throughout New Zealand have been asked to complete a questionnaire as part of this process. Additionally, a sample of up to 15 twice-exceptional students and their parent(s)/caregiver(s), as well as 15 teachers from throughout New Zealand, will be invited to participate in an interview to explore twice-exceptional students’ schooling experiences in greater depth, which will assist in identifying barriers and facilitators to learning achievement.
Your school has given permission for the Special Education Needs Coordinator (SENCo) to act as a liaison at the school to facilitate the research process. The SENCo has identified your child as possibly being twice exceptional. Therefore, I am inviting your child to answer a confidential questionnaire. Please return the questionnaire in the self-addressed envelope provided.

At the end of the questionnaire there is an invitation for you and your child to participate in a possible follow-up interview with the researcher. If you and your child wish to volunteer to participate in an interview please return the invitation with your contact details completed in the same self-addressed return envelope. A co-investigator working at the University of Auckland will then sort the questionnaires from the interview request forms to ensure confidentiality of questionnaire responses, before passing the paperwork onto the researcher. All interviews will take place at your child’s school at a pre-arranged time. Your decision to participate in this research project is voluntary. A summary of the findings of the research will be available to participants who indicate on the consent form that they wish to receive a copy, by December 2018.

**Research invitation:** I would like to invite you to take part in this research project, but before you sign the consent form please consider each of the points listed below:

1. Feel free to ask further questions about the research before making your decision (my contact details are listed below).
2. If you would like to take part in the interview phase, please complete and sign the form and return in the prepaid self-addressed envelopes provided along with the completed questionnaire.
3. You can withdraw from the research at any time without giving a reason.
4. You can withdraw your data, without giving a reason, within 6 weeks of the collection date otherwise it will be included in the research.

**Use of data:** All collected information and transcripts will be stored securely in the Faculty of Education, University of Auckland campus for 6 years, after which they will be destroyed. Once all research findings are finalized they will be reported in my Doctoral thesis, which may be published or used for professional presentations or publications in the future.
Confidentiality: As this is a mixed methods research project, and although all schools and participants will be referred to only through the use of pseudonyms, it may be possible to identify interview participants by the characteristics of individuals or schools, or by the identity of the researcher. Therefore, whilst making every effort to ensure confidentiality, I am not able to fully guarantee this. Additionally, please note that if any incidental issues come to light, such as bullying, normal school procedures regarding referral to the Dean or Senior Team Leader will be followed. As part of this process a conversation with the student will be held prior to a referral being made.

Contact details: If you have any questions please contact:
Researcher: Susan Ng, Doctoral Student, Faculty of Education and Social Work, University of Auckland. Email: sswa008@aucklanduni.ac.nz

Research Supervisor: Dr. Catherine Rawlinson, Senior Lecturer, School of Learning, Development and Professional Practice, Faculty of Education and Social Work, Auckland University.
Email: c.rawlinson@auckland.ac.nz
Phone: 09 623 8899 ext 48736

Research Supervisor: Dr. Mary Hill, Associate Professor, School of Learning, Development and Professional Practice, Faculty of Education and Social Work, Auckland University.
Email: mf.hill@auckland.ac.nz
Phone: 09 623 8899 ext 48630

Head of School: Associate Professor Lorri Santamaria, School of Learning, Development and Professional Practice, Faculty of Education and Social Work, Auckland University.
Email: l.santamaria@auckland.ac.nz
Phone: 09 623 8899 ext 46353

For any queries regarding ethical concerns you may contact, the Chair, The University of Auckland Human Participants Ethics Committee, The University of Auckland, Research Office, Private Bag 92019, Auckland 1142.
Phone: 09 373-7599 ext. 83711
Email: ro-ethics@auckland.ac.nz
Approved by the University of Auckland Human Participant Ethics Committee on 21st December 2015, for 3 years. Reference number: 016294
Appendix H: Parent/Caregiver Consent Form for Student Participant Questionnaire

This form will be stored securely, separated from other data on the University of Auckland premises, for a period of 6 years.

Project Title: Twice-Exceptional Learners in New Zealand Schools.

Name of Researcher: Susan Ng (Doctoral student, Faculty of Education and Social Work, Auckland University).

I/we have read the Questionnaire Participant Information Sheet. I/we understand the nature of the research and why my/our child has been invited to participate in the research. I/we have had the opportunity to ask questions and have them answered to my/our satisfaction. I/we also understand that my/our child’s participation is voluntary and the decision to participate or not participate will not affect my/our child’s academic standing at school in any way.

