

## **Dual Exceptionality: Identifying Exceptional Ability with Dyslexia**

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### ***Introduction***

The term ‘dual exceptional’ refers to individuals who may be exceptionally able in one or more ways, but who also have learning or other difficulties that may mask or inhibit achievement. Difficulties in identifying students with dual exceptionality have been acknowledged since interest in the field began to emerge over thirty years ago (Hemming, 1985; Yewchuk, 1986; Brody and Mills, 1997; Baum and Owen, 2003; Krochak and Ryan, 2007). One of the most prevalent forms of dual exceptionality is exceptional ability in conjunction with dyslexia (Montgomery, 2000). Brody and Mills (1997) contend that it is most difficult to recognise and understand students whose exceptional ability and difficulties lie in the same area. Similarly, a report for the Council of Curriculum, Examinations and Assessment (CCEA, 2006) notes that, while a student with difficulties in academic areas often gains recognition for great ability or achievement in other domains, it is more difficult both to identify and understand those whose ability and learning difficulty occur in the same, or related academic areas.

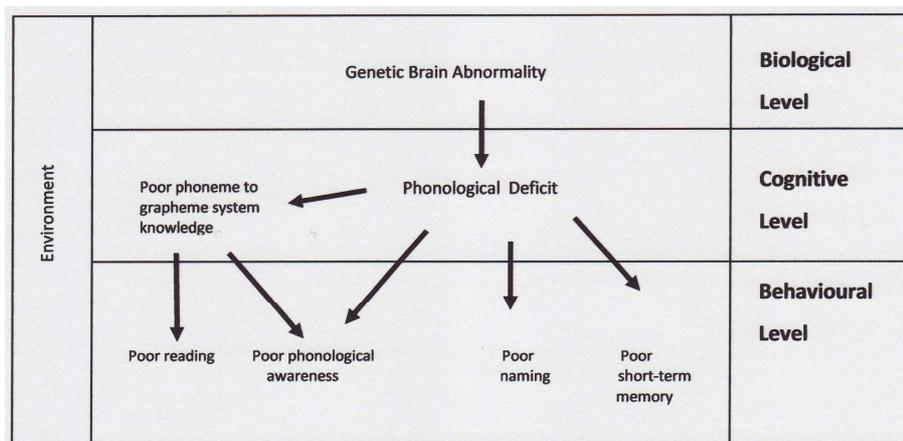
### ***Dyslexia***

The *Report of the Special Education Review Committee* (1993) uses the term ‘specific learning disability’ (SLD) in preference to ‘dyslexia’. This report defines the condition as ‘impairments in specific areas such as reading, writing, spelling and arithmetic’. The definition of the *Report of the Irish Task Force on Dyslexia* is to be preferred, as it more accurately reflects the most recent understanding of the causes and effects of the condition. Dyslexia, it states,

... is manifested in a continuum of specific learning difficulties related to the acquisition of basic skills in reading, spelling and/or writing, such difficulties being unexpected in relation to an individual’s other abilities and educational experiences. Dyslexia can be described at the neurological, cognitive and behavioural levels. It is typically characterised by inefficient information processing, working memory, rapid naming and automaticity of basic skills. Difficulties in organisation, sequencing and motor skills may also be present (DES, 2002:xii).

The difficulties caused by dyslexia are now understood to be due to a phonological processing problem, which prevents the individual with the condition from understanding and

using verbal codes. In brain imaging studies, a difference has been observed in the speech processing areas of the left hemisphere of the brain during simple phonological tasks. In individuals with dyslexia there was less activation in these areas of the brain, when compared to those of controls, and these areas were not activated in concert (Paulesu *et al.*, 1996; Shaywitz *et al.*,1998). A causal model was developed by Uta Frith (1998) in which the relationship between biological, cognitive and behavioural levels is indicated by causal arrows (Figure 1).



**Figure 1** (Frith,1998: p.191).

This model indicates the scope and variety of difficulties that may arise from dyslexia. While dyslexia is most commonly associated with difficulties in reading, it has been shown that difficulties in spelling are almost invariably concomitant (Vellutino,1979; Frith,1980). Montgomery (2003) argues that spelling is a core problem in dyslexia that appears to be more fundamental than reading. Difficulties caused by short-term memory deficits and ‘poor naming’, although less easy to identify, may also create significant barriers to learning. Short-term memory difficulties may give rise to difficulties in both self-organisation and in the organisation of material in written tasks. Poor spelling may lead a student to write slowly and carefully, confining the vocabulary used to words he/she can spell, resulting in work that does not accurately represent the ability of the student.

