2013

Transition and students with twice exceptionality

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Publication details
Published version available from:
http://dx.doi.org/10.1017/jse.2013.3
Abstract

*Twice exceptional* is one of the terms used to describe students who have giftedness and a disability. This is a small heterogeneous population of individual learners who are underserved in special, gifted, and mainstream education settings. Despite the availability of research on transition for students with disabilities there is little research or literature available on transition for students who experience twice exceptionality (2E). This paper provides a review of the literature available on 2E, taking a lifespan perspective and a school transitions context for students experiencing 2E. Finally the synthesis of 2E and transition highlights a potential way forward in the research across special, gifted, mainstream and inclusive education to transform student profiling, identification and transition.

**Transition as a Multilayered and Discontinuous Process**

There has been a shift in research over the last 20 years towards understanding transitions as multi-layered processes that involve multiple discontinuities (Petriwskyj, Thorpe & Tayler, 2005). Wider and more inclusive perspectives on transition allow us to be better informed on the variety of experiences over time for individual learners. Transitions can be understood as specific processes occurring during particular life course turning points. These processes are linked to changes in physical development, roles and relationships and require certain adjustments depending on the environment and the individual nature, culture and resilience of the person. This is the context for the following discussion on transition, students experiencing 2E and the expanding conceptualisations of giftedness and disability.
Legislative Developments and Giftedness as a Multifaceted Concept

Two major legislative developments in the USA in the 70’s were the Marland Report on Gifted Education (1972) and the (1975) Education for All Handicapped Children Act (Assouline & Whiteman, 2011). However, this legislation still did not lead to a shared understanding about the students experiencing 2E who were sometimes transferred between these separate fields of education. Giftedness and disability were seen as distinct, discrete diagnoses so special education and gifted education remained mutually exclusive for nearly 30 years (Reis & McCoach, 2002). With the broadening conceptualisations of disability and giftedness since the 1970’s (Ashman & Elkins, 2011) and greater moves towards inclusive education for all children, there is growing awareness that a student may have coexisting giftedness and disability to various degrees. By the 1980’s in Australia, giftedness was being viewed as a multifaceted concept but there were few Australian research studies on the disabled gifted (Ashman & Elkins, 2005, p. 364). In an online database search for the Australasian Journal of Gifted and Talented Education in 2012, there are fifteen articles relating to gifted learning disabled (GLD) from 1995 to the present and nine that include 2E from 1998. Most of these articles were produced during the Asia Pacific conference on giftedness held in Sydney in 2010. No reference to students who experience giftedness or have 2E has been discovered in the Australasian special education research journals during this review. However, given the shared interest in students with disabilities such as Autism Spectrum Disorder (ASD) there is potential for multidisciplinary collaborative research into 2E between gifted and special education in Australasia.
Although researchers and advocates in the field of gifted education do not necessarily agree on the terminology, awareness of this group of students has been acknowledged by respected researchers in gifted education for over 90 years. 2E wasn’t written into legislation in the USA until 2004 (Assouline & Whiteman, 2011) although, as early as 1923, Leta Hollingworth spoke of these students identified with special talents and defects. In 1971 June Maker referred to them as the gifted handicapped and James Gallagher first coined the term twice exceptional in 1975 (Coleman, Harradine, & King, 2005). Renzulli (1977) took the people first language approach and suggested using the general term for students who were gifted as students who exhibit gifted behaviours. Fetzer (2000) spoke of dual exceptionalities for those who experienced 2E. It is also likely that 2E exists on a continuum across types and degrees given the many potentially different combinations of giftedness and disability (Cline & Hegeman, 2001). Terms such as gifted learning disabled (GLD) or 2E are now mostly interchangeable and common in the gifted education research, advocacy literature, and the learning disability field. GLD is to date the most researched combination of twice exceptionality in gifted education and includes disabilities such as ADHD, Autism Spectrum Disorders (ASD) and specific learning disabilities (SLD). Gallagher’s people first friendly term twice exceptional (2E) has been used in this article as it is broadly inclusive of disabilities and giftedness.

**Inclusive Education and Twice Exceptionality**

Rarely is giftedness mentioned in the inclusive education literature (Smith, 2005) however, the UNESCO (1994, p. 6) Salamanca statement was clear that inclusion also meant giftedness. “…those who may be potentially marginalised due to disability, gender, emotional/behavioural problems, family background, ethnicity, giftedness,
migrants, poverty, hearing or visual impairment, language delay, among others.”