- I/we agree for my/our son/daughter to take part in this research.
- I/we understand that the research will take place between February 2016 and December 2016.
- I/we understand that my/our child is free to withdraw, without giving a reason, during the research time outlined above, and to withdraw, without giving a reason, any data collected within 6 weeks of that data being collected.
- I/we understand that the findings of the research may be published and will be communicated in clear and appropriate language relevant to research communities, groups and individuals.
I/we am aware that whilst every effort will be made to protect the identity of individuals and schools, confidentiality cannot be guaranteed, as the researcher is an educator in New Zealand with a specialist interest in gifted and talented education.

I/we understand that data gathered in the research, including word documents and sound files will be transferred onto memory sticks and stored securely at the researchers home in a lock-box to be later stored at the University of Auckland, Faculty of Education and Social Work campus for 6 years, after which all data will be destroyed.

I/we understand that the Principal and Board of Trustees acknowledge the school’s assurance that participation or non-participation in this research project will not affect my/our child’s grades.

I/we wish/ do not wish (please delete one) to receive a copy of a summary of the findings of the research, which will be available by December 2018.

Child’s name: ____________________________________________

Your Name (s): _______________________________

Signature(s):______________________________

Date: _______________________

Approved by the University of Auckland Human Participant Ethics Committee on the 21st December 2015, for 3 years. Reference number: 016294
Appendix I: Parent/Caregiver Interview Participant Information Sheet

Dear Parent/Caregiver(s),

Please find enclosed an invitation to participate in a University of Auckland research project. I would be grateful if you could review and consider the following information in anticipation of giving consent.

Project Title: Twice-Exceptional Learners in New Zealand Schools.

Name of Researcher: Susan Ng (Doctoral student, Faculty of Education and Social Work, Auckland University).

About the research: There is very little information available in New Zealand about the numbers of, and provisions for, twice-exceptional (gifted and talented with learning difficulties) students in schools. In this research project 250 New Zealand primary, intermediate and secondary schools have been invited to find out more about the learning needs of twice-exceptional learners. Twice-exceptional students and teachers from throughout New Zealand will be asked to complete a questionnaire as part of this process. Additionally, a sample of up to 15 twice-exceptional students and their parent(s)/caregiver(s) as well as 15 teachers from throughout New Zealand will be invited to participate in an
interview to explore twice-exceptional students’ schooling experiences, which will assist in identifying barriers and facilitators to learning achievement.

**How will the research work?** The interview will take place at your child’s school at a pre-arranged time. The interview will be recorded using a digital recording device, which can be turned off at any stage, without giving a reason, should you or your child request this. The interview will not last any longer than 1 hour. You will be offered an opportunity to review a written transcript of the recorded interview to edit, as required, within 6 weeks of the transcription of the interview taking place. Reviewed transcripts are to be returned to the researcher in the self-addressed envelopes provided, within 2 weeks of receiving the transcribed interview transcript, otherwise the data will be used as originally written. Your decision to participate in this research project is voluntary. A summary of the findings of the research will be available to participants who indicate on the consent form that they wish to receive a copy, by December 2018.

**Research invitation:** I would like to invite you to take part in this research project, but before you sign the consent form please consider each of the points listed below:

1. Feel free to ask further questions about the research before making your decision (my contact details are listed below).
2. If you would like to take part please sign the interview consent form and return using the prepaid self-addressed envelopes provided.
3. You can withdraw from the research at any time without giving a reason.
4. You can withdraw your data, without giving a reason, within 6 weeks of the collection date otherwise it will be included in the research.

**Use of data:** All collected information and transcripts will be stored securely on the Faculty of Education, University of Auckland campus for 6 years, after which they will be destroyed. Once all research findings are finalized they will be reported in my Doctoral thesis, which may be published or used for professional presentations or publications in the future.

**Confidentiality:** This is a mixed-methods research project, and although all schools and participants will be referred to only through the use of pseudonyms, it may be possible to identify participants by the characteristics of individuals or schools, or by the identity of the researcher. Therefore, whilst making every effort to ensure confidentiality, I am not able to
fully guarantee this. Additionally, please note that if any incidental issues come to light, such as bullying, normal school procedures regarding referral to the Dean or Senior Team Leader will be followed. As part of this process a conversation with the student will be held prior to a referral being made.

