

# **A model of twice-exceptionality: Explaining and defining the apparent paradoxical combination of disability and giftedness in childhood**

**Shortened title for running head: A model of twice-exceptionality**

## **Abstract**

The literature on twice-exceptionality suggests one of the main problems facing twice-exceptional children is that there is no consensus on the definition of the term disability or giftedness and consequently the term twice-exceptional. Endeavouring to locate a definition of these specific terms loops back on itself to legislation based on the medical model of disability and the defining of giftedness in a limited way, frequently through high achievement and performance, which contradicts the generally accepted notion of giftedness in Australia. It appears that we need a model to define the apparent paradoxical term, not only to scholars within the field but to educators and the wider community of students and parent/guardians. This paper examines the contextual contributing factors in the creation of a model of twice-exceptionality, creating a preliminary point for discourses in disability, giftedness and twice-exceptionality, on which it is anticipated, future research can be grounded.

**Keywords** Twice-exceptional - Gifted education - Disability studies - twice-exceptional understanding

## Introduction

*“When I use a word,” Humpty Dumpty said, in rather a scornful tone, ‘it means just what I choose it to mean — neither more nor less.’*

*‘The question is,’ said Alice, ‘whether you **can** make words mean so many different things.’* (Carroll, 1994, ch. 6).

Little did Carroll (1994) ever envision that this throwaway line would instigate such wide-ranging application from judges, to presidents and philosophers, in contemplating and disarticulating word connotations (Walsh & Eva, 2013). With this short exchange, Carroll illustrates the classic conundrum facing researchers in defining terms and definitions used. As researchers, when we use a particular axiom, we may know the exact meaning, however, this may diverge from that of our reader (Walsh & Eva, 2013), often there are numerous meanings for particular words. Lewis Carroll’s guidance on the philosophical construction of language and the need for inherent meanings in the language we use, feeds into my research in the area of twice-exceptional children, an area where slippery definitions appear to be the norm. Characterisations based on an apparent paradoxical mix of disability and giftedness within individual children endeavour to define, categorise and contribute to understanding of this population within the fields of gifted education studies and critical disability studies. This paper is concerned with these definitions and the relationship in, and between concepts in the field, leading to the development of a model of twice-exceptionality, rather than identification and programming needs such as those identified in Project 02E’s toolkit (Morrison & Rizza, 2007). Wood and Estrada-Hernández (2009) called for “a workable and global definition of twice exceptionality that encompasses the diverse range of the individual experience” (p. 12). It is envisioned that this model will begin to enable this. Additionally, the suggestion by Ambrose, VanTassel-Baska et al. (2010) that “all in the field can benefit from forays into the distant interdisciplinary terrain from which they might derive new ideas and methods” (p. 459) has been taken up in examining the definition of twice-exceptionality through a disability studies discipline.

The discourse surrounding disability abounds with discussions about differing ways of comprehending disability and impairment (French & Swain, 2008a) and the negative suppositions which underscore perceptions of children with disability (Priestley, 2001; Singh & Ghai, 2009). Equally, there are many definitions of giftedness with some supplementary stigmatised notions of what the defining characteristics of giftedness are. Yet we endeavour to communicate on common

ground, with little shared understanding of meanings and by failing to agree on what a word means we are thus giving it differing meaning. To arbitrarily use terms such as twice-exceptional and giftedness, without allocating specific definitions and therefore meaning, requires the reader to use their definition which may contravene or conflict with that intended by the author. It should be said that the meaning of any expression is what the author actually intends to be understood from it by the reader (Hancher, 1981), defining terms is a prerequisite for this shared understanding. Why then do researchers frequently fail to define the term twice-exceptional, or define it in a limited way as a child with a learning disability?

## **Background**

Australian schools have struggled to understand the diverse nature of gifted children, since the 2001 Australian Senate review (Commonwealth of Australia) into gifted education. Educators struggle even more so with the concept of twice-exceptionality (gifted children with disability), even though inclusivity and equity in education have become the policies of choice for 21st Century education (Gray & Beresford, 2008; New South Wales Government, n.d.; Organisation for Economic Co-Operation and Development (OECD), 2008; Queensland School Curriculum Council, 2001).

Children who are twice-exceptional are children who have two exceptionalities (Coleman, Harradine, & Williams King, 2005): giftedness/talent and disability. According to Yewchuk and Lupart (1993) a learner “is considered twice-exceptional when he or she is identified as gifted/talented in one or more areas while also possessing a learning, emotional, physical, sensory, and/or developmental disability” (p.14) . Giftedness, **in an holistic definition**, can co-occur with any disability, **including intellectual disability, for example the National Education Association (2006) in the United States of America, suggests that “student with mental retardation can be a gifted artist or athlete” (p. 1). A definition of giftedness based solely on ‘measured’ intelligence quotient (IQ), is particularly limiting due to cultural and contextual factors (for example see Al-Hroub, 2011 ; Flynn, 1999; Ford, Harris, Tyson, & Frazier Trotman, 2002). Further El-Haroub (2011 ) suggests that after the Marland Report in 1972 proposed a more holistic definition, “the direct link between high performance or IQ and being gifted was lost” (p. 7).**

