Research Papers

Gifted with Disabilities
The Twice-Exceptional in India

ANITHA KURUP* AND SHALINI DIXIT**

ABSTRACT

The 'twice-exceptional' is a segment of the population in whom extraordinary abilities coexist with disabilities. For a country like India with a large and diverse population of over 1.3 billion, which constitute about 10–15 per cent of the gifted population, the twice-exceptional children are estimated to be about 1.2 million in the age group of 3–18 years. The number of children in this specialised group is large; identifying them and providing them with appropriate services needs attention. The twice-exceptional child will need a unique environment that will simultaneously harness his/her gifts and also provide support to overcome the challenges whether they are learning difficulties, developmental disorders, or handicaps of a perceptual, physical, or psychological nature. In the absence of any initiative for the twice-exceptional children in India, the paper discusses the need for recognition of this invisible population. Drawing from the experiences of other countries, the paper provides a framework for identification and interventions that India can undertake to address the needs of our twice-exceptional children. The paper concludes with the possible policy directions in tracing this unique population in India.

Introduction

Most western countries including the United States, European countries, and Australia have conducted large-scale longitudinal research and have developed alongside programme interventions at the national level for their gifted children. More recently, Asian countries like China, Singapore, Malaysia and others have

**Dean* and *Professor* of the School of Social Sciences; and *Head* of the Education Programme, National Institute of Advanced Studies (NIAS), Indian Institute of Science (IISc.), Bangalore, India. She leads the National Programme for Gifted Education in India at NIAS (email: bkanitha@gmail.com).

***Assistant Professor* of the Education Programme, and *Researcher* of the National Programme for Gifted Education in India (email: shalinidixit3@gmail.com).

recognised the importance of identification and nurturing the gifted, and have undertaken programmes at the national level. India is one of the very few developing countries that has unfortunately *not* recognised the immense potential of a national programme for the gifted education.

A country of nearly 1.3 billion population, India houses the second largest population of the world, marked by its distinct diversity. Haub and Sharma (2006) referred to India as a "collection of many countries held together by a common destiny and successful democracy" (p.3). The total number of school-going children, including pre-school and Grades 11 and 12, is 406.9 million (Census of India, 2011). Assuming normal probability, the gifted children at a conservative estimate will be 3 per cent of the population amounting to a whopping 12.2 million. The 'twice-exceptional' or 2e children are a segment of the population where extraordinary abilities and talents coexist with disabilities. The incidence of learning disabilities in the gifted population is estimated to be about 10–15 per cent and the risk of learning disorders increases as a function of IQ (Silverman, 2003). The size of the twice-exceptional population who have learning disabilities—a subset of the gifted population in the age group of 3-18 years—at a conservative estimate of 10 per cent — numbers 1.2 million. In fact, the number will be much bigger if one were to include twice-exceptional with developmental disorders like blind and deaf, physically challenged and mentally challenged. However, this estimate is not available at the national level.

The number of children in this specialised group (2e) is large and their identification and appropriate education is further complicated by the geographical distribution and the diverse background of this special population Further, India faces an immense uphill task to conceive and develop a robust education programme for the 2e, given the fact that the gifted education programme in India is yet to take off. In most countries, the 2e programme is embedded in the gifted education programme.

Large-scale longitudinal studies in the west over the last few decades indicate that there is a strong correlation of gifted children's potentials with their environments (Gross, 1999; Makel and Williams, 2005; Pfeiffer and Petscher, 2008). The period between birth and 3 years has been recognised as significant for neuronal elaboration or 'blooming'. Nash (1997) has pointed out that sensory experiences and associated learning in this period

has a direct impact on shaping and reshaping of neuronal circuits and on preserving their loss during the 'pruning' or synapse refinement stage of neural development (Nash,1997). Though we cannot contest the genetic influence on the brain, the effects of the environment on brain development are equally crucial. The twice-exceptional child needs a unique environment that will simultaneously harness the gift and also provide support to overcome the challenge or handicap. It is thus imperative to provide greater sensory opportunities through cognitively enriched environments reflective of the imperative recognition of the specific disabilities of a 2e child. Among the list of recommendations made in the report by the Task Force of the American Psychological Association (Neisser *et al.*, 1996) is the provision of early enriched environments for a long-lasting effect on intelligence and academic achievement for children from early infancy through preschool.

It is in this context that India, which is yet to launch a national programme on gifted education, needs to consider the importance of including toddlers and pre-school children within its ambit. More importantly, the programme will have to additionally evolve specific mechanisms to identify and provide services for the twice-exceptional. Neglecting 2e children will not only result in a national loss of human resources, but will also create a deeper impact on families and individuals of this special population who are constantly challenged with limited information and a fragmented understanding of this unique situation.