**Contact details:** If you have any questions please contact:

**Researcher:** Susan Ng, Doctoral Student, Faculty of Education and Social Work, University of Auckland.
Email: sswa008@aucklanduni.ac.nz

**Research Supervisor:** Dr. Catherine Rawlinson, Senior Lecturer, School of Learning, Development and Professional Practice, Faculty of Education and Social Work, Auckland University.
Email: c.rawlinson@auckland.ac.nz
Phone: 09 623 8899 ext 48736

**Research Supervisor:** Associate Professor Mary Hill, School of Learning, Development and Professional Practice, Faculty of Education and Social Work, Auckland University.
Email: mf.hill@auckland.ac.nz
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Head of School: Associate Professor Lorri Santamaria, School of Learning, Development and Professional Practice, Faculty of Education and Social Work, Auckland University.
Email: l.santamaria@auckland.ac.nz
Phone: 09 623 8899 ext 46353

For any queries regarding ethical concerns you may contact, the Chair, The University of Auckland Human Participants Ethics Committee, The University of Auckland, Research Office, Private Bag 92019, Auckland 1142.
Phone: 09 373-7599 ext. 83711
Email: ro-ethics@auckland.ac.nz

Approved by the University of Auckland Human Participant Ethics Committee on 21st December 2015, for 3 years.
Reference number: 016294
Appendix J: Interview Consent Form for Parents/Caregivers

Code: December, 2015

Interview Consent Form for Parents/Caregivers

This form will be stored securely, separated from other data on the University of Auckland premises, for a period of 6 years.

Project Title: Twice-Exceptional Learners in New Zealand Schools.

Name of Researcher: Susan Ng (Doctoral student, Faculty of Education and Social Work, Auckland University).

I/we have read the Interview Participant Information Sheet. I/we understand the nature of the research and why I/we have been invited to participate in the research. I/we have had the opportunity to ask questions and have them answered to our satisfaction. I/we also understand that my/our participation is voluntary and the decision to participate or not participate will not affect my/our child’s academic standing at their school in any way.

- I/we agree that my /our child may participate in this interview.
- I /we agree to take part in this interview.
- I/we understand that the research will take place between February 2016 and December 2016.
• I/we understand that I/we am free to withdraw, without giving a reason, during the research time outlined above, and to withdraw any data collected, without giving a reason, within 6 weeks of that data being collected.

• I/we understand that I/we will be interviewed and my/our response audio recorded.

• I/we agree to my/our voice being recorded and these recordings being transcribed by the researcher.

• I/we understand that I/we can ask for the digital audio recording device to be turned off, without giving a reason, at any time during the interview.

• I/we understand that I/we will be given a copy of the transcript from the interview to review and edit as required within 6 weeks of the transcription of the interview taking place.

• I/we understand that I/we need to make any changes I/we see as necessary and return the written interview transcript within 2 weeks of receiving it or the original written version will be used in the research.

• I/we understand that the findings of the research may be published and will be communicated in clear and appropriate language relevant to research communities, groups and individuals.

• I/we am/are aware that whilst every effort will be made to protect individual’s and participant schools’ identities, confidentiality cannot be guaranteed.

• I/we understand that data gathered in the research, including word documents and sound files will be transferred onto memory sticks and stored securely at the researchers home in a lock-box to be later stored at the University of Auckland, Faculty of Education and Social Work campus for 6 years, after which all data will be destroyed.

• I understand that the Principal and Board of Trustees acknowledge the school’s assurance that participation or non-participation in this research project will not affect my child’s grades or standing at the school.

• I/we wish/ do not wish (please delete one) to receive a copy of a summary of the findings of the research, which will be available by December 2018.

Name (s): ________________________________________________________________

Name of child participating in the study: __________________________________________
Signature (s):_____________________________________________________________

Date: _______________________

Contact phone number:

Contact e mail address:

Approved by the University of Auckland Human Participant Ethics Committee on the 21st December 2015, for 3 years.
Reference number: 016294
Appendix K: Student Questionnaire

Twice-Exceptional (Gifted and Talented with Learning Difficulties)
Student Questionnaire

This questionnaire is designed to find out more about your learning experiences at school. Please fill in all sections.

Section One: Background Information

Year level: ____________ Age __________ Male or Female (please circle one)

Learning strengths (include subject areas): ________________________________

Learning difficulties/disability: _______________________________________

Diagnosis of twice-exceptionality by (circle appropriate answer(s)):
- o Medical Practitioner (Dr.)
- o Educational Psychologist
- o Special Education Needs Coordinator at school
- o Other (please state) ________________________________
- o Don't know

Section Two: Teaching, Learning and Support Strategies

Please tick (✓) in the appropriate column to indicate how helpful you find each strategy. If the strategy is not used at your school, please indicate this in the column marked ‘not used.