In Ireland, the identification of dyslexia is based on a discrepancy between cognitive ability and attainment in basic literacy skills measured by standardised norm-referenced testing.

General cognitive ability must be within or above the average range (above 90 standard score) and performance in basic skills must be at or below the second percentile (two standard deviations below the mean), in order for the difficulty to be recognised as SLD (dyslexia) for the purposes of accessing extra supports (DES, 2002: p.20).

### ***Exceptional Ability***

The term ‘exceptionally able’ is the preferred term used in Ireland to describe students who are elsewhere labelled as gifted and/or talented. It describes one part of the continuum of ability, ranging from ‘disability’ to ‘profound ability’, that is found in all populations. The National Council for Curriculum and Assessment (NCCA) uses this term to identify those “students who require opportunities for enrichment and extension that go beyond those provided for the general cohort of students” (NCCA, 2007:7). Seven domains in which an individual may exhibit exceptional ability are named in the NCCA *Guidelines for Teachers*; ‘general intellectual ability’ is one of these domains. While noting that there is no single code in use, a set of measurement levels to define exceptional cognitive ability is outlined:

- Able – IQ range 120 to 129
- Exceptionally able – IQ range 130 to 139
- Profoundly exceptionally able IQ range 170+ (ibid: p.8)

According to this scale, an exceptionally able student is identified as being two standard deviations above the mean. Quite commonly, a student with dual exceptionality may be two standard deviations below the mean in achievement in basic skills, while being two standard deviations or more above the mean in ability. This represents a very wide discrepancy between (potential) ability and attainment.

### ***Dual Exceptionality***

There is some evidence from research to indicate that dyslexia in conjunction with high ability may cause an exceptional ability to develop (Geschwind, 1984). Johnson and Evans (1992) found evidence, through a comparison of the sub-tests of the Weschler Intelligence Scales for Children–Revised (WISC-R), that in some very able individuals there may be a greater development of spatial abilities at the expense of language functions. Both sub-test scatter and discrepancy between Verbal and Performance scores on the WISC-R were examined, by Patchett and Stansfield (1991), Montgomery (1997) and Herskovits and

Gyarmathy (1995), in an effort to establish a pattern that would clearly identify students with exceptional ability and a learning difficulty. Gyarmathy (1995) though, in reviewing these and other similar studies, concluded that, because of the possibility of over-inclusion, caution is necessary in using sub-test scatter or discrepancies as evidence of dual exceptionality.

### ***Identification at Primary Level***

Difficulties caused by dyslexia may be apparent in children in the first few weeks of school as they begin to fail to link the sounds of the alphabet to the letters. However, children who have good visual memories manage to conceal this difficulty by their ability to remember whole words. Montgomery (2003) suggests that the very able child may succeed in concealing reading difficulties until about eight years of age. At this stage, the demands of the curriculum suddenly expand and the strategies the child has employed may no longer be sufficient. Mandatory testing carried out at the end of first class or the beginning of second class should reveal difficulties, however some very able students manage to achieve average scores on these tests. As the areas of study broaden in the middle years of primary schooling, in addition to a good work ethic, greater concentration and excellent memory skills are required to conceal difficulties. Eivers *et al.* (2010) in their report on the National Assessments found that, while 16 to 17% of second-class students were considered by their teachers to be behind the class level in reading ability, in the case of sixth-class 35% of students were thought to be behind class level. This supports Montgomery's contention, noted above, that as demands increase difficulties become more apparent.

At primary level, when a student is seen to have difficulties in basic skills, initial support is put in place in the classroom unless the difficulties are very severe. Since dyslexia is a high-incidence difficulty, if problems in learning persist support of extra teaching will be given under the general allocation model (Special Education Circular 02/05:4.2). While screening and diagnostic testing are normally carried out within the school, assessment by an educational psychologist will not necessarily be carried out. Schools are limited in the number of these assessments that they may avail of annually, so psychological testing may be reserved for students who have low-incidence needs, for those students whose difficulties are very severe or for students about to transfer to second level. As there is currently no

provision of resources for students with exceptional ability, there is no compelling reason to prioritise the formal identification of these students. Informal assessment and observation by well-informed teachers may identify high ability in students, with or without attendant difficulties. In the case of pupils with severe difficulties due to dyslexia however, it is possible that they may be so overwhelmed with difficulties in the acquisition of basic literacy skills that they lack the self-confidence to freely engage with the learning process in a way that might reveal their ability.