When people hear the term disability they equate a disability stereotype of an individual lacking in intelligence (Silverman, 2003; Swain & Cameron, 1999) to that person with disability. They become the ‘stigmatised other’. There are many highly intelligent, gifted children with physical disability who look and appear different to others. They may be hearing or vision impaired, paraplegic, have cerebral palsy or have missing extremities. Equally, there are other children who

present as 'normal' individuals but have disability which may be physical, sensory or neuro-behaviourally based. Frequently this 'invisible' (Gabel, 1999) 'hidden' disability, is not readily recognised by others (for example mental illness). These children are no less intelligent because of their disability than they are because of their hair colour; there is no corresponding logic or evidence to support the connection.

Watson et. al. (1999) contend that the foremost obstruction for children with disability, is that they reside in a society which diminishes their diversity and which frequently sees their very being as problematical and objectionable. Singh and Ghai (2009) suggest the prevalence of oppressive discourses surrounding children with disability tend to "speak and act on behalf of those children [constructing them] ... as inexperienced, passive, and intellectually immature". This requires the presumption of a non-unitary identity, whereas the dominant medical model of disability and the labelling of children with particular 'disorders' suggests a unitary, homogenous identity of disability. There is conflict between the lives and experiences of a twice-exceptional child who is first and foremost a child, one who is an active and experienced 'voice' of intellectual strength and maturity, and the medicalised dis-ability label they receive.

The literature surrounding the concept of twice-exceptionality occasionally hints at the problematical issues in defining the terms *gifted*, *disability* and *twice-exceptional*, yet the field has generally only included a focus on defining giftedness (which still has no universally accepted definition), rather than disability which is contained within the concept. To be able to situate and develop a model of twice-exceptionality in the field it is necessary to examine both areas - disability and giftedness, to endeavour to provide a clearer more definite meaning to twice-exceptionality, prior to amalgamating the two in constructing the term twice-exceptional (Figure 1).

<insert figure 1 here>

## **Gifted and talented**

There are many definitions of giftedness and this in itself presents problems when identifying, and providing for the label 'gifted child'. There is no single, universally accepted definition of giftedness, a word which is often used reciprocally with the word 'talented'. The two terms 'gifted'

and ‘talented’ are utilised inconsistently within the field, which in turn leads to further ambiguity over what the nomenclatures mean and understandings of how to identify and cater for children. Therein lays a conundrum, if we cannot define giftedness or agree on a definition, who is included/excluded from the giftedness section of Figure1? Are there absolutes of gifted and non-gifted, or degrees of giftedness as Brown et al. (2005) advocate?

### *Gagné’s definition of giftedness*

To assist in defining giftedness there exists many differing models, many advocating high achievement as a key in identifying gifted individuals. Gagné’s Differentiated Model of Giftedness and Talent (DMGT) (2012) has gained increasing attractiveness amongst educators, particularly in Australia (Education Queensland, 2013; New South Wales Department of Education and Training (NSWDET), 2004; Wormald, 2011). The features of this model advocate the developmental nature of giftedness, or potential, into talent or achievement, rather than achievement being *the* focal point of giftedness. **This model can contribute to our understanding of twice-exceptionality, in that it does not define giftedness in a narrow sense of being only intellectually, or academically based. This model incorporates multiple areas of giftedness. According to Gagné (2004, 2012), giftedness occurs in four main domains of aptitude: intellectual, (for example: general intelligence); creative, (for example: inventiveness); socio-affective, (for example: leadership); and, sensori-motor (for example: vision, endurance), all domains where disability can occur.**

The domain of gifted education describes students with two main words: gifted and talented. According to Gagné (2012) these two words do not signify two separate concepts. By differentiating these terms, the dissimilarity can take a variety of forms: the ‘gifted’ term may be applied to “high cognitive abilities” (Gagné, 2012, p. 1) but not yet achieving and ‘talent’ to the areas of very high achievement.

Gagné defines gifts as “the possession and use of outstanding natural abilities, called aptitudes, in at least one ability domain, to a degree that places an individual at least among the top 10% of age peers” (Gagné, 2013, p. 193). As opposed to talents which are more specifically the

outstanding mastery of systematically developed abilities, called competencies (knowledge and skills), in at least one field of human activity to a degree that places an individual at least among the top 10% of age peers who are or have been active in that field (Gagné, 2013, p. 193).

For the purpose of this paper Gagné's (2013) conception of giftedness is being adopted because it is widely followed and accepted in Australia (Wormald, 2011) and because it accounts for some environmental and societal factors which may affect a child's ability to achieve (and become talented) at levels considered commensurate with their innate ability or 'gift'. The giftedness section will therefore, be populated by those who demonstrate giftedness potential, but who might not necessarily be demonstrating high achievement. There is little value in utilising a single test cut-off score in identifying giftedness, and any process needs to be multifaceted (Brown et al., 2005) an holistic view of the child and their potential is needed. For the purpose of this paper, the word *gifted* is being used to abridge *gifted and talented*.