The fact that 70 per cent of the Indian population is in its villages, and a vast majority of the population is also very poor; the absence of enriched environments to provide greater sensory opportunities and learning so vital to the development of the brain; coupled with the unique challenges faced by 2e children — provides a further impetus for early identification and provision of mentoring mechanisms. In an attempt to reach out to resource-poor families, particularly the 2e among them, the national programme of gifted education in India will have to recognise that the gifted population in India is not homogeneous; thereby increasing the challenge of providing differentiated enriched learning environments to the diverse population of the gifted. In spite of the challenge for India due to its multiple layers of differences that arise from the complex interactions of caste, religion, language, socio-economic status and the rural/urban divide, it may be prudent to focus on early identification of the gifted children including the twice-exceptional. Early identification will remove a second level of difference that

arises through lack of access to ability and need-appropriate education in India.

Apart from these differences caused by unequal access, the formal education system adds yet a third layer to unequal opportunity by introducing different schooling systems ranging from home-schooling to schools following a range of curricula including state-recognised Boards, Central Board of Secondary Education (CBSE), National Institute of Open Schooling (NIOS), Council for the Indian School Certificate Examination (CISCE), International General Certificate of Secondary Education (IGCSE), International Baccalaureate (IB) and the Montessori system among others. These different types of schools located in rural and urban areas reflect variations with regard to infrastructure, teacher quality, teaching/learning process, teacher-student ratio, and the school environment (Kurup and Maithreyi, 2012). The inequality already existing in Indian society is further amplified by the differences created in the formal education system. Today in India, it is only the elite who can access the IGCSE or IB curriculum that has individualised educational plan (IEP): a crucial curricular feature for nurturing the development of the gifted/twice-exceptional. The twice-exceptional as a group already faces difficulty in getting into mainstream formal education system due to prejudices and attitudes towards any child with disabilities. For a fraction of the 2e, who belong to the elite, parents of these children have worked together to find their way to an extremely small number of elite schools that have programmes to accommodate the 2e within the larger school system. Some of the schools in Bangalore are the Bangalore International School and Vidyashilp International Academy. There are isolated efforts by several NGOs who provide training and learning support to children with disabilities, but the 2e seems to be invisible within this population. This is, however, not true for a vast majority of twice-exceptional children in India, who are not even recognised for their gift, or whose gift may mask their disability and thus prevent appropriate remediation. For those who are recognised, and belong to poor households, the public school system is not at all equipped to respond to the needs of this population.

Twice-Exceptional—The Invisible Population

Twice-exceptional students are a unique group who demonstrate being gifted in one or more areas with the coexistence of some

form of developmental disorder, learning disorder, or physical, sensory-perceptual, or psychological disability. Often referred to as 2e, these children are otherwise called paradoxical learners (Tannenbaum, 1983; Tannenbaum and Baldwin, 1983), for to the fact that they demonstrate inefficiency in certain basic cognitive skills but at the same time exhibit high levels or superior levels of intellectual abilities in certain other spheres. More often than not, these children have been identified for their learning disabilities with little attention on the giftedness they possess.

The defining characteristic of a twice-exceptional learner is evidence of high performance or potential in a gift, talent or ability combined with a disability that suppresses the student's ability to achieve according to her/his potential (Brody & Mills, 1997). Thus, many 2e children are misidentified as average learners since their gifts help them compensate their specific learning disabilities and they pass as average though they are fundamentally underachievers (compared with their abilities). In situations where parents and teachers are unaware of the possibility of the coexistence of the gift with the disability, the children's occasional demonstration of gifts in certain areas and their underperformance in other areas leads one to believe that they are lazy or uninterested in specific areas.

Along with being exceptionally talented these students may have a learning disorder. These disorders can range from dyslexia (reading disability), dysgraphia (writing disability), dyscalculia (numerical disability), behavioural disorders (Attention Deficit/ Hyperactivity Disorder (ADHD), conduct disorder; physical disability, hearing impaired, visually impaired, physical disability, autism spectrum disorder, and social or emotional difficulties. The twice-exceptional also show characteristics of giftedness. They demonstrate above age-level potential in one or more domains that places them in the top 3 per cent of their age group. However, in all likelihood the coexistence of one or more disabilities will result in the disability inhibiting the expression of the gift, or the gift preventing diagnosis of the disability, both problematic situations (Reis *et.al.,* 2014).

Reis, Baum and Burke (2014) reviewed deliberations by the National Joint Commission of Twice-exceptional Students (2009) and the three subsequent meetings convened at National Association for Gifted Children (NAGC) annual conference. Alongside they reviewed research and literature during the course of the article and outlined the following operational definition of 2e students.

Definition

Twice-exceptional learners are students who demonstrate the potential for high achievement or creative productivity in one or more domains such as math, science, technology, the social arts, the visual, spatial, or performing arts or other areas of human productivity and who manifest one or more disabilities as defined by federal or state eligibility criteria. These disabilities include specific learning disabilities; speech and language disorders; emotional/ behavioural disorders; physical disabilities; Autism Spectrum Disorders (ASD); or other health impairments, such as Attention Deficit/Hyperactivity Disorder (ADHD). These disabilities and high abilities combine to produce a unique population of students who may fail to demonstrate either high academic performance or specific disabilities. Their gifts may mask their disabilities and their disabilities may mask their gifts.