### ***Transition***

The amount and quality of information about in-coming students transferred from the primary to the post-primary school varies greatly. The recent document *Better Literacy and Numeracy for Children and Young People* asserts that:

The transfer of information from primary school about what children have learnt in general and about their learning in literacy and numeracy, is patchy at best and sometimes anecdotal only (DES, 2010: 6:6).

Despite this assertion, there are many primary and post-primary schools whose personnel liaise very effectively, ensuring a successful transition for their students from one sector to the other through the dissemination of relevant information. While various guidelines underline the importance of good communication and consultation between the two sectors about students in transition (NCSE, 2006; NCCA, 2007; DES, 2007), and an onus is placed on primary school principals to ensure that procedures for consultation are put in place (DES, 1999), the steps outlined are not very specific. In the absence of clear directives on specific procedures, there are bound to be great variations in practice. The proposal in *Better Literacy and Numeracy for Children and Young People* (2010) to provide for the transfer of the results of the standardised tests carried out towards the end of primary education, and to provide a written report on achievement in a number of areas including literacy, would provide a sound basis for a continuum of learning for all students through the transition period.

### ***Second Level***

It is unusual for students entering post-primary school in Ireland to transfer with a formal assessment of exceptional ability. In the case of students with dual exceptionality who are tested because of a learning difficulty, cognitive testing will sometimes reveal potentially

high ability. However cognitive testing, using Weschler Intelligence Scales, of students with dyslexia or other learning difficulties may not identify exceptional ability, particularly where only Full Scale scores are used. The very able student who has learning difficulties may present as average because of low scoring on some of the sub-tests, or because of a large discrepancy between Verbal and Performance scores. Where testing of intelligence/cognition is part of incoming tests exceptional ability may be identified but in this testing also, scoring of very able students with dyslexia may be uneven or misleadingly ‘average’. Students with dual exceptionality may remain undetected throughout the school years either, as Krochak and Ryan (2007) argue, because these students compensate well for their disability or because they do not demonstrate the high achievement that is usually associated with exceptional ability. Brody and Mills (1997) suggest that it would be better to avoid set cut-off points for identification or for admitting to programmes, as this discriminates against students with dual exceptionality.

A representative sample of incoming assessment results of students with dyslexia, who were later identified through observation, testing and/or achievement as being exceptionally able or having the potential to be exceptionally able academically, is shown in a table below so that variations and similarities in scoring may be seen (Figure 2). These examples are drawn from testing carried out in the course of this writer’s work as a special education teacher in a post-primary school. They are followed by three brief case studies that illustrate to some extent the heterogeneous nature of dual exceptionality. The AH2 was the test in use for incoming assessments at the time when these students entered second level. This is a test of general reasoning that has now been replaced in many schools by the Cognitive Abilities Test 3 (CAT 3).

Student name	Reading Age	Maths Skills (N. France) Standard Score	AH2 Total	AH2 Verbal	AH2 Quantitative	AH2 Non-Verbal
Jamie	12.6	108	C	C	C	C
Ewan	12.2	100	C	C	D	C
Elizabeth	10.5	95	C	C	C	B
Henry	8.5	83	D	E	E	C
Kate	9.5	99	C	C	C	C

**Figure 2.**

- In three of the cases, Elizabeth, Jamie and Ewan, testing was carried out by an educational psychologist at primary level

- Reading, measured by D. Young Cloze Reading Test 3, shows a wide range of scores
- All but one student scored in the average range in Mathematical Skills
- All students scored average or above on the Non-Verbal Test

The Junior Certificate results in the core subjects of these five students are shown below (Fig. 3). Religion was not a core subject at the time some of these students took Junior Certificate examinations, so it is not included. Level taken, higher, ordinary or foundation, is shown in brackets beside the student's grade in each subject. CSPE has one level only. An asterisk marks a spelling and grammar waiver. Jamie and Henry had readers.