<table>
<thead>
<tr>
<th>Teaching, Learning and Support Strategies</th>
<th>Extremely helpful</th>
<th>Very helpful</th>
<th>Moderately helpful</th>
<th>Somewhat helpful</th>
<th>A little helpful</th>
<th>Not helpful</th>
<th>Not used</th>
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</thead>
<tbody>
<tr>
<td>1 My teachers use a variety of teaching strategies as well as reading and writing (for example, drawing and music) to help me learn</td>
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<tr>
<td>2 My teachers teach me to use critical and creative thinking activities (for example, philosophical thinking)</td>
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</tbody>
</table>

334
<table>
<thead>
<tr>
<th>Strategies</th>
<th>Extremely helpful</th>
<th>Very helpful</th>
<th>Moderately helpful</th>
<th>Somewhat helpful</th>
<th>A little helpful</th>
<th>Not helpful</th>
<th>Not used</th>
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<tbody>
<tr>
<td>3 My teachers let me explore areas I am interested in so I can use my gifts and talents</td>
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<td>4 I receive mentoring with an ‘expert’ in areas that interest me</td>
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<td>5 My teachers use inquiry-based learning to allow me to investigate problems</td>
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<td>6 My teachers allow me to use different ways to show my learning in assignments</td>
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<td>7 My teachers allow me to choose topics or projects to investigate</td>
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<td>8 My teachers allow me to move through topics at my own pace</td>
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<td>9 My teachers use open-ended challenges where creativity is needed to solve problems</td>
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<td>10 My teachers teach me to use megacognitive (thinking about thinking) strategies to help with learning</td>
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<td>11 My teachers encourage me to use goal-setting as a learning strategy</td>
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<tr>
<td></td>
<td>Strategies</td>
<td>Extremely helpful</td>
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<td>Moderately helpful</td>
<td>Somewhat helpful</td>
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<td>Not helpful</td>
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<td>12</td>
<td>My teachers allow me to use creativity in product design</td>
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<td>13</td>
<td>My teachers allow me extra time for tests and assignments</td>
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<td>14</td>
<td>My teachers encourage me to use graphic organisers to help me organize my learning</td>
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<td>15</td>
<td>My teachers allow me to use a separate room to help me concentrate in tests</td>
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<td>16</td>
<td>My teachers encourage me to use stress/ anxiety management techniques (eg: counselling)</td>
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<td>17</td>
<td>My teachers allow me to use assistive technology such as computers in the classroom</td>
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<td>18</td>
<td>I am allowed special assessment conditions (such as reader-writers or extra time in exams)</td>
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<td>19</td>
<td>My teachers encourage me to use tools (such as mindmaps) to help develop my study skills</td>
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<td>20</td>
<td>My teachers use clear learning aims for lessons</td>
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<td>21</td>
<td>My teachers allow me to modify learning activities (such as of the amount of work needed) to assist in meeting the standard for an assessment</td>
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<tr>
<td>Strategies</td>
<td>Extremely helpful</td>
<td>Very helpful</td>
<td>Moderately helpful</td>
<td>Somewhat helpful</td>
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<td>Not helpful</td>
<td>Not used</td>
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<tr>
<td>22 My teachers provide me with opportunities to learn with other twice-exceptional individuals</td>
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<td>23 My teachers encourage me to participate in gifted and talented / enrichment learning classes.</td>
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(Survey developed from a ‘Learning Strategies for Twice-exceptional Students’ list compiled by Nielsen (2002))

**Section Three: Self-Efficacy Questionnaire for Children (SEQ-C)**

Please tick in the appropriate column to indicate how well you believe you achieve each of the following.

<table>
<thead>
<tr>
<th></th>
<th>Extremely well</th>
<th>Very well</th>
<th>Moderately well</th>
<th>Quite well</th>
<th>Not very well</th>
<th>Not at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>How well can you get teachers to help you when you get stuck on schoolwork?</td>
<td></td>
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<td>2</td>
<td>How well can you express your opinions when other classmates disagree with you?</td>
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<td>3</td>
<td>How well do you succeed in cheering yourself up when an unpleasant event has happened?</td>
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<td>4</td>
<td>How well can you study when there are other more interesting things to do?</td>
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<td>5</td>
<td>How well do you succeed in becoming calm again when you are frightened?</td>
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<tr>
<td>6</td>
<td>How well can you become friends with other students or children?</td>
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<td>7</td>
<td>How well can you study a chapter for a test?</td>
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<tr>
<td>8</td>
<td>How well can you have a chat with a stranger?</td>
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<td></td>
<td>Question</td>
<td>Extremely well</td>
<td>Very well</td>
<td>Moderately well</td>
<td>Quite well</td>
<td>Not very well</td>
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<tr>
<td>9</td>
<td>How well can you prevent yourself from becoming very nervous?</td>
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<tr>
<td>10</td>
<td>How well do you succeed in finishing all your homework every day?</td>
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<tr>
<td>11</td>
<td>How well can you work in harmony with your classmates?</td>
<td></td>
<td></td>
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<tr>
<td>12</td>
<td>How well can you control your feelings?</td>
<td></td>
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<tr>
<td>13a</td>
<td>How well can you pay attention during a class on your favorite subject?</td>
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<tr>
<td>13b</td>
<td>How well can you pay attention during a class on your least favorite subject?</td>
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<tr>
<td>14</td>
<td>How well can you tell other students that they are doing something you don't like?</td>
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<tr>
<td>15a</td>
<td>How well do you succeed in understanding your most favorite subjects in school?</td>
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<tr>
<td>15b</td>
<td>How well do you succeed in understanding your least favorite subjects in school?</td>
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<tr>
<td>16</td>
<td>How well can you tell a funny story to a group of children?</td>
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<tr>
<td>17</td>
<td>How well can you tell a friend that you don’t feel well?</td>
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<tr>
<td>18</td>
<td>How well do you succeed in satisfying your parents with your schoolwork?</td>
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<tr>
<td>19</td>
<td>How well do you succeed in staying friends with other children?</td>
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<tr>
<td>20</td>
<td>How well do you succeed in suppressing unpleasant thoughts?</td>
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<tr>
<td>21a</td>
<td>How well do you succeed in passing a test in your area of learning strength?</td>
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<tr>
<td>21b</td>
<td>How well do you succeed in passing a test in your area of learning difficulty?</td>
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<tr>
<td>22</td>
<td>How well do you succeed in preventing quarrels with other children?</td>
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<tr>
<td>23</td>
<td>How well do you succeed in not worrying about things that might happen?</td>
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</tr>
</tbody>
</table>