Inclusion goes beyond disability and aims to ensure all students achieve their individual educational potential (Rouse, 2012). How effectively barriers to learning are anticipated and removed for students who are experiencing 2E will depend on how broadly inclusive the school system is and how well prepared teachers are over time to support all students (Rouse, 2012). Understanding the possibility of 2E is important in research concerned with individual students’ learning needs. A view proposed by Assouline and Whiteman (2011) is that without a comprehensive understanding of the combination for example of giftedness and AS an accurate diagnosis and appropriate educational provisions can be missed.

**Myths and Misdiagnosis**

Within the last eight years and since the reauthorisation of the Individuals with Disabilities Education Act (IDEA 2004) in the USA, (Coleman, Harradine & King, 2005) it is now understood that giftedness and disability are not mutually exclusive. The Disability Standards for Education in Australia (Attorney-General’s Department, 2005) does not mention 2E or students experiencing GLD so there may be an assumption in Australia that students who are also gifted do not require any special interventions. Teachers may believe that gifted means globally gifted or highly able across all domains at all times (Karnes, 2004). This belief denies the enormous diversity among gifted students and contributes to the lack of appropriate services for these students. Few mainstream teachers know how to recognise the characteristics of learners who are gifted and fewer still recognise the paradoxical nature of students experiencing 2E (Bianco, 2005) so this situation needs to change through the education of teachers and policy
makers For example, some behaviours of gifted children can appear similar to behaviours which define other exceptionalities. Effective and efficient means of identification and provision are not yet well established for 2E so students may remain unidentified, misdiagnosed and underserved (Webb, Amend, Webb, Goerss, Beljan, & Olenchak, 2005). The most common misdiagnoses in gifted children and adults are AD/HD, Oppositional Defiant Disorder (ODD), Obsessive Compulsive Disorder (OCD), and Mood disorders. A dual diagnosis of giftedness and disability or 2E is possible, however, identification and correct diagnosis requires an understanding of personality factors, context and the degree of giftedness in the individual. Webb et al. (2005) suggest that discrepancy in a cognitive profile does not necessarily mean there is a learning disability. For this reason psychologists need education in giftedness (Assouline & Whiteman, 2011).

Implications of Misdiagnosis

Common in the literature on 2E is the well-accepted proposition that there are three types of learners who experience GLD. According to this idea there are those who are gifted with subtle learning disabilities, which may only become apparent during transitions such as when schoolwork increases in difficulty. The second group is actually identified with a learning disability, but although gifted, may never be identified as gifted. The third group is not identified as gifted or with a disability because each masks the other and the student performs within average expectations (Wormald & Vialle, 2011). Disagreement exists over this concept of masking (McCoach, Kehle, Bray, & Siegle, 2001). However, misdiagnosis has major implications for the teacher’s role in the identification process and delivery of appropriate transition support. The issue of
misdiagnosis underscores the need for empirical research in this area.

**Empirical Studies in Twice Exceptionality**

In an empirical investigation of 2E, Foley Nicpon and colleagues (2011) examined research from 1990 through 2010. They intentionally considered GLD, AD/HD and ASD. Most studies were around the topic of identification and referral but other categories were psychosocial factors and effect of interventions. Several refer to transitions within the nature of their investigations, but it was not the central issue of any papers. There were a total of forty-three empirical studies investigated. Twenty-one were about GLD, seventeen gifted/ADHD and five were about gifted students with ASD. Twenty-six empirical studies were published before 2005 so it would have been useful to have reference to some of these USA studies in the Ashman and Elkins (2005) text. In the *International Edition of the Education of the Gifted and Talented* (Davis, Rimm, & Siegle, 2011) there is no specific information on 2E and transitions.

Although in Australia gifted and special education tend to be separate entities, Assouline and Whiteman (2011) suggest that special education is an umbrella for exceptionality housing giftedness, 2E and disability. They recommend that in recognising individual differences educators and psychologists need to have a realistic understanding of the individual variations in physical, cognitive and social emotional development in each group. Some of the core issues around transition and twice exceptionality will now be considered.