### *Giftedness and Australian policy*

The idea of a child being considered gifted in Australia, was given national attention in 1988 by the first Australian Senate Select Committee enquiry into the education of gifted and talented children (Commonwealth of Australia, 1988) and was a milestone in subsequent consideration about provisions for gifted education throughout Australia (Geake, 1999). The Senate Committee remarked that in 1988 "... no Commonwealth programs targeted specifically to the gifted exist" (Commonwealth of Australia, 1988, p. 176). The Report continued stating that:

The Committee considers that this situation is undesirable and that the gifted, a vital national resource, need more support at a national level, to overcome the disparities in the standard of provision... Many of the gifted will not achieve to their full potential, unless special educational provision is made for them (Commonwealth of Australia, 1988, p. 177).

There were no federal policies or legal mandates allied with, or following the enquiry's report, but it was significant in exposing the lack of educational provision and support for these children in Australia at the time. A ten year review and assessment of the implementation of the Senate recommendations (Geake, 1999) also suggested that in 1999 the situation had not changed since the initial 1988 Senate enquiry. There are still no specific mandates catering for gifted children, or gifted children with disability. Giftedness along with disability appears to have become the 'stigmatised other' of the 'not-normal' in society.

### **Disability**

Problems arise in discussions regarding children with disability because of the inconsistent and contradictory use of the terminology, in a similar way to that of the term *gifted*. The literature

surrounding disability is proliferated with debate about differing ways of comprehending disability and impairment (French & Swain, 2008a); the definition of these idioms; and the negative suppositions which underscore perceptions of children with disability (Priestley, 2001; Singh & Ghai, 2009). Assumptions identified in the literature as dominating contemporary society's understanding of children with disability are: these children are categorised as 'silent' and 'voiceless' 'sufferers' (Corker & Davis, 2000); and are frequently deprived of agency because they are incapable of making choices (Singh & Ghai, 2009). Goodley and Northom (2005) suggest that disability research tends to be dominated by quantitative methodologies which predominantly focus on the 'psychopathology of disability' instead of a 'psychology of disability' (Singh & Ghai, 2009). Again there is a predicament, we cannot concur when defining disability and impairment, so how can we define who is included/excluded from the disability section of Figure 1? Are there absolutes of disability and 'non-disability' and consequently absolutes of 'ability'?

Watson et al. (1999) contend that a problematic issue facing children with disability, is the fact that they reside in a world which diminishes their individual differences, viewing them as an homogenous group, with a single defining identity (disability), seeing their existence as problematical and objectionable. Presumptions of children with disability as being an homogenous group leads to a denial of the existence of an individual identity (Singh & Ghai, 2009) beyond disability (and giftedness). Goodley and Northom (2005) posit that thinking surrounding people with disability, tends to focus on deficits, what they cannot do, rather than viewing children with disability "as social actors, as controllers and as negotiating their complex identities within a disabling environment" (Singh & Ghai, 2009, p. 132). The opposite could be stated about children identified as gifted, with thinking that encompasses these children focusing on surfeit ability and what they *can* do which is considered exceptionally 'superior' to their age-peers, their exemplary achievements compared to their chronological age. On the one hand gifted children are viewed as "a vital natural resource" (Commonwealth of Australia, 1988, p. 177) and on the other hand those with disability are viewed from a standpoint of being identified as a "burden" to society, an assumption reinforced as normative by prevalent bio-medical and economic paradigms (Lero, Pletsch, & Hilbrecht, 2012, para. 1).

To a large extent research surrounding children with disability has tended to focus primarily on their experience of 'helplessness', where disability and childhood have been represented as states of dependency, and the child's needs surrounding care (Singh & Ghai, 2009). Singh and Ghai caution against simplistic notions of childhood experiences with regards to the individual experiences of children with disability, which they suggest are habitually assimilated into collectives of 'disabled

families', leaving individuals' lived-experiences eclipsed by parental/carer needs and institutional and medical notions of 'care'.

### ***International definitions of disability***

To address discrimination, segregation and frequent exclusion of people with disability, many countries have attempted to define disability and create legislation which covers those with disability so defined. Whilst on a whole this legislation has been extensive in its coverage of disability, it rarely acknowledges the disabling societies in which people with disability live their lives. In order to come up with a clearer understanding of disability and the role it plays in twice-exceptionality, it is necessary to look at some pertinent legislative definitions of disability. Firstly, we will look at how disability is defined according to the *Americans with Disabilities Act of 1990*. Secondly, the Australian federal *Disability Discrimination Act of 1992*'s definition of disability, followed by a world view of disability and impairment presented by the World Health Organisation and the *International Classification of Functioning, Disability and Health, 2011*.

