
When Giftedness, Dyslexia and Attention Deficit Hyperactivity Disorder (ADHD) Meet: Two Case Studies of Educational Management

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My purpose in addressing this very specific blend of exceptionalities is because in my years of practice offering educational advice, advocacy and 1:1 programs to 'twice exceptional' (2e) students and families this has been the most challenging profile of all. Diagnosis and successful targeting of their range of needs is a multi-tiered process sometimes taking several years. Finding a suitable program 'match' in a school is very difficult as there is no available funding in NSW schools for mandated small groups that can meet their range of needs.

As a tutor of a gifted 7-year old with mild to moderate symptoms of dyslexia, it is quite simple to construct an appropriate, successful program but when ADHD is added into the mix the task becomes highly problematic for reasons I will explain following the definitions of terms.

'Dyslexia' is from the Greek language, meaning 'difficulty with words'. It is genetic in origin and involves functional differences in the brain which affect reading, writing and spelling in various manifestations. Approximately 4% of the population is severely affected, with another 6% having mild to moderate symptoms of dyslexia. Students with dyslexia have some astounding perceptual and learning strengths despite their range of impediments to conventional learning. Strengths in visual-spatial processing, once honed and harnessed, can be of enormous value in memory and problem solving.

Attention Deficit Disorder, particularly the Passive Inattentive Type, which is not accompanied by disruption or impulsive behaviour, is classified as a learning difficulty involving poor concentration, task impersistence, disorganisation, forgetfulness, low self-esteem and poor working memory. In simple terms specific deficits in the frontal lobe activity in the brain caused by the inefficient processing of dopamine, among other chemicals, results in considerable loss of stimulus to the Working Memory and poor recall of the content of classroom lessons. According to Selikowitz (2009), ADHD is considered to be the causal condition from which Auditory Processing Disorder (APD) arises.

Dyslexia is common in children with ADHD(PI). The range in reported prevalence of co-morbidity is from 24% to as much as 70%. Their learning deficits are often misdiagnosed as dyslexia alone. These conditions manifest quite differently but the effects are magnified when the two conditions occur in the one child. For example,

the phonological processing with visual and aural delay of the dyslexic child, requires a literacy remediation program that targets single sounds, blends and digraphs as these children have difficulty in discerning between the single short sounds. Where there is co-morbid ADHD (PI), the attention span of the child may be so limited that there is insufficient 'teachable' time when the child can concentrate on even short, sharp sessions of sound recognition, work and games. Attempts to use remediation for improvements in phonological processing are ineffective without medication specifically where a paediatric assessment and recommendation for medication has been made. Similarly, the use of medication in itself, will not improve phonological processing without appropriate teaching. Low persistence must be avoided as it prevents the exercise of adequate practice in the fundamental literacy and numeracy skills. According to Selikowitz (2009) the combination of the two is essential for these students and I would endorse this view from my clinical experience.

These co-morbid conditions are often missed in gifted children whose reading may develop in the average range in the classroom setting. Combined with superior comprehension, this achievement level is a representation of underachievement in a gifted child.

Case 1: Mark

Mark tested in the top 10% of children in his age group on a WPPSI-III at 5 years 9 months (see Table 1).

Table 1. Mark's IQ test results

	Composite Score	Percentile Rank	
VIQ	122	93	Superior
PIQ	128	97	Superior
PSQ	92	30	Average
FSIQ	123	94	Superior

He is an intensely serious child with a huge passion for ancient history fed by his father's reading interests. His dry sense of humour is applied when it is least expected, which makes him quite delightful to adults.

Yet, at 6 years 6 months of age, in Year 1, his educational attainments were: no mastery of sounds or alphabet, variable recognition of numbers, emotional issues at school, and some 'acting out' in Kindergarten from sheer frustration. He reportedly suffered from 'selective hearing', poor fine motor skills for which he received Occupational Therapy, and he had qualified for the Reading Recovery program offered to low progress readers in NSW.