Identification

Identification of twice-exceptional students requires comprehensive assessment in both the areas of giftedness and disabilities, as one does not preclude the other. Identification, when possible, should be conducted by professionals from both disciplines and when at all possible, by those with knowledge about twice-exceptionality in order to address the impact of co-incidence/co-morbidity of both areas on diagnostic assessments and eligibility requirements for services (Reis, Baum and Burke, 2014, pp. 222).

Services

Educational services must identify and serve both the high achievement potential and the academic and social-emotional deficits of this population of students. Twice-exceptional students require differentiated instruction, curricular and instructional accommodations and/or modifications, direct services, specialised instruction, acceleration options, and opportunities for talent development that incorporate the effects of their dual diagnosis.

Based on the above definition and other research in this area the following characteristics of the 2e students can be mapped (Table 1).

Table 1

Characteristics of Twice-Exceptional Children

1.	Divergent thinking, novel approach to problem-solving, abstract reasoning and exceptional analytical skills (Ferri *et al.*, 1997; Rivera, Murdock & Sexton, 1995).
2.	Extensive vocabularies (Deshler & Bulgren, 1997; Ferri *et.al.* 1997)
3.	Good Memory (Ruban & Reis, 2005)
4.	Good listening comprehension and able to express themselves well (Hishinuma & Tadaki, 1996)
5.	Strong critical thinking and often enjoy interest or hobbies (Ruban & Reis, 2005; Reis *et al.* 2014)
6.	Desire for knowledge, desire to explore and discover (Ruban & Reis, 2005)
7.	High level of creativity and keen interest in hobbies outside school setting (Baum, 1988; Reis *et al.* 2014)
8.	Specific aptitude (aesthetic, literary or mechanical) and task commitment to areas of interest (Ruban & Reis 2005).
9.	Wide areas of interest (Ruban & Reis, 2005)
10.	Good sense of humour (Ruban & Reis, 2005)
11.	Perfectionism, unrealistic self-expectations (Ruban & Reis, 2005)
12.	Highly sensitive to criticism, to feelings of others (Ruban & Reis, 2005)
13.	Often bored with grade-level activities, repetitive, rote learning, and frustrated with lack of input and stimulation in the areas of their excellence (Dix & Schafer, 1996)
14.	Feelings of frustration, unhappiness and isolation (Baum & Owen, 1988; Norton, 1996; Silverman, 1989)
15.	Hyperactive, inattentive, impulsive, aggressive, defensive, withdrawal (Mendaglio, 1990; Dix & Schafer, 1996; Van Tassel-Baska, 1991; Reis *et al.* 2014)
16.	Poor listening and concentration skills(Reis *et.al.* 2014)
17.	Lack of organisational skills, Failure to complete tasks/assignments (Ruban & Reis, 2005, Reis *et.al.* 2014)
18.	Disruptive classroom behaviour, lack of motivation and learned helplessness (Reis & Colbert, 2004)
19.	Low self-esteem, low self-concept (Van Tassel-Baska, 1991; Ruban & Reis, 2005; Whitemore, 1980)
20.	Absence of social skills (Ruban & Reis, 2005; Waldron, Saphire & Rosenblum, 1987; Reis *et. al.* 2014)

The above list though not extensive is comprehensive enough to attempt the recognition of traits of the twice-exceptional in the

Indian context. Developing a trait table based on real examples of the twice-exceptional in India can be one of the first steps in reaching out to this elusive population. Parents, teachers and community members can be active participants in this exercise of identifying the 2e children in India.

Spectrum and Scope of Disabilities

The 2e as a population face several challenges in the nature and types of specific exceptionalities that coexist with giftedness. As discussed above, students can have one or more forms of disabilities combined with giftedness. Different forms of disabilities combined with giftedness presents with it unique set of issues and challenges. There is an underlying need to understand the nature of disabilities that could range from different types of learning disabilities; to physical and mental disabilities; and socio-emotional problems. The processes of identification and intervention for children who belong to the above categories have to take into cognisance these specific disabilities along with the gift. As well, in the case of some 2e categories such as gifted with ADHD and gifted with autism-spectrum disorders, identification is further complicated by the fact that the traits of giftedness alone overlap with the traits of one of these disorders. Thus, an attempt is made to briefly outline the nature of the specific dual exceptionalities in this section as outlined by Reis and McCoach (2002).