(Survey developed by Muris, P. (2001, 2002). Self-Efficacy Questionnaire for Children (SEQ-C)).
Section Four: Comments

Does your school support both your learning strengths and weaknesses? Please state why or why not.

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

Any other comments about this questionnaire:

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

Thank you for taking the time to complete this questionnaire!

Please return your QUESTIONNAIRE and consent/assent forms in the provided self-addressed envelopes:

One more thing....
POSSIBLE FOLLOW-UP INTERVIEW FORM

Would you and your parent(s)/caregiver(s) be interested in participating in a follow-up interview to further explore your perceptions of the education of twice-exceptional learners in New Zealand schools? Please circle as appropriate:

Student:
YES, I would like to be interviewed.
NO, I do not want to be interviewed.

Parent(s)/Caregiver(s):
YES, I would like to be interviewed.
NO, I do not want to be interviewed.

If you answered YES above, please complete your contact details on this page, along with a suitable time to be interviewed:

Contact details:

Student Name:_________________________________________________________

Parent/Caregiver name(s): _____________________________________________

Contact information for parents/caregivers:
Mobile phone: _____________________________________________
Home phone: _____________________________________________
E mail address: ________________________________________________
Other contact information___________________________________________

Preferred interview day and time:
_________________________________________________________________________
_________________________________________________________________________

Please return your FOLLOW-UP INTERVIEW FORM along with your QUESTIONNAIRE and CONSENT/ASSENT FORMS by email.

Thank you.
Appendix L: Teacher/SENCo Questionnaire.

**Teacher/SENCo Questionnaire**
(Adapted with permission from the ‘Twice-Exceptional Needs Assessment Survey’ by Foley-Nicpon et al., 2011)

Individual responses to this questionnaire will remain confidential.

Thank you very much for taking the time to complete this survey.

**Section One: Background information**

1. Gender: M___ F___ Other:_____


3. Your current position at your school (eg: Classroom teacher/ SENCo/ Other (please state)):
   __________________________________________________________

4. Your length of teaching service is: ______ years ______ months

5. Class level(s) you are presently teaching (e.g. Year 1, 2, 3 etc or N/A):
   __________________________________________________________

6. Do you have occasional or frequent contact with someone who has special needs?
   YES ___ (Frequency:______________________________________) NO:_______

7. Your highest academic qualification is (e.g. Bachelors degree, Graduate Diploma in Teaching or higher qualification (eg: Postgraduate diploma/ Masters/ PhD):
   __________________________________________________________

8. Have you completed any qualifications specializing in the education of Gifted and Talented individuals? Yes_____ No_____ (If YES please state):
   __________________________________________________________

9. Have you completed any professional development courses in Special Education?
   Yes _____ No_______ (IF YES please state):
   __________________________________________________________
## Section Two: Short answer questions

1. How familiar are you with the following?

<table>
<thead>
<tr>
<th></th>
<th>Extremely familiar</th>
<th>Highly familiar</th>
<th>Moderately familiar</th>
<th>Somewhat familiar</th>
<th>A little familiar</th>
<th>Not familiar</th>
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</thead>
<tbody>
<tr>
<td>Ministry of Education guidelines for the education of twice-exceptional students</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Your school’s definition of twice-exceptionality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Your school’s policies and procedures for twice-exceptional students</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Twice-exceptionality (gifted students with learning difficulties)</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Gifted students with specific learning disabilities (eg: math, writing, reading etc)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Gifted students with emotional difficulties (eg: anxiety, depression etc)</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Gifted students with Autism Spectrum Disorders (ASD)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gifted students with Attention-Deficit/Hyperactivity Disorders (AD/HD)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Your school’s provision of support strategies designed to assist twice-exceptional students</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