I assessed him for MULTILIT, a research-based reading program from Macquarie University and began to see him twice weekly for half-hour sessions with an expectation of home practice. A diagnosis of ADHD was given at 6 years 8 months and he began to take Ritalin. It became evident that Mark was not the only one with ADHD in his household as the home revision was, at best, spasmodic. It took 12 months to

complete the course but his reading ability is excellent now. His mathematical computation is suffering because he needs home revision for a few minutes each day but it does not happen. At 9 years 5 months he is still reversing letters occasionally, sometimes cannot accurately count the even numbers to 30, but he reads like an adult and his general knowledge is astounding. His self-efficacy is intact and he is not a reluctant writer. The wonderful special education teacher at his school has given him attention four days a week for two years even though he is not a ‘funded’ student.

There is a long way to go yet for Mark but early diagnosis and intervention have had positive catalytic effects upon his progress. His peers and his school recognise him as a twice exceptional learner, while his giftedness is understood and celebrated.

Case 2: Eliot

Confusion ‘reigns’ for the families of these children often for some time until diagnoses are made. Eliot’s initial IQ testing occurred at age 6 years 9 months (see Table 2).

Table 2. Eliot’s WISC III results

	Composite Score	Percentile Rank
VIQ	132	98
PIQ	103	58 *discrepancy >26 points
PSQ	117	87
FSIQ	121	92

There is a subtest scatter of scores, with weaknesses in Object Assembly, Picture Arrangement and Coding.

Results from the Stanford Binet-V, one month later, revealed no clear indication of a learning difficulty (see Table 3). Mild symptoms of dyslexia were evident in his written work.

Table 3. Eliot’s Stanford Binet-V results

Factors	Standard Scores (IQ)	Percentile Rank
Fluid Reasoning	138	99th
Knowledge:	137	99th
Quantitative Reasoning	119	90th
Visual-Spatial Processing	140	99.6th
Working Memory	120	91 st
Nonverbal IQ	135	99th
Verbal IQ	134	99th
FULL SCALE IQ	136	99th

Eliot is a technology 'genius' in his school community. His handwriting had been supported by Occupational Therapy programs but he was not writing at all. With the Lindamood-Bell Visualising and Verbalising program, and the Inspiration online mind-mapping program he has produced some creditable pieces of work. He now uses voice-activated software, MacDictate, to create some speed in recording his first draft. The full range of spelling strategies and rules have been taught.

Eliot has been in a self-contained gifted class for 3.5 years but is not meeting grade level in mathematics although his 1:1 program is structured on Bruner's spiral curriculum to revisit and build concepts. His quantitative reasoning is strong but his computational skills and motivation for mathematical computation are still weak.

It is difficult to extend such a specific intensity of interest in technology during tutoring as he extends himself with it constantly. He helps me with my technology needs. Eliot is a kind and generous boy who exhibits complex emotions in response to his daily experiences.

Eliot has not been medicated for ADHD although several psychologists have diagnosed it, because his parents are opposed to this type of medication for their son. I have counselled them that this will cause a slower rate of academic progress but they are contented with that. His spelling age is equivalent to his chronological age, currently 11 years 8 months.

The discrepancies that exist for Eliot are evident in his National Assessment Program – Literacy and Numeracy (NAPLAN) results. His NAPLAN results for Year 5 at 10 years 6 months:

Reading	Band 8
Writing	Band 3
Language Conventions:	
Spelling	Band 5
Punctuation and Grammar	Band 7
Numeracy	Band 5

The critical areas for intervention for students with ADHD and reading difficulties are the deficits in executive function, a slower processing speed, problems in language comprehension (*consider giftedness here), phonological processing and the core ADHD behavioural symptoms.

A study by Tannock (2007) found that children with ADHD plus co-morbid Reading Disability ('dyslexia') need specific treatment for *each* component of this co-morbid condition. They need a combined treatment approach. Reading instruction plus stimulant medication may be effective. She concluded that stimulant medication improves behavioural symptoms of ADHD but has no effect on phonological processing, and that specific, focused, individualised and intense reading instruction improves phonological processing abilities.

Twice exceptional children are gifted first and they need an advanced curriculum aimed at developing their passionate interests. They are often missed for Learning

Disability diagnosis because they compensate with their considerable cognitive strengths.

References

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