The dual exceptionalities can be broadly classified as:

1. Twice-exceptional with Learning Disabilities
   Type 1—Mild Learning Disability
   Type II—Severe Learning Disability
   Type III—Masked Abilities and Disabilities
2. Gifted Students with Hearing and Visual Impairment
3. Gifted Students with Cerebral Palsy
4. Gifted Students with ADHD
5. Gifted Students with Autism Spectrum Disorder (ASD)
6. Gifted Students with Psychological and Behavioural Problems

Twice-Exceptional with Learning Disability (LD)

Learning disability refers to any disability related to acquisition, organisation and retention of verbal and/or nonverbal information. As the name suggests, an LD negatively affects the learning process of a student. In case of a gifted child with an LD, the LD may go unnoticed. A gifted student's academic performance may not

be as low as other LD students. On the other hand, the talents and giftedness of some children might not get recognised because of their disability. Based on such situations researchers have identified three types of Gifted Learning Disabled (GLD) (Baum, 1990, as cited in Krochak & Ryan, 2007).

Type I: Mild Learning Disability: These students may not be noticeable because they manage to do well in academics. They may be identified as demonstrating laziness, clumsy, sloppy and less motivated.

Type II: Severe Learning Disability: Students are mostly diagnosed as LD but rarely as gifted. Their disability masks their giftedness, leading to severe consequences on their performance.

Type III: Masked Abilities and Disabilities: Students may not be identified as either gifted LD. The characteristics like frustration, learned helplessness, lack of motivation, lack of organisational skills, low self-esteem, low social skills of LD children mask their giftedness. On the other hand, they have certain positive traits such as advanced vocabulary, high levels of creativity, advanced problem-solving skills, good memory, task commitment, etc. However, the fact remains that because of this masking of abilities, identification of both the LD and the giftedness is impeded (Ruban & Reis, 2005).

Gifted Students with Hearing and Visual Impairment

Children with hearing and visual impairments have similar characteristics. Children can show lag in academic achievement of up to five years (Reis & McCoach, 2012). Students with either hearing or visual disability show an accelerated ability on the other intact modality. If a student is visually-impaired and is gifted she/he may show advanced hearing skills and concentration. On the other hand, a hearing-impaired child may show sharp visual abilities and visual attention (Willad-holt, 1999).

Gifted Students with Cerebral Palsy

Cerebral palsy is a neurological condition which affects the body movements, body and muscular coordination along with gross and fine motor skills. Willard-Holt (1994, as cited in Reis & McCoach, 2012) reported such students to have advanced mathematical and verbal skills; they are quick at learning and recall, have a good sense of humour, and are curious and persistent. Thus, they use cognitive skills to manage their disability.

Gifted Students with Attention Deficit Hyperactivity Disorder (ADHD)

Children with ADHD are characterised by attention problems, and/or hyperactivity and impulsivity. For a child to be classified as ADHD these symptoms should be manifested in more than one setting, for example, school *and* play (DSM-IV American Psychiatric Association, 2000). The characteristics of gifted students, often, resemble the ADHD-2e student. The latter may show inattentiveness, boredom and hyperactivity. However, as compared to other ADHD children, ADHD-2e children show sustained attention on tasks of their choice and interest. In order for an ADHD child to be categorised as gifted, his/her behaviour should be monitored closely, at both home and school.

Gifted Students with Autism Spectrum Disorder (ASD)

According to DSM-IV autism is characterised by difficulty in language, imagination, and social situations; symptoms include lack of shared gaze and rigid and specific behaviour patterns and interests. The traits of autism sometimes overlap with those of non-2e gifted children, i.e., difficulty in making friends because of advanced or asynchronous development, and sustained attention on topic of interest. Because of this camouflaging, it is imperative that the expert who diagnoses or monitors the students should be familiar with both the conditions separately: ASD and giftedness.

Gifted Students with Psychological and Behavioural Problems

Just like any other student, gifted students may also suffer acute psychological conditions, owing to underachievement, lack of suitable peers, boredom, and frustration. It is important for teachers and student counsellors to remain aware of distress among students and attend to any alarming situation (Reis & McCoach, 2002). These students can experience mixed feelings about their ability and disability leading to confusion, anger, frustration, and isolation. These mild or severe psychological conditions may give rise to inconsistent achievement and behaviour patterns, hostility, withdrawal, and impulsive behaviour (McEachern & Bornot, 2001).

Status of Identifying Twice-Exceptional Students in India

The twice-exceptional in India are more likely to be identified for their disability rather than their gift. The underlying cause is that

India continues to delay implementing a national gifted education programme. As is the case worldwide, the advocacy for the disability with a focus on physical disability has had a longer history. The efforts to advocate for the individuals with physical disabilities began over three decades ago and have made considerable headway both internationally and at the national level. Mental disability and learning disability are new entrants into the discourses on disability and have gained limited success in gaining visibility in the Indian context. It is in this newly defined space, that perhaps the twice-exceptional will be recognised with a focus on providing service for their disability. In the near absence of the recognition of *gifted* children in India, it has been observed at the institutional level that the term 'gifted' and disability are considered to be mutually exclusive.