### ***The United State of America - Americans with Disabilities Act of 1990***

Under the *Americans with Disabilities Act (1990)* disability is defined in a broad manner in relation to an individual who has:

- (A) a physical or mental impairment that substantially limits one or more major life activities of such individual;
  - (B) a record of such an impairment; or
  - (C) being regarded as having such an impairment
- (Sec. 12102, para. 1).

### ***Australia - The Australian Federal Disability Discrimination Act***

Similarly to the *American's with Disability Act of 1990*, the Australian Federal *Disability Discrimination Act (DDA) (1992)* and the *Disability Standards for Education Act (DSE) (2005)*, have gone a long way to protecting and providing for some people with disability, yet there remains a



group of intelligent children who experience a range of disabilities, often affecting their socio-emotional circumstances, daily activities and classroom learning, who are not being catered for, children who are twice-exceptional. These children may have any disability, (in combination with giftedness), for example: Cerebral palsy; poor coordination; dyslexia; dysgraphia; anxiety; Scotopic Sensitivity Syndrome/Irlen Syndrome; joint hypermobility; Asperger's Syndrome, to name a few. According to Silverman (2003) these children "are often teased by their classmates, misunderstood by their teachers, disqualified from gifted programs due to their deficiencies, and unserved by special education because of their strengths" (p. 4).

The Australian Federal DDA (Commonwealth of Australia, 1992) defines a disability to be:

total or partial loss of the person's bodily or mental functions; or (b) total or partial loss of a part of the body; or (c) the presence in the body of organisms causing disease or illness; or (d) the presence in the body of organisms capable of causing disease or illness; or (e) the malfunction, malformation or disfigurement of a part of the person's body; or a disorder or malfunction that results in the person learning differently from a person without the disorder or malfunction; or (g) a disorder, illness or disease that affects a person's thought processes, perception of reality, emotions or judgment or that results in disturbed behaviour; and includes a disability that: (h) presently exists; or (i) previously existed but no longer exists; or (j) may exist in the future ...To avoid doubt, a *disability* [emphasis in original] that is otherwise covered by this definition includes behaviour that is a symptom or manifestation of the disability (p. 5).

The DDA (1992) uses an expansive definition of the term disability. It expressly refers to a disability that impacts on learning as being a "a disorder or malfunction that results in the person learning differently from a person without the disorder or malfunction" (p. 5).

### ***International – The International Classification of Functioning, Disability and Health***

The World Health Organisation has proposed a more holistic definition of disability and impairment, which includes disability as a bi-product of the environmental context in which people with disability live their lives. *The International Classification of Functioning, Disability and Health* (ICF) (World Health Organisation (WHO), 2014) stresses that disability discourse should emphasise "environmental factors in creating disability, ... [with] problems with human functioning

... categorized in three interconnected areas” (2011, p. 5). Firstly, these being impairments in how the body functions or variations in the structure of the body, for example deafness, paralysis. Secondly, highlighting activity limitations where difficulties may exist in undertaking activities, for example hearing, walking. Thirdly, restrictions to participation which restrict a person with disability from being involved in any area of life, for example facing transport restrictions due to a person using a wheelchair. The report continues by stating that a disability refers more to the “difficulties encountered in any or all three areas of functioning” (World Health Organisation, 2011, p. 5).

In some countries legislation the term ‘disability’ is used and in others the term ‘impairment’, (see for example the Australian DDA). In disability studies these two terms have differing meanings which in some instance appear to conflict with regional definitions. International definitions of impairments refers to:

any loss or abnormality of psychological, physiological, or anatomical structure or function to do with the body... Examples of impairments include blindness, deafness, loss of sight in an eye, paralysis of a limb, amputation of a limb; mental retardation” (United Nations Department of Economic and Social Affairs, 2004, para. 2).

Whereas international disability definitions describe an operative restriction or activity limitation:

caused by impairment where the impairment causes restriction or lack...of ability to perform an activity in the manner or within the range considered normal for a human being... Examples of disability include difficulty seeing, speaking or hearing; difficulty moving or climbing stairs; difficulty grasping, reaching, bathing, eating, toileting (United Nations Department of Economic and Social Affairs, 2004, para. 3).

These international definitions and viewpoint on disability and impairment, are set on backgrounds of contextual factors and theories of disability. This adds further layers to the conundrum of clarifying and agreeing upon definitions and terms to be utilised in twice-exceptional discourse. In order to gain legislative provision under these definitions, individuals have to be categorised by a medical practitioner as having a disability. Hence, the dominance of the bio-medical approach to defining and

categorising disability continues to be promulgated with little alternative.