Subject/ Student	Eng.	Maths	Irish	French	Ger.	Hist.	Geog.	Sci.	CSPE
Jamie	B* (h)	A (h)	-	D* (o)	-	B (h)	A (h)	B (h)	B
Ewan	B (o)	B (o)	-	-	-	D (h)	D (h)	B (o)	A
Elizabeth	B (o)	B (o)	D (o)	C (o)	-	B (h)	B (h)	D (h)	B
Henry	B* (f)	B (o)	-	-	D *(o)	B (o)	A (o)	B (o)	C
Kate	C* (h)	B (h)	B* (h)	B* (o)	-	D (h)	C (h)	C (h)	A

**Figure 3:** Junior Certificate Results

### ***Case Study 1: Elizabeth***

Elizabeth was assessed by an educational psychologist when she was in 5<sup>th</sup> Class:

<p>WISC III :</p> <ul style="list-style-type: none"> <li>→ Full Scale, 127 Standard Score (SS)</li> <li>→ Verbal, 126 SS</li> <li>→ Performance, 121 SS</li> </ul>	<p>Weschler Objective Reading Dimensions (WORD):</p> <ul style="list-style-type: none"> <li>→ Basic Reading 75<sup>th</sup> percentile</li> <li>→ Spelling 7<sup>th</sup> percentile</li> <li>→ Reading Comprehension 15<sup>th</sup> percentile</li> </ul>
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No WORD composite score was given. A specific learning difficulty (dyslexia) was identified from these scores, with spelling being particularly affected, but scores were not low enough to qualify Elizabeth for an SEN allocation. At transition to post-primary school, Elizabeth's incoming test results (Figure 2 above) showed an 'average' student with a weakness in reading. Her reading age however was above the cut-off point for Learning

Support, which was offered to students with a reading age of below 10.5. A student on the borderline in this way would normally be monitored to check for any difficulties, however Elizabeth was a diligent student with no apparent difficulties during her years in Junior Cycle. She showed exceptional ability in Art and Crafts. Junior Certificate examinations presented no difficulties for her (Fig. 3), but only three core subjects were taken at higher level. Her only 'A' was in Art which she took at higher level.

When Elizabeth was in 5<sup>th</sup> Year, her French teacher approached the SEN Department as she was concerned that Elizabeth's spelling was causing difficulty in written expression, holding back a student who was otherwise very able. An SEN teacher spoke with Elizabeth's English and Irish teachers, who also had concerns that her written work did not represent her ability in those subjects. Elizabeth was offered one class a week of support. Discussion with Elizabeth, her other subject teachers and with her parent suggested that a spelling and grammar waiver for Leaving Certificate would give Elizabeth greater possibility of achieving to her potential in the exams. Reasonable Accommodations (RACE) were applied for and a spelling and grammar waiver was granted on the basis of Elizabeth's spelling in the Wide Range Achievement 4 (WRAT 4), which was below the 10<sup>th</sup> percentile. In Leaving Certificate examinations, Elizabeth took Irish at Foundation Level and Maths and English at Ordinary Level. She did not achieve as highly as she had hoped, although on the basis of an excellent portfolio she got the third-level course of her choice.

Elizabeth's Leaving Certificate results did not reflect her ability. A significant difficulty for Elizabeth in examinations was that, in an effort to avoid making spelling mistakes, she had become accustomed to writing very brief responses to questions. This is a common tactic used by students with dyslexia, as also is the overuse of direct quotation from texts. Repetition is also common in longer writing tasks. These characteristics were features not only of Elizabeth's writing, but of Kate and Henry's also.

Early identification and the introduction of support are extremely important in the case of highly able students like Elizabeth. Kate, whose in-coming testing results are also shown above (Fig.2), had a very similar profile on incoming to Elizabeth, but had greater difficulties in reading. While no assessment information transferred from her primary school, Kate was offered Learning Support on the basis of her incoming reading test score. During first year

she took part in a reading intervention, which was provided by pairing first year students with trained transition-year tutors. Post-testing showed that Kate’s reading had improved by 1.9 years. Like Elizabeth, Kate coped very well with the curriculum in Junior Cycle, achieving satisfactory results in Junior Certificate examinations, in which all but one subject was taken at Higher Level (Fig.3). In exactly the same way as Elizabeth, Kate’s difficulties in language subjects due to very weak spelling were brought to the attention of the SEN Department in her fifth year. All her teachers confirmed that Kate was a student with exceptional ability, whose written work did not represent her very high ability.