Despite the above challenges, the last two decades have seen a consolidation of the traits of twice-exceptional based on clinical data, individual case profiles, and attempts to carry out systematic research to understand their characteristics and traits better (David & Rimm, 2002). Drawing from a wide range of literature (i.e. McEachern and Bornot, 2001; Ruban & Reis 2005, Reis *et al.* 2014) from the field of twice-exceptional, an attempt is made to summarise the traits to provide a starting-point to identify this group in the Indian context.

Identification of Twice-Exceptional Students

The 2e started to be recognised in the 1970s; however the correct approach to identifying 2e students still remains debated (Grimm, 1998; Krochak & Ryan, 2007; Rizza & Morrison, 2007; Ruban & Reis, 2005). The most common obstacle in identifying the twice-exceptional children is the fact that academic performance is the most frequently assumed indicator of giftedness. Students who are gifted but have some disability seldom perform as well as the gifted children do. Consequently, they are seldom included in gifted education programmes. Coleman and Gallagher (1995, as cited in Rizza & Morrison, 2007) observed that most US states have an identification process and education programme in place for the twice-exceptional; however, there is still under representation of these students in the pool of gifted students.

Right from the initial recognition of this group by Maker (1977, as cited in Ruban & Reis, 2005) their existence remains undeniable. However, for all the reasons discussed above, it

remains challenging to identify them (Krochak & Ryan, 2007; Reis & Ruban, 2005, Reis & McCoach, 2002; Rizza and Morrison, 2007). These researchers also acknowledge that it would be misleading to use IQ scores or ability-testing alone to identify the 2e. Even widely-employed IQ tests such as the Wechsler tests have limitations. There is no normative data to indicate the performance of twice-exceptional students. There has now, however, been modification in the norms of, for example, the WISC-IV (2003). Data from disabled and gifted students had been included in the new norms, but there was no inclusion of twice-exceptional students. Similarly, for other tests of general ability, there is no literature on how a particular ability influences the gifted trait of a student. Therefore, in the absence of a comprehensive framework, the use of standardised tests poses a serious challenge. In an attempt to identify the twice-exceptional. Krochak and Ryan (2007) suggested the use of a multi-faceted approach. They suggested use of a combination of measures including: behavioural checklist of both positive and negative behaviour; informal assessment inventories; use of portfolios; and creativity tests — in addition to IQ tests. In other words, identification of the 2e children will have to adopt multiple data points to be able to arrive at a conclusion. A similar but more structured approach has been recommended by McCoach *et al.* (2004, as cited in Ruban & Reis, 2005) as an eight-step system. This system uses various measures such as intelligence testing, behavioural observations, cognitive processes, achievement test, functioning in classroom, curriculum-based assessment, and interview etc. to devise and implement educational plan for twice-exceptional children.

In another review Grimm (2010) suggested a very simple process for identifying twice-exceptional students: use the subtests of any intelligence test to see if there is a high score on more than three subtests. This student can then be shortlisted and information from teachers, family and peers can be gathered about her/him. This should be followed by observation of the child in different settings. The observed 2e children can be compared with the children of same disability to ensure if she/he exhibits advanced abilities.

Interventions for Twice-Exceptional Students

Reviewing various intervention models for twice-exceptional children, Reis and McCoach (2002) remarked that efforts have remained inconsistent and ineffective. They have used reversal of

underachievement as criteria for the success of the intervention programmes. They remarked that the diverse populations, and likelihood of students own motivational level influencing the results, make it difficult to be conclusive about the efficacy of these intervention programmes.

Rizza and Morrison (2007) devised a toolkit to identify and work with twice-exceptional children. There are following four stages suggested by them: *Pre-referral and Screening;* at this stage students who either primarily show giftedness and their disability is masked, or they show disability and their giftedness is masked, or they show a balanced outlook and their disability is compensated by their giftedness, and are attended to. This can be achieved by seeking out instances of difficulty at some level in gifted students and instances of exceptional performance amongst disable students. The role of class teacher becomes crucial at this time. Next stage is *Preliminary Intervention.* The shortlisted students may be analysed about their strengths and weaknesses, so that an individualised educational plan may be developed for them. The resultant intervention plan should be implemented at this stage with the help of school, counsellor and teacher. *Evaluation Procedures* are done next to determine the effectiveness of the devised educational plans. Rizza and Morrison suggest that the evaluation should be liberal and *Multi factor evaluation should be done* so that any relevant information about the students learning style and strength should not be missed out. Based on these evaluations the final stage is that of *Educational Planning.* The plan should address both, strengths and weaknesses of the students through Individual Education Plan.