The bio-medical and economic paradigms see resources and support allocated based on diagnoses which are limited to the specific definable verification categories of disability and, at least in Australia, not in conjunction with the Federal DDA's definition of what constitutes disability. According to McDowell and O'Keeffe (2012) the current systems are based on several assumptions. The first being that allocating a diagnostic label to all children with 'significant impairment' (p.3) is feasible, in actuality there are many disabilities not covered under the present funding systems, particularly in Australia. Secondly, there is nothing within the diagnosis or labelling of a particular disability which specifies the impact this may have on a child or their life and education. McDowell and O'Keeffe argue that existing systems frequently ignore the needs of children who have a solitary, intense disability which is excluded from authorised funding categories, but who have comparable impairment levels commensurate with disabilities which are included. The current system ignores children with multiple non-included disabilities but where the effect of the impairment combination is "greater than a single severe diagnosis" (McDowell & O'Keeffe, 2012, p. 4). McDowell and O'Keefe suggest this is where "good clinical practice dictates against the premature application of diagnoses of lifelong significance" (p.4) yet, in some instances clinicians may be forced into premature labelling to fit the funding requirements. There remains lurking in the shadows Humpty Dumpty's disparaging insinuation that when a word such as disability is used in a particular context, for example funding requirements, the word's meaning is "just what ...[they] choose it to mean – neither more nor less" (Carroll, 1994 , ch. 6) .

## **Disability Theory**

The literature encompassing disability dialogue abounds with discussions about varying ways of comprehending disability and impairment (French & Swain, 2008a). Priestley (2003) describes four dominant models of disability: two individual models – biological, medical/individual model, and psychological, tragedy model; and two social models – structural, social model and cultural, affirmative/non-tragedy model. French and Swain (2008a) contest that these are models of 'the problem' rather than models of professional intervention however, they form useful structures in which to discuss and situate the developing model of twice-exceptionality.

### *The individual/medical model of disability*

The medical model of disability dominates policy, practice and provision for people with disability.

This model defines and understands disability as residing in individual impairment “defect and abnormality, the clear implications are in terms of care and cure...the establishment of a whole range of professions, and the professionalization of western society, is grounded in and justified by this foundation” (French & Swain, 2008a, p. 130).

The medical model of disability grew out of the science behind what constitutes ‘normal’ and ‘abnormal’ in relation to the body, including ‘normative’ cognitive functions, the corporeal ‘norm’, with the “suffering [sic] of disabled people [prompting] a medical solution” (Wolbring, 2001, p. 38). This medicalisation of disability creates a two-fold problem in that quality of life and medication are often necessary however, medicalisation leads to legitimisation of disability only by the confirmation “by authorised medical professionals” (French & Swain, 2008a, p. 131).

Establishment of an ‘ideal’ body, and as a corollary the ‘ideal’ mind, fits in with the formation of the medicalisation of the body and mind (Thomas, 2007). Utilising terminology which incorporates the normal/abnormal binary constructions ‘the dis-abled’ ‘other’ (those un-able) (Barnes, Mercer, & Shakespeare, 1999; Coleridge, 2000; Goggin & Newell, 2005) mentally or physically ‘unfit’. Perceptions of disability (and giftedness) have been tied together with advents in scientific concepts, such as the bell curve, and the concept of a ‘normal’ curve where those on the extremities signify the ‘abnormal’ (Thomas, 2007), societies ‘other’, the ‘outsiders’.

The bell curve “introduced the idea of the embodied norm, bodies and body practices became standardised and homogenised...Those at the curve’s extremes constitute the ‘abnormal’” (Thomas, 2007, p. 67). There became an increasing imperative for people to ‘fit in’ and conform to the category of normalcy (Thomas, 2007). Disability was seen as affecting an individuals’ ‘placement’ on the bell curve, as was giftedness, consequences of this perception relate to social standing in relation to the ‘norm’ and resultant societal perceptions of competence (Swain & Cameron, 1999; Watson et al., 1999) or incompetence. A preoccupation with impairment indicates a fixation with corporeal ‘perfection’, cognitive and bodily ‘fitness’ (Singh & Ghai, 2009) and the bell curve of ‘normality’.

### *The tragedy model of disability*

When the then Prime Minister of Australia, Julia Gillard, cried during her speech in parliament outlining the introduction of the National Disability Insurance Scheme, (NDIS) (Ireland, 2013) aimed at providing insurance cover for Australians with ‘significant disability’, it could be seen as a perpetuation of the tragedy model of disability.

The tragedy model represents disability as a biological state, with a limitation ascribed “as a deficit, a personal burden and a tragedy” (Wilder, 2006, p. 2), something “ ‘*abnormal*’ [original emphasis] and to be avoided at all costs” (Oliver & Barnes, 1996, p. 66). Saxton (2000) indicates perceptions of people with disability are that they have no quality or enjoyment of life and that they are burdensome to society. The tragedy model of disability includes perceptions of people with disability which are frequently negative and stigmatised stereotypes (French & Swain, 2008b). These comprise the use of language of exclusion and concepts of “inferiority, inadequacy, pity, sadness, evil and disgust” (French & Swain, 2008b, p. 8).

### *The social model of disability*

The social model of disability grew out of the shift to remove attitudinal and societal barriers to people with disability predicated in social and cultural environments (Priestley, 2001). This model embraces the view that despite an impairment, which frequently cannot be changed, individuals with disability are “still of equal intrinsic worth...[and] it is society that must come to terms with their disability and accept them as they are” (Coleridge, 2000, p. 28) so the society is ‘disabling’ rather than the individual’s disability. Criticisms of the purely social model of disability include the supposition that it discounts individual experiences of impairment, a critique which the affirmative model seeks to address.