**Profiling Students Experiencing Twice Exceptionality**

The language used to describe, define or identify need or ability is important in gaining access to appropriate services during transitions; such as before entry to school,
during school, moving grades into middle or high school and leaving school. Students experiencing 2E may not be identified for any specialist service and therefore may be particularly at risk where they are not served for any of their special needs (Cline, 1999). This is because the identification processes in each of the fields of gifted and special education remain narrow in focus (Bianco & Leech, 2010). Bianco (2005) examined the effects of disability labels; learning disability, emotional, behaviour disordered on general and special education teacher referrals to gifted programs. These labels do influence educators’ thinking and behaviour in that special educators do not tend to look for gifted behaviours or refer these students to gifted education services. Gates (2010) has renewed calls for the field of gifted education to change, take note of developments in special education and focus on the whole child rather than the labels. It has been found that different educational settings, beliefs and teacher training lead to varying success in profiling students experiencing 2E. Mainstream teachers are more likely than special education teachers to refer students with disabilities to gifted education services (Hands, 2009).

According to Rogers (2011) 14% of the gifted population in her study showed some form of disability. This is compared with previous estimates that 2-5% of the gifted population will have disabilities and 2-5% of students with disabilities will be gifted (Nielsen, 2002). Lovett and Sparks (2011) agree the 2E population exists, but challenge the prevalence based on GLD identification in particular. Due to such wide variability in criteria, definitions and assessments, identification and profiling processes need to be prioritised in the research.

**Teachers’ Role in the Identification Process**
All teachers need to know about students who experience 2E (Karnes, 2004, p.18). Clark (2002) stated professional development for special education teachers is essential as students with disabilities in vision, communication, hearing, behaviour, social-emotional development or learning may also be gifted. Vialle & Rogers (2012) argue that the challenge for inclusion of students who are gifted is the adequate education of all teachers in the nature and needs of students experiencing giftedness.

Identification During School Transition Processes

Students who experience 2E could be described as being in transition between different educational cultures (Cline, 2001) as they experience vulnerability due to individual developmental asynchrony (Silverman, 2007). They may not fit neatly into the usual age-grade lockstep of school, but require flexible acceleration for their giftedness and remediation or accommodation for their difficulties. These students may follow a different developmental trajectory from learners who are not experiencing this asynchrony (Baum, Dann, Novak, & Preuss, 2009).

Transitions are spaces where deeper learning and self-awareness can occur and where different individual needs and roles can be negotiated so that students can develop their talent and themselves (Moon & Reis, 2004). Unfortunately most students with GLD are not identified for either their disabilities or their exceptional abilities until much later in life (Brody & Mills, 1997). According to one study 41% of the gifted students with disabilities were not diagnosed until college (McEachern & Barnot, 2001). In order to identify and profile students with special needs of any kind, teachers need to know what to look for, have valid screening instruments and flexible assessment processes sensitive enough to assist in identification. As many students who experience 2E remain
undetected, the identification process can be very delayed, if it happens at all. According to Dole (2001) there is little research available about the role of these experiences on the identity formation of learners who experience 2E. However, vulnerability, poor self-concept, poor self-efficacy, hypersensitivity and high levels of frustration, anxiety and self-criticism are reported so improving the outcomes for the students is vital. According to one student with 2E, ‘School is a place where you grow not a place where you just are’ (Coleman, 2001, p. 62).

School transitions, such as entering third grade, middle school, high school and college present opportunities for a learner to be identified as experiencing 2E because work and curriculum demands increase, along with the amplified need for organisational skills and the expectations of greater independence. Clues of difficulties arising may be that: assignments are not handed in, are inadequate or late, or behaviour becomes difficult where the students appears lazy or disruptive. However, clues can be easy to misinterpret (Hands, 2011) so students need to be monitored closely and involved as agents in examining their own learning (Prior, 2011). Students experiencing 2E can become more successful in school (Moon & Reis, 2004) if the assessment of their abilities and needs is earlier, more comprehensive and individualized (Foley Nicpon et al., 2011). A coherent instructional framework is needed with the best fit between their asynchronous needs and flexible, effective provision over time and transitions (Hughes & Rollins, 2009).

**Early Childhood and Transition to school**

Optimal child development requires early identification, profiling and assessment of needs because attitudes towards learning and self begin early in a child’s life (Chamberlain et al., 2007). There is a lack of research documenting children’s
experiences in the transition to early childhood education. It is acknowledged that the transition will be more difficult depending on the degree of discontinuity between early childhood and beginning school (Davies, 2011). One of the possible transition issues for students who are highly gifted is early entry into school. Highly gifted children generally are considered at risk in the early years of school through the inappropriate match of needs and curriculum provided. When disability is added to the mix, the transition to school can be fraught with many difficulties because a high level of giftedness alone can create significant discrepancies form age peers’ development (Gross, 2004). A rare example of a research paper on learners experiencing 2E entering preschool is from Chamberlain et al. (2007). The authors suggested that routines based assessment and play based assessment may be particularly effective in identifying and providing for the needs of preschool children experiencing 2E. They acknowledged that little had been done in either gifted or early childhood special education to address the needs of this 2E group.