Initiatives for the Twice-Exceptional in India: Identification and Intervention

In India the process of identification of the twice-exceptional poses a serious challenge. Given the fact that the country is still contemplating the need for a separate National Programme on Gifted Education, the programme for the twice-exceptional is going to take time. The ray of hope is that the first steps are already taken. India has recognised the need to explore the development of parameters and tools to identify the gifted children from 2010 on a pilot basis. The tools are in the process of being standardised. Thus, one can hope that the twice-exceptional will find their way through this national intervention and receive their due. It can be

argued along the same lines, given the large numbers (1.2 million in 3–18 years) one is dealing with, it will be essential to develop several identification tools and different levels to address the problem of scale, diversity, language, caste and class that define the very fabric of the Indian population.

The near absence of any initiatives for the twice-exceptional children in India calls for a multi-pronged approach to address the needs of this special population. This would require: (i) creating a space for the twice-exceptional within the learning disabilities group, and (ii) advocating for the gifted education programme and creating a space within it. India will have the challenge of developing a comprehensive platform to provide services for the twice-exceptional. The multitude of languages, caste, class, religion and the rising rural urban differences defining inequality in a diverse country like India might create huge roadblocks for the programme.

However, to begin with, it will be critical to identify and create a database of the twice-exceptional children in India through an intensive field exercise reaching out to the existing clinics, informal service centres and parents of the twice-exceptional. School counsellors, can play a critical role in the first level of identification of the twice-exceptional children in the formal educational system. She/he can act as a mediator between school and parents, can devise academic strategies with teachers and can do individual and group counselling with students who face this dual paradox of twice-exceptional. With the kind of psychological behavioural challenges these students face, the school counsellor can be a facilitator and mediator for students, teachers and parents. Researchers have observed that role of a school counsellor is crucial in communicating to the psychologist, teachers and parents, about the vulnerabilities and challenges of a twice-exceptional child (Assouline, Nicpon & Huber, 2006; McEachern & Bornot, 2001). In the absence of any services for the twice-exceptional, this can be an important first step. The country can launch a nationwide awareness programme about the twice-exceptional targeting teachers and counsellors across schools in India. Leverage of technology and media will be critical to provide the required momentum for this uphill task.

The disability group in India has a long history. Over the years, this group has been able to build momentum and create mechanisms within the formal school system to integrate children

with disability. The forms of disability has been physical during the initial phase of the struggle but has gradually expanded to include children with learning disabilities. This shift has taken place during the past decade and has resulted in several measures taken by the government to provide special provisions to children with learning disabilities too. It is against this background that we argue for the inclusion of the twice-exceptional who along with disabilities that can be physical, mental or learning disabilities also have gifts in specific areas. The argument that the twice-exceptional which is a subset of the disability group has not received enough attention and harnessing their gift while addressing their disability will go a long way to enhance the national resource and build back confidence and pride within this sub group. It may not be a surprise if this new shift will bring to the centre the need for the gifted education programme in India.

Alternatively, it may be useful to introduce the twice-exceptional into the much awaited gifted education programme in India. As early as 1986, the Indian government sought to improve the overall quality of education, particularly for rural Indian and other minority populations, by introducing the *Navodaya Vidyalaya* Scheme to promote rural and minority talent (Wright, 2008). In addition, annual national-level tests such as the National Talent Search Scheme, Olympiads in mathematics and science, the *Kishor Vigyanik Protsahan Yojna* scholarship, INSPIRE programme and other local talent search programmes have been introduced. By and large these tests measure acquired knowledge and skills and are used as a single point screening test conducted at the national level. As pointed out by Renzulli (2005), the Achilles heel of gifted education has been the inability to adequately include children who do not fall into nice neat stereotype(s) of good test takers and lesson learners - ethnic minorities, under achievers and children who live in poverty and young people who show their potential in non-traditional ways. Further, as Naglieri and Ford (2005) have pointed out, children may be intellectually gifted, yet do not demonstrate high academic achievement and hence may be left out on these tests.

Most of these programmes have been developed with a limited understanding of how giftedness unfolds among the varying populations that constitute India. The programmes are unaware that gifted population constitutes a critical proportion of the twice-exceptional. Similar attempts to identify the gifted children

have been made by a few Non-Governmental Organisations (NGOs) in some parts of the country. The *Jyana Probhodini* School for the gifted and talented in Pune and the Jagadish Bose National Science Talent Search (JBNSTS) programme in Kolkota are a few examples. These programmes have been local specific and have been operational for several decades. These programmes have been successful in a limited scale.

Despite the late start, India is still in a position to turn this to its advantage. By drawing on global developments in new fields such as cognition, neuroscience, neuro-imaging, neuropsychology, and brain studies, India can envision a comprehensive and robust national programme of gifted education by creating a national centre of gifted education. This centre can be steered by a core group of researchers, practitioners, parents, and policy and advocacy experts representing the different regions/stakeholders in the country (Kurup & Maithreyi, 2012). India can also harness the literature that points to the growing presence of the twice-exceptional—a new segment of population that is gifted with disabilities.