### *The affirmative/non-tragedy model of disability*

The affirmative model of disability grew out of the social model which views people with disability in a positive light, this model encompasses a “way of thinking that directly challenges presumptions about experiences, lifestyles and identities of people with impairments” (French & Swain, 2008a, p. 65). This model builds upon the existent social model providing a framework for individualistic understanding of people with disability and their daily lives and directly challenging the personal tragedy model (French & Swain, 2008a). It seeks to develop an understanding amongst people who do not identify with disability, that disability and impairment constitute a fundamental facet of personal identity for those with disability, further that “affirmation is expressed through resilience and resistance to the dominant personal tragedy model” (French & Swain, 2008a, p. 65).

The affirmative model challenges supposition regarding the lifestyles, experiences and identities of individuals with impairments, but French and Swain caution about the oversimplification of disability under this model stating that “no disabled person is simply disabled: they are young, old, working class...” (French & Swain, 2008a, p. 66) and even gifted. This model serves to reject the prevailing discursive practices with regards to people with disability and their lives, and affirm the

validity of individual experiences, lifestyles, and notions of self (French & Swain, 2008a) as well as the notion that an individual can be gifted and have a disability.

### **Disability and giftedness: Twice-exceptionality**

The literature predominantly refers to learners with giftedness and disability as being twice-exceptional (Beckley, 1998; Foley-Nicpon, Allmon, Sieck, & Stinson, 2011; Foley-Nicpon, Assouline, & Colangelo, 2013). The term twice-exceptional is widely used by researchers though it remains a relatively new term amongst educators (Foley-Nicpon et al., 2013). The label ‘exceptional’ is traditionally a special education term which is generally used to specify children with either exceptional ‘strengths’ or exceptional ‘weaknesses’ (Hallahan & Kauffman, 1980).

The idiom ‘twice-exceptional’ was coined by Gallagher in referring to children who had two exceptionalities (Coleman et al., 2005): exceptional strengths (giftedness) and a disability (Assouline, Foley-Nicpon, & Huber, 2006; Beckley, 1998; Foley-Nicpon et al., 2011; Foley-Nicpon et al., 2013). According to Assouline et al. (2006) a learner “is considered *twice-exceptional* when he or she is identified as gifted/talented in one or more areas while also possessing a learning, emotional, physical, sensory, and/or developmental disability” (2006, p. 14). The evolving model of twice-exceptionality (Figure 2) illustrates the connection between disability, impairment, social and cultural milieu and giftedness.

However, research tends to focus on educational interventions, treatment and characteristics as learners instead of their holistic lived experiences as children rather than only school students. Other researchers refer to twice-exceptional children as being those with learning disabilities, rather than a broader use of the term to encompass all disabilities, implying that twice-exceptional refers only to gifted students with learning disabilities. For example, Silverman (2005) “twice-exceptional: gifted and learning disabled” (p. 2) and Silverman (2013) “in the condition of twice-exceptionality-giftedness combined with learning disability” (p. 13). Yet other researchers begin with discussing or referring to twice-exceptionality when in actuality they write about only a subset of this group those with giftedness and learning disabilities, for example Nielsen and Higgins (2005) and Hanlon (2011).

The phrase twice-exceptional is used inconsistently within the literature, frequently referring only to gifted students with learning disabilities (GLD) and overlooking the use of the term with reference to children who have other disabilities (e.g. motor skill impairment). This is further compounded by researchers focusing on the area of GLD with the implication that this is the only area of twice-exceptionality. However, Foley-Nicpon et al. (2013) are an exception as their study specified the

rationale behind choice of specific disability for their research whilst acknowledging the existence of other disability categories. Foley-Nicpon et. al. (2013) choice of disability for their empirical study focused on autism spectrum disorders (ASD), specific learning disabilities (SLD), attention deficit hyperactivity disorder (ADHD), and emotional disturbances (ED). Their rationale for this selection was that, although other disability categories may well be relevant to their research, there were a number of practical reasons for restricting the categories (Foley-Nicpon et al., 2013).

Firstly, availability of research literature; frequency of diagnosis in schools (SLD and ADHD are main categories in North America); increased incidence rate (e.g. ASD); or the area in gifted education which is accorded extensive attention (e.g. ED); and because of trepidation regarding uneven development (e.g. socio-emotional development vs. academic development). This acknowledged lack of research into other disability categories means there is an extensive research gap in the literature regarding children with other exceptionalities. A criticism of this categorisation of disability in the literature is that it further reinforces the propensity of specific categories of disability related to medical needs-models - the medical model of disability, instead of in terms of the individuality of lived-experiences and “individuals with diverse educational needs” (Newsome, 1985, p. 53).