**Adolescence**

Generally this is a stressful period for all students (Forlin & Pearce, 2005). Individuals are faced with many changes, both within themselves and in relation to others. In the case of the student experiencing 2E their giftedness may create more intense or extreme pressures than would be usual (Coleman & Cross, 2005). They are also likely to be even more vulnerable to stress due to their combination of factors (Coleman, 2001). For example, upper primary and early middle may be times of movement from mainstream education into special education for some students identified with difficulties (Mastropieri & Scruggs, 2010). The timing of appropriate accommodations such as acceleration is critical for students experiencing 2E so there is
opportunity to demonstrate their ability and compensate for their difficulties (Colangelo, Assouline, & Gross, 2004). A process referred to as dual differentiation was suggested in the gifted education literature calling for a concentration on the giftedness while also providing opportunities to learn compensatory strategies for their difficulties (Baum, Cooper & Neu, 2001). There are few successful programs designed to transition students experiencing 2E from primary through to high school. Two of these programs are the ‘GOLD’ program (Bees, 1998) and ‘The Wings Mentoring Program’ (Shevitz, Weinfield, Jeweler & Barnes-Robinson, 2003).

Social Emotional Needs in Transition

Psychosocial strength or grit is at the centre of eminent levels of achievement and needs to be strategically delivered to support students through key transitions in their talent development (Duckworth, et al., 2010). This helps lead to self-efficacy, self-determination and self-actualisation which are goals for all students. Highlighting the importance of transition periods at specific life intervals this indicates the need to prepare for transitions through choice making for the future (Subotnik, Olszewski-Kubilius, & Worrell, 2011). Protective factors are important in terms of resilience for all learners. Dweck (2006) created the term mindset to describe the attitudes learners have towards intelligence and whether they have a fixed mindset, or a growth mindset (intelligence is malleable and responds to development processes). A growth mindset allows for personal responsibility in learning, failure, change and progress. Students who experience 2E particularly need the protective factor of a growth mindset. Betts and Niehart (2010) developed a theoretical model to profile gifted students differentiated by their behaviour, feelings and needs. One of the six profiles is 2E, and in terms of school support,
challenge in the area of strength is the first priority. Van Tassel-Baska, Feng, Swanson, Quek, & Chandler, (2009) recommend transitional counselling into high school as part of a range of support services over primary school years for students who experience 2E.

**Synthesis of Relationships**

Clark (2002) pointed out that to serve gifted students with disabilities a collaborative effort and a case manager are required. Special education has been using this case management approach successfully for some time with students who have disabilities. Forlin and Pearce (2005) recommended collaboration between special and general educators and other specialists for an inclusive schooling approach for students with disabilities. This could be broadened in the Australasian special education research to form collaborative partnerships with gifted education specialists for students with disabilities who are also gifted. Crim, Hawkins, Ruban and Johnson (2008) suggest that 2E be included in the larger discussion of special education generally. Cross-discipline approaches would be useful to build on relevant research from other domains and more complex methodologies with larger sample sizes, would assist researchers to begin to better understand the ways in which high ability and disability affect each other. Methods of early identification using collaborative, multidisciplinary approaches and methodology which assist educational programmers in profiling strengths and under which circumstances these occur, are required. Undertaking longitudinal studies to understand the outcomes for children with various forms of 2E across their lifespan is seen as valuable. Interventions are a research priority (Foley Nicpon et al., 2011).

**Conclusion**

The available literature on transitions and students experiencing 2E is rare. In
increasingly inclusive communities greater collaborative research is needed across gifted, inclusive, mainstream and special education research in order to address this gap in knowledge. Timely identification and profiling processes including flexible differentiated support systems for students experiencing 2E need further investigation. Issues associated with asynchronous development suggest that research needs to establish a framework of what it means to experience 2E and what works for individual students. Further collaborative, multidisciplinary research is required to understand the role school and other transitions play in the identification of learners experiencing 2E and most importantly, providing opportunities for their transformation and growth.
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doi: 10.1177/001698620004400302


doi: 10.1177/0016986212456079