Twice-Exceptional in India — The Road Ahead

A well-thought-out programme for the twice-exceptional at the national level can benefit children across all sections of society. In fact, the programme will be more useful for children who come from poor, rural and tribal households who do not have the necessary resources to support these children. The resources needed for a programme for twice-exceptional children can be optimised if conceived at the national level, which can organise for resource sharing through nodal centres established at district and state levels and facilitating for an individualised education plan based curriculum for these children. Training of teachers to address the need for this population is integral to the success of the programme.

To begin, the government can run the programme on a pilot basis. Simultaneously, one can explore the Corporate Social Responsibility (CSR) funding to support the twice-exceptional from poor socio-economic backgrounds. This can be made possible if we can create a platform to advocate for the rights of these children. Parents of the twice-exceptional children who are de-facto playing the role of facilitators can be drawn for additional support. Therefore, it is imperative that the country should take up the responsibility of catering to twice-exceptional children because considerable numbers of these children may be coming from

resource-poor homes. The same centre can provide services to the gifted and thus a cost-effective local centre to address the learning needs of children across the learning continuum is created in every district. Local resource persons can be drawn to compliment the working of this centre.

References

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

Assouline, S.G., M.F. Nicpon and D.H. Huber. 2006. The Impact of Vulnerabilities and Strengths on the Academic Experiences of Twice-exceptional Students: A message to school counsellors. *Professional School Counselling,* 10 (1), 14–24.

Baum, S. M. 1988. An Enrichment Programme for Gifted Learning Disabled Students. *Gifted Child Quarterly*, 32, 226–230.

Baum, S. M., and S.V. Owen. 1988. High Ability/Learning Disabled Students: How Are They Different? *Gifted Child Quarterly*, *32*,321–326.

Bracamonte, M. 2010. Twice-exceptional Students: Who Are They and What Do They Need? *Twice-exceptional Newsletter*. http://www.2enewsletter.com/article_2e_what are_they.html

Brody, L.E. and C.J. Mills. 1997. Gifted Children with Learning Disabilities: A Review of the Issues. *Journal of Learning Disabilities*, *30*, 282–296.

Davis, G. and S. Rimm. 2002. *Education of Gifted and Talented Students*. Boston: Allyn and Bacon.

Deshler, D.D. and J. Bulgren. 1997. Redefining Instructional Directions for Gifted Students with Disabilities. *Learning Disabilities: A multi-disciplinary Journal*,8,121–132.

Dix, J. and S. Schafer. 1996. From Paradox to Performance: Practical Strategies for Identifying and Teaching Gifted/LD Students. *Gifted Child Today Magazine,* 19, 22–31

Douglass, M. J. 2008. Twice-exceptional: Gifted Students with Learning Disabilities (Considerations packet). Retrieved from: education.wm.edu/centers/ttac/documents/packets/twiceexceptional.pdf

Ferri, B., N. Gregg and S. Heggoy. 1997. Profiles of College Students Demonstrating Learning Disabilities With and Without Giftedness. *Journal of Learning Disabilities,* 30, 552–559.

Grimm, J. 1998. The participation of gifted students with disabilities in gifted education programmes. *Roeper Review,* 20:4, 285–286

Gross, M. U. M. 1999. Small poppies: Highly Gifted Children in the Early Years. *Roeper Review*, *21*, 207–214. doi:10.1080/02783199909553963

Haub, C. and O.P. Sharma. 2006. India's Population Reality: Reconciling change and tradition. *Population Bulletin, 61*(3), 3–20. Retrieved from

http://www.britannica.com/bps/additionalcontent/18/22748170/Indias-Population-Reality-Reconciling-Change-and-Tradition

Hishinuma, E. and S. Tadaki. 1996. Sep/Oct. Addressing Diversity of the Gifted/at risk : Characteristics for Identification. *Gifted Child Today*, 20–45.

Krochak, L. A. and T. G. Ryan. 2007. The Challenges of Identifying Gifted Learning Disabled Students. *International Journal of Special Education,* 22 (3), retrieved from http://www.internationaljournalofspecialeducation.com.

Kurup, A. and R. Maithreyi. 2012. A Review of Challenges in Developing a National Programme for Gifted Children in India's Diverse Context. *Roeper Review*, 34(4), 215–223.

McEachern, A.G. and J. Bornot. 2001. Gifted Students with Learning Disabilities: Implications and Strategies for School Counsellors. *Profesional School Counselling,* 5(1), 34–4.

Mendaglio, S. 1990. Counselling Gifted Learning Disabled Individuals and Group Counselling Techniques. In L.K. Silverman(Ed.),*Counselling the gifted and talented* (pp.131–149) Denver: Love.