Winzer (2010) states that children who possess exceptionalities struggle to reach their fullest potential and that “their intellectual, emotional, physical, or social performance falls below or rises above that of other children” (para. 1). Winzer maintains that twice-exceptional children possess special needs relating to their psychological, physical, cognitive, social or emotional issues, or an amalgamation of these. These children are deemed to parallel children considered the ‘norm’ but they are seen to digress from what is considered to be “average in physical, mental, emotional, or social characteristics” to a degree which requires special education services/intervention to “develop [them] to their maximum capacity” (Boykin, 1957, p. 42). Boykin suggested that twice-exceptional childrens’ needs and issues with adjusting to life situations, were frequently heightened “by their own inability and lack of opportunity to cope with normal life situations, demands, and activities, or by the attitudes and restrictions of society and its failure to give exceptional children a fair, unbiased, unprejudiced chance to achieve” (Boykin, 1957, p. 42). According to more recent understandings little has changed since Boykin’s sentiments.

The educational life of a twice-exceptional student is often littered with negative experiences which can cause students to feel like a failure and to have low self-efficacy, increased internalised and externalised anger, and anxiety and depression (Barber & Mueller, 2011). This is particularly

troublesome as Vespi and Yewchuk (1992) found that these students had an immense aptitude when it came to self-motivation and self-confidence. However, this was set against a background of contradictory academic and social skills, which led to clouded ability to deal with peers and interpret and react to non-verbal behaviour, and which, in turn, led to frustration, anxiety, negative school attitudes, heightened dread of failing and unrealistic expectations of themselves (Foley-Nicpon et al., 2011; Vespi & Yewchuk, 1992).

In 2011 (Foley-Nicpon et al.) a review of the empirical research conducted over the previous two decades in the United States into twice-exceptional students showed that many of the studies focused on limited areas of twice-exceptionality, again clouding the field with differing definitions appearing relating to twice-exceptionality. The analysis noted 43 empirical studies examining particular areas of twice-exceptionality (Foley-Nicpon et al., 2011). However, the empirical study focused on research that had been conducted in three specific areas SLD, ADHD, and ASD. Of these studies, 14 were qualitative, 25 were quantitative and four used mixed methods, indicating the favouring of quantitative data over qualitative (Foley-Nicpon et al., 2011). Additionally, diagnosis and identification methods and definitions for twice-exceptionality, varied within the empirical studies making comparisons across the projects problematic, with varied inclusion and exclusion criteria. The majority of the studies focused on SLD rather than the full spectrum of twice-exceptionality.

There are gradations of giftedness, disability and twice-exceptionality, but do we define twice-exceptional children by the impacts their disability has on their giftedness? And if so, how can those be measured? This model of twice-exceptionality (figure 2) seeks to act as a clarifying framework with regards to research involving these children and has the potential to be utilised by researchers in defining twice-exceptionality.

### **The evolving model of twice-exceptionality**

The rationale for developing a model to explain twice-exceptionality lies in the circumstances explained hereto. The acknowledgment and identification of twice-exceptional learners has been, and continues to be, hampered by the misperception that being gifted means being an academic high achiever (Silverman, 2003). While educators find it hard to reconcile the apparent paradox between being gifted (implying being exceptionally able), and being 'dis-able' or disabled (implying being un-able in some way) (Silverman, 2003), this model intends to endeavour to reconcile this. Tannenbaum and Baldwin (1983) state that the apparent contradiction has been, and



arguably still is, viewed as “entirely incompatible and irreconcilable in any single child, yet it exists” (p. 12), and arguably still does today (Foley-Nicpon et al., 2011; Silverman, 2005). There is a discord between the way we define and understand these terms within and beyond academia, therefore, this model aims to contribute to defining and understanding twice-exceptionality.

Inadequately defining or failing to define twice-exceptionality makes it problematic to acknowledge and consider their educational needs related to their distinctiveness. Recognition of their exceptionality and daily lived-experiences of impairment and giftedness, can lead to better understanding by educators, parents/carers and the children themselves, a visual model can assist in articulating twice-exceptionality. According to Foley-Nicpon et al. (2011) the lack of a definition impedes research in this area.

In using the **medical and affirmative models** of disability to frame the development of a twice-exceptional model, it is anticipated that the resulting form will focus on the individual child who is twice-exceptional. Additionally, affirming that a person who is twice-exceptional has an identity which is not solely defined as being ‘a dis-abled, gifted person’ but is multi-faceted and contributes to their uniqueness as an individual.

As discussed earlier, the medical model of disability, still dominates definitions of disability as it is medical practitioners who must make the clinical judgements regarding individuals and ‘diagnosis’ of disability, based on these judgements. Tools such as the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (American Psychiatric Association, 1994), rightly or wrongly, dominate, and have major influence over diagnosis in the field of mental ‘disorders’, particularly in Australia and America. The DSM-5 has its critics (see British Psychological Society, 2011; Frances, 2012; National Health Service, 2013; Society for Humanistic Psychology, n.d.), yet this ‘tool’ remains widely used.