2. How would you describe your experience of working with the following populations?

<table>
<thead>
<tr>
<th></th>
<th>Extensive experience</th>
<th>A lot of experience</th>
<th>Moderate experience</th>
<th>Some experience</th>
<th>Little experience</th>
<th>No experience</th>
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</thead>
<tbody>
<tr>
<td>Gifted students with specific learning disabilities (eg: in math, writing, reading etc)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gifted students with emotional difficulties (eg: anxiety, depression etc)</td>
<td></td>
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<tr>
<td>Gifted students with Autism Spectrum Disorders (ASD)</td>
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<tr>
<td>Gifted students with Attention-Deficit/Hyperactivity Disorders (AD/HD)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
3. How confident are you that your current understanding of, and experiences with, twice-exceptional students enables you to make suitable evaluation referrals of twice-exceptional students to the appropriate people?

<table>
<thead>
<tr>
<th>Highly confident</th>
<th>Very confident</th>
<th>Moderately confident</th>
<th>Some confidence</th>
<th>Little confidence</th>
<th>Not confident</th>
</tr>
</thead>
</table>

4. Please indicate what you consider to be the level of importance of the following factors for making appropriate referrals for the evaluation of twice-exceptionality?

<table>
<thead>
<tr>
<th>Behavioural difficulties in the classroom</th>
<th>Most important</th>
<th>Highly important</th>
<th>Moderate importance</th>
<th>Some importance</th>
<th>Little importance</th>
<th>Not important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outside of school activities/achievements</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parental concerns or nomination</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peer relationships or nomination</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance on class tests</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance on class work or assignments</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance on IQ or similar ability tests</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher observation of discrepancies between performance formats (eg: written versus oral)</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Student nomination</td>
<td></td>
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<td></td>
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<tr>
<td>Other (please state):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. How responsible do you think the following providers are for providing suitable learning support strategies for twice-exceptional students?

<table>
<thead>
<tr>
<th>Classroom teacher</th>
<th>Most responsible</th>
<th>Highly responsible</th>
<th>Moderately responsible</th>
<th>Some responsibility</th>
<th>Little responsibility</th>
<th>No responsibility</th>
</tr>
</thead>
</table>

343
Gifted Education Specialist teacher

Special Education Needs Coordinator

School Counsellor

Educational Psychologist

Parent

Other (please specify)

6. What percentage of students at your school do you estimate are twice-exceptional?
   - %
   - Don't know

7. Please indicate what you consider to be the level of difficulty for each of the following factors, when considering the educational needs of twice-exceptional learners.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Most difficult</th>
<th>High difficulty</th>
<th>Moderate difficulty</th>
<th>Of some difficulty</th>
<th>Little difficulty</th>
<th>No difficulty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic difficulties</td>
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<td></td>
</tr>
<tr>
<td>Social difficulties with peers</td>
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<tr>
<td>Social difficulties with adults</td>
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<tr>
<td>Home-school coordination</td>
<td></td>
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</tr>
<tr>
<td>Coordination of care amongst professionals working with the students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Understandings about socio-emotional and academic issues facing the twice-exceptional student</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

8. What in-school teaching, learning or support strategies are used for twice-exceptional students at your school? Please list all and indicate their importance.

<table>
<thead>
<tr>
<th>Teaching, learning, support strategy</th>
<th>Most important</th>
<th>Highly important</th>
<th>Moderately important</th>
<th>Of some importance</th>
<th>Little importance</th>
<th>No importance</th>
</tr>
</thead>
</table>
Section Three: Please answer these questions as fully as you can

1. How does your current school identify and assess the learning needs of twice-exceptional learners? (Please state if not known):
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

2. Does your school use Individualized Educational Plans (IEP’s) for twice-exceptional students?  
YES___ NO____

3. In your opinion how effective are IEP’s in addressing and optimising the learning success of twice exceptional students in the classroom? Why do you believe this is the case?
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

4. In your opinion, are accommodations for twice-exceptional students at your school more focused on remediating areas of learning difficulty or providing for individual areas of learning strength (gifts and talents)? Please comment on as many as you can think of.
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

Thank you!
Please return your QUESTIONNAIRE FORM in the supplied self-addressed envelope.