When students are unable to express themselves fully and freely in writing they often become inhibited, not only in their writing but also in other ways. Elizabeth was a quiet, hard-working student who lacked confidence in her own academic ability. The difficulties of both students appeared to have been mild enough to have been overcome, but in fact they were severe enough to prevent both students developing to their full potential at second-level. Early identification of the effects of dyslexia on the learning of both these students, as well as recognition of the exceptional ability that was masking their significant difficulties, may have made a significant difference to their academic achievement at second level.

**Case Study 2: Ewan**

In third class in primary school, due to difficulties in literacy skills, Ewan was referred to an educational psychologist for assessment:

<p>WISC-III:</p> <ul style="list-style-type: none"> <li>→ Full Scale, 66<sup>th</sup> percentile</li> <li>→ Verbal, 75<sup>th</sup> percentile</li> <li>→ Performance, 47<sup>th</sup> percentile</li> </ul>	<p>WORD:</p> <ul style="list-style-type: none"> <li>→ Reading, 68 Standard Score</li> <li>→ Spelling, 68 SS</li> <li>→ Comprehension 80 SS</li> </ul>
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This testing showed a significant difference between Verbal and Performance scores. Freedom from Distractibility was also an area of weakness. Reading comprehension was an area of relative strength. Dyslexia was diagnosed, with a specific difficulty in both spelling and reading. Ewan was supported under the general allocation. A review report two years later, when Ewan was in 5<sup>th</sup> Class gave no scores for cognitive testing, stating that cognitive levels were the same as at previous testing. WORD showed:

→ Basic Reading, 10<sup>th</sup> percentile

- Spelling, 4<sup>th</sup> percentile
- Reading Comprehension 16<sup>th</sup> percentile
- Word Composite, 5<sup>th</sup> percentile

At transition to post-primary school, incoming tests indicated that Ewan was an ‘average’ student (Fig. 2). He was above the cut-off point for both additional support for SEN and for Learning Support. He had been granted an exemption from Irish at primary level. A highly verbal student, Ewan was often disruptive in class. He was exceptionally able in Art, although he frequently failed to complete projects that were assigned. As he progressed through school, there were frequent difficulties with behaviour. He was intractable when he felt that he was being, in his own words, ‘disrespected’. He doodled when he was thinking or when he was bored, which caused frequent difficulties with his teachers. His creative writing was of a very high quality, but the mechanics of his writing were poor. On a one-to-one basis, Ewan’s verbal ability, general knowledge and interest in current affairs revealed a highly intelligent, thoughtful student. However in third year, he frequently talked about dropping out of school and in fact Ewan left after Junior Certificate. His Junior Certificate results, with the exception of Art and CSPE, did not reflect his ability (Fig.3). Ewan’s exceptional academic ability was in the same area as his difficulty, which was a primary cause of his frustration with his learning. Early identification of dual exceptionalism may have changed outcomes for this student.

### ***Case Study 3: Jamie***

Jamie experienced great difficulties in the acquisition of literacy skills from the time he began primary education. His first assessment by an educational psychologist was when he was in fifth class. WISC-III testing resulted in the following:

- Full Scale: 98 SS
- WORD Composite: 2<sup>nd</sup> percentile.

The educational psychologist noted that, during testing, Jamie frequently used his intelligence to accurately guess a word by recognising a single initial letter. Severe dyslexia was identified. Jamie was given in-school support and his parents arranged for additional support outside school.

At transition to post-primary school, Jamie was granted 2.5 hours of additional SEN teaching. He also had an exemption from Irish. Jamie's incoming test results revealed an 'average' student, who was well above the cut-off point for Learning Support classes (Fig.2). Despite these results, Jamie had severe difficulties in reading and writing. His slow and inaccurate reading made access to texts difficult. He used Kurzweil text-to-speech software in the SEN Department but, as he found it difficult to concentrate on text in that way for long periods of time, his SEN teacher read many texts to him. Initially Jamie was very nervous and lacking in self-confidence but, as he became accustomed to second level school and to working with his SEN teacher, he began to benefit more from the extra classes. He also benefited from the fact that he was very competent in mathematics and so all SEN classes were devoted to working on literacy skills and texts. All extra teaching classes were individual, as he was withdrawn from mainstream class during Irish classes. As Jamie's confidence increased, it became clear that he was a very able student. Junior Certificate examinations were taken at higher level with the exception of French (Fig.3).