As a result of the medical model of disability being the prevalent way of defining and categorising disability in our society, the labels of ‘disorders’ appear in the disability section of the model to assist researchers and educators in seeing how these ‘categories’ can tie-in with giftedness, in constructing twice-exceptionality. It is to be noted that just because a disability category is not listed, it does not mean that it is not included in the model, the categories appear as examples and as a guide only. If a disability is recognised under the Disability Discrimination Act (Commonwealth of Australia, 1992) then it is automatically included within the model regardless of funding status and nomenclature.

<insert figure 2 here>

The model should be viewed as having imprecise and blurred edges where there is no clear cut-off, or boundary between gifted/non-gifted and disability/non-disability. As Brown et al. (2005) suggested for giftedness, in this case both giftedness and disability are dynamic non-static conditions, which vary within and between individuals, and in differing situations depending on the prevailing social and cultural milieu. For a fuller description of how twice-exceptional children may demonstrate the two sets of traits in Figure 2, we need to consider the interface between giftedness and disability and acknowledge this interface is interceded by the social and cultural milieu where twice-exceptional children live their lives (Wood & Estrada-Hernández, 2009). Twice-exceptional children may display the same gifted tendencies as 'regular' gifted do, but these may be 'hidden' by disability (Brody & Mills, 1997). They also may display the same disability dispositions as those with disability, but these may be 'hidden' by giftedness (Brody & Mills, 1997). These two 'hidden' tendencies have been referred to as the 'masking effect' or 'masking hypothesis' (Assouline et al., 2006).

What appears to be different, for twice-exceptional children, is the way these two traits of disability and giftedness affect individuals which is beyond the scope of this paper. However, a brief outline of gifted traits which twice-exceptional may display are: curiosity; a well-developed vocabulary; intense, wide interests; high creativity; and divergent thinking (Trail, 2011; Wood & Estrada-Hernández, 2009). Twice-exceptional children share many characteristics with 'regular' children with disability, in that they frequently display 'deficits' in comparison to the so called norm. These 'deficits' can include: inconsistent performances at school; deficits in planning and organisation; deficits in cognitive processing; deficits in receptive and/or expressive communication; and deficits in motor skills (Trail, 2011; Wood & Estrada-Hernández, 2009).

### **The influence of social and cultural milieu**

Without definitive agreement on the meaning of giftedness and disability, due in part to the influences of particular societies and culture, twice-exceptionality needs to be clarified within a social and cultural framework. The social and cultural milieu surrounding twice-exceptional individuals determines the process of 'categorising' children and the complement of characteristics considered 'normal' for child members of each 'category' of disability, giftedness and twice-exceptionality. Further environmental influences on childhood determine, as Waksler proposed, that "children are viewed ... in their very nature [as] not grown up and thus *not something* rather than *something*" [original emphasis] (Waksler, 1991, p. 63) and consequently become a social construct where there is no universally accepted view of childhood (Priestley, 2003).

In one society and culture what constitutes giftedness may differ dramatically from another society's views, as Freeman states "context is all in the identification of giftedness because 'gifted' is an adjective, a description, so the recognition of individuals who are seen as meriting that term depends on comparisons" further that "how each individual reacts to their classification as gifted is also dependent on personality and home support" (2005, p. 80) and culture. The same could be stated for disability, a child who may be identified with disability in one culture may not necessarily be seen as having a disability in another (Utley & Obiakor, 2001). There needs to be societal and cultural shifts in acceptance of the co-existence of disability and giftedness, and a shared understanding.

## **Conclusion**

Lack of consensus on what constitutes twice-exceptionality, slippery definitions and problems with quantifying and measuring both giftedness and disability impede research in this area. With the two overlapping definitions of what disabilities are, and what giftedness is, researchers have attempted to clarify the paradoxical notion of this co-occurrence within individual children. Yet much existent research continues to primarily focus on certain areas of twice-exceptionality, (in particular SLD, interventions, characteristics and treatment), at the expense of others, rather than elucidating children's lived experiences as rich sources of evidence for an action agenda. Lack of agreement within the field on what commonalities exist for twice-exceptional children further complicates research and provision.

The literature suggests one of the main problems facing twice-exceptional children is that there is no consensus of the definition for the terms disability or giftedness and consequently the term twice-exceptional. Indeed, Ambrose et al. (2010) suggest that the discipline of gifted education is fractured in areas such as practice, identification and research. Endeavouring to locate a definition within this fractured milieu means the specific term of twice-exceptionality loops back on itself to legislation based on the medical model of disability, the categorisation of disability, and the defining of giftedness in a limited way, frequently through high achievement and performance, which contradicts the generally accepted notion of Gagné's representation of giftedness. The twice-exceptional model seeks to instigate discussion in defining the term, not only to those researching within the field, but to teachers and the wider community of parents/guardians and students. The contextual contributing factors informing the foundation of this model have created a preliminary point for discourses in disability giftedness and twice-exceptionality. It is anticipated that future research can be grounded upon this model to facilitate discourse, practice and interventions for twice-exceptional children.

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