One more thing…please see over
POSSIBLE FOLLOW-UP INTERVIEW REQUEST FORM

Would you be interested in participating in a follow-up interview to further explore your perceptions of the education of twice-exceptional learners in New Zealand schools?  
YES___  
NO___

If YES, please complete your contact details on this page, along with a suitable time for you to be interviewed:

**Contact details:**

Name:________________________________________________

School:________________________________________________

Best contact information:
School phone number:_____________________________________
Personal Mobile phone:______________________________________
Personal Home phone:_______________________________________
Personal email address:______________________________________
Other contact information_____________________________________

Preferred interview location at your school:
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

Preferred interview time:
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

Please return your FOLLOW-UP INTERVIEW FORM in the self-addressed envelope with the QUESTIONNAIRE and CONSENT FORM.

Thank you!
Appendix M: Indicative Interview Questions

Twice-exceptional Students:

1. What kind of learner are you?
2. When did you first become aware of your learning differences?
3. Can you please describe your gifts and talents areas?
4. Can you please describe your area/s of learning difficulty and how this/these affect/s your learning?
5. How do you think your gift(s) and learning difficulties have affected you as you have grown older?
6. How have schools recognised and catered for your gifts and talents?
7. How have schools recognised and catered for your area(s) of learning difficulty?
8. When thinking about your gifts and your learning difficulties, what aspects of the schooling experience have you felt assisted you the most with your learning?
9. When thinking about your gifts and your learning difficulties, what aspects of the schooling experience have been really difficult for you?
10. How do you feel about any planned support (e.g. IEP’s) that may have been put in place to assist you with your learning needs?
11. How was this support (if any) implemented throughout your schooling?
12. What are your thoughts and reflections on your school experiences?
13. Do you have any suggestions for how schools could better cater for learners like you who have both gifts and learning difficulties?

Parents/Caregivers:

1. When were you first aware that you child had gift(s) and talent(s) alongside learning difficulties?
2. How was your child identified as being twice-exceptional?
3. How did the school react to the news that your child was twice-exceptional?
4. Were they aware of the concept of twice-exceptionality? Why/why not?
5. Was there a school policy/program in place to support twice-exceptional students?.
6. How did the school accommodate your child’s learning needs in respect to both their gifts and area/s of learning difficulty?
7. How effective do you think the support provided for the area(s) of giftedness and/or the area of learning difficulty has been?
8. How do you perceive the continuity in support for your child’s learning needs during transition to new year levels/schools?
9. What positive experiences do you recall your twice-exceptional child having at school?
10. What helped your twice-exceptional child have this positive experience?
11. What negative experiences do you recall your child having to overcome at school?
12. What challenges, if any, did you have to overcome in advocating for the learning needs of your child?
13. Do you have any suggestions for how NZ schools could better provide for and support the learning needs of twice-exceptional learners?

**Teachers:**

1. How would you define twice-exceptionality?
2. When did you first become aware of the concept of twice-exceptionality?
3. Does your current school have policies and procedures documented to assist you in identifying and providing for twice-exceptional learners? If so, what do these documents include?
4. In your opinion is this documentation effective in terms of the identification of twice-exceptional students and in assisting you to evaluate their individual learning needs?
5. In your opinion, is this documentation effective in terms of communicating about and providing for the learning needs of twice-exceptional learners?
6. Given that special assessment conditions and other curriculum accommodations are often based on the provision of an Educational Psychologist and/or medical professional and/or other expert reports, do you think there are students that might be overlooked as being twice-exceptional in the school system?
7. In your experience of teaching twice-exceptional students, how much emphasis is put on catering for their area(s) of learning difficulty?
8. In your experience of teaching twice-exceptional students, how much emphasis is put on developing their area(s) of giftedness and talent?
9. In your opinion how does the NZ curriculum (as implemented at your school) support the learning needs of twice-exceptional learners?
10. How do you implement the policies designed to assist twice-exceptional learners at your school?
11. How do you implement procedures and/or resources designed to assist twice-exceptional learners at your school?
12. How do you perceive the effectiveness of the policies and provisions afforded to twice-exceptional students in the New Zealand education system?
13. In your opinion what barriers or facilitators are there in schools that impact on your ability as an educator to optimise the opportunities for learning success for twice-exceptional students?
14. Do you have any suggestions for how educators and/or educational organisations could better identify and provide for twice-exceptional learners?
## Appendix N: Initial Coding Exemplar