Naglieri, J.A. and D.Y. Ford. 2005. Increasing Minority Children's Participation in Gifted Classes Using the NNAT: A Response to Lohman. *Gifted Child Quarterly*, *49*, 29–36.doi:10.1177/001698620504900104

Nash, J. M. 1997. *Fertile Minds*. Retrieved from http://www.time.com/time/magazine/article/0,9171,985854,00.html

Neisser, U., G. Boodoo, T.J. Bouchard, A.W. Boykin, N. Brody, S.J. Ceci and S. Urbina. 1996. Intelligence: Known and Unknowns. *American Psychologist, 51*, 77–101. Retrieved from http://www.gifted.uconn.edu/siegle/research/Correlation/Intelligence.pdf

Norton, S. 1996. The Learning Disabled/Gifted Student. *Contemporary Education*, 68, 36–40.

Papierno, P. B., S.J. Ceci, M.C. Makel, and W.M. Williams. 2005. The Nature and Nurture of Talent: A Bioecological Perspective on the Ontogeny of Exceptional Abilities. *Journal for the Education of the Gifted*, 28, 312–332. doi:10.4219/jeg-2005–343

Pfeiffer, S. I. and Y. Petscher. 2008. Identifying Young Gifted Children Using the Gifted Rating Scales—Preschool and Kindergarten. *Gifted Child Quarterly*, *52*, 19–29. doi:10.1177/0016986207311055

Reis, S. M. and R. Colbert. 2004. Counselling Needs of Academically Talented Students with Learning Disabilities. *Professional School Counselling,* 8 (2), 156–167.

Reis, S. M. and D.B. McCoach. 2002. Underachievement in Gifted and Talented Students with Special Needs. *Exceptionality,* 10(2), 113–125.

Reis, S. M. and L. Ruban. 2005. Services and Programmes for Academically Talented Students with Learning Disabilities. *Theory into Practice,* 44 (2), 148–159.

Reis, S. M., S. M. Baum and E. Burke. 2014. An Operational Definition of Twice-exceptional Learners: Implications and Applications. *Gifted Child Quarterly,* 58(3), 217–230.

Renzulli, J.S. 2005. Applying Gifted Education Pedagogy to Total Talent Development for all Students. *Theory into Practice*. 44(2), 80–89. doi:10.1207/s15430421tip4402_2

Rivera, D.B., J. Murdock and D. Sextion. 1995. Serving the Gifted/Learning Disabled. *Gifted Child Today Magazine.*18, 34–37.

Rizza, M.G. and W.F. Morrison. 2007. Identifying Twice-exceptional Students: A Toolkit for Success. *Teaching Exceptional Children Plus. 3 (3).*Retrieved from: http://files.eric.ed.gov/fulltext/EJ967126.pdf

Roy, P. and A. Kurup. 2016. A Critical Assessment of Gifted Education in India. In D. Y. Dai and C. H. Kuo (Eds.), *Gifted Education in Asia.* pp. 147– 166. Information Age Publishing Inc., United States of America.

Ruban, L. M. M. Reis. 2005. Identification and Assessment of Gifted Students with Learning Disabilities. *Theory into Practice.* 44 (2), 115–124.

Silverman, L. K. 1989. Invisible Gifts, Invisible Handicaps. *Roeper Review*, *12*, 37–42.

Silverman, L.K. 2003. Gifted Children with Learning Disability. In N. Colangelo and G. A. Davis (Eds.), *Handbook of Gifted education (3rd ed.)* (pp. 533–544). Allyn and Bacon, United States of America.

Mendaglio, S. 2002. Heightened Multifaceted Sensitivity of Gifted Students: Implications for Counseling. *Prufrock Journal. 14*(2),72–82.

Tannenbaum, A.J. 1983. *Gifted Children: Psychological and Educational perspectives.* Macmillan, New York, NY.

Tannenbaum, A.I. and L.J. Baldwin. 1983. Giftedness and Learning Disability: A Paradoxical Combination. In L.H. Fox, L. Brody and D. Tobin (Eds.), Learning-disabled/gifted children: Identification and programming (pp. 11–36). University Park Press, Baltimore.

Van Tassel-Baska, J. 1991. Serving the disabled gifted through educational collaboration. *Journal for the Education of the Gifted.* 14.246–266.

Waldron, L.A., D.G. Saphire, S.A. Rosenblum. 1987. Learning disabilities and giftedness: Identification based on self-concept, behaviour, and academic patterns. *Journal of Learning Disabilities.* 20, 422–428.

Whitmore, J. F. 1980. Giftedness, Conflict and Underachievement. Allyn and Bacon, Boston.

Willard-Holt, C. 1999. Dual exceptionalities. Retrieved from http://www.itma.vt.edu/courses/currip/lesson11/Willard-Holt1999DualExceptionalities.pdf

Wright, B.J. 2008. *A Global Conceptualization of Giftedness: A Comparison of U.S. and Indian Gifted Education Programmes* (Master's thesis). Dominican University of California, San Rafael, CA.