Assessment was carried out by the educational psychologist prior to application for Reasonable Accommodations for Leaving Certificate. WAIS results:

→ Verbal, 99.7<sup>th</sup> percentile

→ Performance, 61<sup>st</sup> percentile

The WAIT-II showed Pseudo Word Decoding at the 1<sup>st</sup> percentile. The National Educational Psychology Service (NEPS) psychologist noted that a Full Scale score would not adequately reflect this student's true cognitive ability. She described him as a 'young man of superior ability'. With a reader and a spelling and grammar waiver, Jamie achieved excellent Leaving Certificate results which included an A1 in Higher Level English. His results were equal to his expectations and he is currently studying his first-choice course at third level.

Henry was another student with similar difficulties to Jamie. Henry did not have an assessment before transfer to second level. Assessment carried out by an educational psychologist during his first year found him to be in the "upper end Low Average/ Average range", with WORD Composite at 0.2% ile. An allocation of 1.5 hours was made at the beginning of his second year. At this stage, Henry was overwhelmed by his difficulties and had little self-confidence. With support, over the next few years he gradually became more aware of his self-efficacy in learning. He began to participate more in group work and

discussion, although written work continued to be very brief and undeveloped. A review assessment before application was made for RACE for Leaving Certificate, showed “current cognitive functioning in the Above High Average Range”. Henry got 170 points in his Leaving Certificate and, after a year spent doing a post Leaving Certificate course, he is now studying for a degree in third level. A comparison between the attainment at second level of Henry and Jamie underlines the importance of individual or small group support from an early stage.

### ***Summary and Conclusions***

Early identification, preferably at primary level, is important if students are to fulfil their potential at second level. Incoming assessments as shown above (Fig. 2) did not indicate the extent of either the difficulties or the potential ability of the students described here. The recent addition of a spelling test to incoming assessments in the writer’s school has helped to identify dyslexic difficulties in students who performed well on the reading test. The introduction of CAT 3 also gives a clearer cognitive picture than AH2, which was not as stringent a test. However identification of dual exceptionality at second level would be greatly facilitated if standardised assessments carried out in primary school were available to the post-primary school, as trends in attainment would be seen and could be compared with further testing carried out at second level.

Students in Junior Cycle are unlikely to be identified as having exceptional abilities and/or learning difficulties if they are performing satisfactorily in tests and examinations. Dual exceptional students will usually show some discrepancies between potential and performance, so each student’s progress should be compared to his/her potential and dips in progress should be monitored. For this reason, tracking of end-of-term exam results should be the norm in Junior Cycle in particular, and progress should be checked in the light of performance in standardised assessments such as incoming tests, or cognitive tests such as WISC III or IV where they are available. Although cognitive testing does not give a full picture, it provides a basis for understanding. However, it is important to bear in mind that no fixed assumptions should be made about a student’s potential based on cognitive testing alone. The two students described above who had review assessments in fifth year, showed a significant increase in cognitive functioning on reassessment. In the experience of this

writer, this has been an invariable outcome for all students having psychological reviews in fifth year, whatever their level of ability.

Students whose difficulties appear relatively mild may prove to have significant difficulties in spelling in Senior Cycle, particularly in languages other than English, as was the case with Kate and Elizabeth. The most harmful aspect of a spelling difficulty at any stage of second level is the constricting effect it has on the writing of otherwise very able students. When the habit of writing only what one can spell has become ingrained, it takes a long time and a great deal of effort to develop complexity and fluency in one's writing. Students with dual exceptionalities who have 'mild' dyslexia and are unsupported by extra teaching are as likely to underachieve in Certificate examinations as dual exceptional students who appear to have more severe difficulties.

Lack of self-confidence is a very large factor in the underachievement and the disengagement from learning of many students with dual exceptionalities. As outcomes fail to match expectations, often because of poor performance in written work due to errors in spelling and grammar, poor organisation of writing or lack of plan and structure, these students lose confidence and feelings of self-efficacy. This begins most often in the higher stages of primary school and the first years of second level, when students begin to compare themselves to others and 'deficiency becomes identity and learning is transformed from the early child's free exploration of the world to a chore beset by insecurities and self-imposed restrictions' (Papert, 1980:5). When students lose heart and have no enjoyment in learning, they lose the 'task commitment' that Renzulli (1977) identifies as one of the three necessary elements of giftedness. Once disengagement becomes an entrenched attitude, it is difficult to reverse. This risk is always present for students with dual exceptionalities, but perhaps it is most particularly so for students with dyslexia, as so many outcomes in school arise from written work. It is for this reason that it is so important to identify and support both the difficulties and the exceptional ability of these students.

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