<table>
<thead>
<tr>
<th>Line-by-line coding</th>
<th>Excerpt from Transcript 9 F Code 07L June 3rd 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Becoming aware</td>
<td>M: The term twice-exceptional got thrown around, maybe around Year 5, but we aware when he was 5 that something was different.</td>
</tr>
<tr>
<td>Identifying difference</td>
<td>I: And what was that difference?</td>
</tr>
<tr>
<td>Reacting emotionally</td>
<td>M: He was in childcare, because I worked, and the childcare centre was like “he’s so amazing, he’s so onto it, he does this and does that” and in his portfolios, they used to get excited with the stuff and working with X because he was, I guess, in a sense, more advanced… and they were like, he’s amazing, but I used to think, yeah (sceptical), he’s the youngest in our family…</td>
</tr>
<tr>
<td>Identifying difference</td>
<td>I: You thought it was positional?</td>
</tr>
<tr>
<td>Family positioning</td>
<td>M: Yeah, you know, nothing amazing, but on starting school, within weeks the new entrant teacher said to me that she believed X was ADHD and that I needed to get him assessed.</td>
</tr>
<tr>
<td>Early awakenings</td>
<td>I: She picked up on a different aspect of X?</td>
</tr>
<tr>
<td>Identifying difference</td>
<td>M: Yes- and I’m a nurse, and know quite a bit about ADHD so I thought, no, he’s not ADHD, he’s a bright child so, no, not ADHD. So we left it at that and I butted heads a lot with the school over things like X not wanting to sit on the mat- he couldn't sit on the mat- and we pushed and pushed and we got a psychologist to come in from the MOE, but it was limited with what they could do for X…and so they did a few assessments and found out he had a very high IQ- it was 142—and that was at (age) 6, and they were like wow-and then I think the school freaked out a little bit about that.</td>
</tr>
</tbody>
</table>
### Appendix O: Frequency Tables- Teacher/SENCo Questionnaire

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valid</td>
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<td>12</td>
<td>22.2</td>
<td>22.2</td>
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<td></td>
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<tr>
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<table>
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<td></td>
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<td>9</td>
<td>16.7</td>
<td>16.7</td>
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<td>3</td>
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<table>
<thead>
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<th>Cumulative Percent</th>
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<table>
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<th>Length of Service</th>
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<th>Cumulative Percent</th>
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<td>11.1</td>
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<td>3</td>
<td>11</td>
<td>20.4</td>
<td>20.4</td>
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<td>4</td>
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<td>Total</td>
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### Class Teaching Level

<table>
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<tr>
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<th>Frequency</th>
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<th>Cumulative Percent</th>
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### Contact with Exceptional Individuals

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<th>Valid Percent</th>
<th>Cumulative Percent</th>
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Appendix P: Mobius Strips

Mobius strips were jointly discovered by German mathematicians August Möbius and Johann Listing in 1858. They refer to a surface with only one side when situated in a three-dimensional space and have interesting properties. A Mobius loop can be made by taking a paper strip, twisting it once, then joining the ends together. A line drawn down the centre of the strip will eventually join up to itself in one continuous loop (thus demonstrating it has only one boundary), this being twice the length of the original paper strip. The author uses the analogy of the Mobius strip and its curious properties, as being visually representative of diff-capable individuals in the school context, for the purposes of demonstrating the effects of current teaching practices on development of identity, capability and personal wellbeing.

Cutting the strip down the centre line produces one long strip with twists in it, not the expected 2 separate loops envisaged by most people unfamiliar with the properties of the Mobius strip. This is depicted in diagram 1 below. This visual image is representative of a whole-person approach to the education of diff-capable students, that enhances the development of learning strengths in equal measure to the recognition of areas of learning difficulty. This unified approach enhances personal awareness and understanding in a supportive learning environment focused on the provision of opportunities that develop gifts into talents. Full participation in school life is enhanced by recognition of diversity as part of the human condition, not as a deviance from social norms. The continuity of the loop represents the unified development of individual characteristics, including both learning exceptionalities, as features of the one person.

In contrast, cutting the strip one third of the way from one edge produces two loops- one longer thin strip with two full twists in it, and another intertwined shorter Mobius strip, as seen in diagram 2 below. This visual analogy is representative of current educational approaches as seen in many schools in regard to the teaching of diff-capable students, that typically focuses on learning difficulties to provide interventions directed at remediation. In doing so, learning strengths are usually ignored. Such an approach results in confused entanglement of the exceptional entities, complicating the development of personal identity, agency, participation and capability in the educational setting, as one component of the self
(the area of high ability) remains unrealised. This can give rise to identity conflicts that negatively impact upon personal well-being.

A holistic approach focused on individual capabilities that consider both learning strengths alongside learning challenges is therefore indicated. It is argued that by adopting a unified conceptualisation of learning exceptionalities, schools can better assist diff-capable students in realising the unique and creative positive attributes of their combined learning differences. Such an approach would help to promote a sense of inclusion in the school setting, to enhance the development of positive student identity and capability, thereby encouraging the development of personal well-being.
References


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