



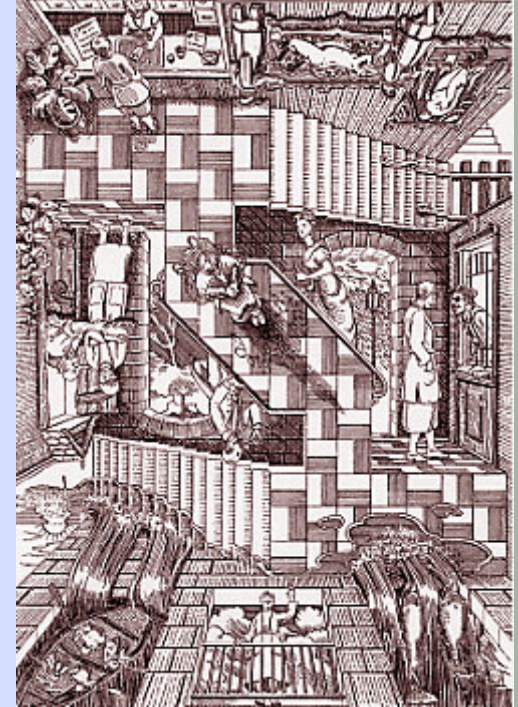
AN ENIGMA:  
IDENTIFICATION  
OF  
GIFTED  
STUDENTS  
WITH A  
LEARNING  
DISABILITY

Catherine Wormald

# Professor Egghead's proverbs

Professor J Fortescue Egghead likes to use big words & complicated sentences. Here is how the professor would say eight well-known proverbs. See how many you can recognize.

1. A rotating fragment of mineral collects no bryohpytic plant
2. Exercise your visual faculties prior to executing a jump
3. Under no circumstances compute the number of your barnyard fowl previous to their incubation
4. An excess of individuals skilled in the preparation of edibles impairs the quality of thin soup
5. A feathered biped in the terminal part of the arm equals in value a pair of feathered bipeds in densely branched shrubbery
6. A recently purchased implement for brushing away floor dirt invariably effaces the dirt most efficiently
7. A tiresome heart at no time succeeds in acquiring the beautiful damsel
8. Everything is legitimate in matters pertaining to ardent affection and armed conflict between nations



(Classic Brainteasers Martin Gardner 1995)

# RESEARCH METHOD

- Quantitative – survey of teachers
  - attitudes
  - confidence to identify & meet needs of students with diverse needs
  - strategies to meet needs
- Qualitative – teachers
  - case studies – identified students
    - families
    - allied professionals
    - interviews
    - analysis of interviews

# *PROFILES OF LEARNING DISABLED*

Hidden Gifted Learning Disabled

Subtle Gifted Learning Disabled

Recognised Learning Disabled

(S. Baum)



# Case Study Adam Assessments

## Adam

WISC III

Neale Analysis of reading

Irlen reading/Perceptual ability

Auditory processing TOP test

Primitive reflex testing

SCAN test

Developmental motor & perceptual skills

Handwriting Bonney & Perks – handwriting difficulties assessment

Handwriting speed test

Visual motor skills

Visual motor integration supplemental tests

<b>Verbal IQ (VIQ)</b>	Very superior range	147 – 99.9%ile	Information	18
			Similarities	17
			Arithmetic	18
			Vocabulary	18
			Comprehension	19
			Digit Span	12
<b>PIQ</b>	High average	119 – 90%ile	Picture completion	11
			Coding	10
			Picture arrangement	12
			Block Design	19
			Object assembly	12
			Symbol search	12
<b>Index summary</b>			Verbal comprehension	146 – 99%ile
			Perceptual organisation	122 – 93%ile
			Freedom from distractibility	129 – 97%ile
			Processing speed	106 – 66%ile

# EFFECTS – ADAM

**IQ** - Digit span - short term memory weakness

Block design – mentally organize visual information strength

**Visual** – Scotopic Sensitivity Syndrome – perceptual dysfunction – translate ideas into print – handwriting

**Auditory** – auditory comprehension & memory – reading, writing, spelling, comprehension, behaviours & socialization

**Physical development** – handwriting – unable to cross the midline, isolate movements between head, shoulders & upper limbs, pencil grip, gross motor skills.

Strengths – planning auditory sequencing, visual perception.  
Visual perception rather than motor coordination for writing

# RECOMMENDATIONS

**IQ** - Extension work at school, abilities in numerical calculations further study

**Auditory processing disorder** - Placement toward the front facing teacher during exams to avoid distraction

Transcriber

A structured phonics program - multisensory to assist development reading & spelling strategies

**Developmental motor and perceptual skills** -Therapy sessions

Development of home program

Monitoring throughout school year

**Visual** - Frequent short breaks when reading

Extra time for all reading, writing & assessment tasks

Sit close to the board for copying, copy from a competent friend, copy of notes provided

Glare reducing filter or alter the colour of the background when using the computer

Turn off some of the lights, does not sit directly under them or facing a window

Modified homework expectation

Homework instructions in print

Learning to touch type, allowed to type assignments & assessable material to improve legibility & presentation

# INTERVENTIONS

SAMONAS Sound therapy

Gross motor program to assist with the integration of primitive reflexes

Spectrally modified Irlen tinted filters for all reading, class work and whenever he feels comfortable wearing them & optical prescription for long-sightedness

# Case Study Mark Assessments

## Mark

WISC III

Neale Analysis of reading

Auditory processing - TOP test

SCAN test

South Australian Spelling Test

MUSEC – Macquarie University Word Attack Test

Developmental motor & perceptual skills

Handwriting Bonney & Perks – handwriting difficulties assessment

Visual motor skills

Visual motor integration supplemental tests

Integration Tests

Handwriting speed test

Behavioural optometric assessment

Oral Expressive language skills

<b>Verbal IQ (VIQ)</b>	Very superior range	140 – 99.6%ile	Information	14
			Similarities	15
			Arithmetic	18
			Vocabulary	18
			Comprehension	19
			Digit Span	14
<b>PIQ</b>	High average	119 – 90%ile	Picture completion	13
			Coding	6
			Picture arrangement	11
			Block Design	19
			Object assembly	19
			Symbol search	19
<b>Index summary</b>			Verbal comprehension	137 – 99%ile
			Perceptual organisation	133 – 99%ile
			Freedom from distractibility	134 – 99%ile
			Processing speed	88 – 21%ile

## EFFECTS

**IQ** - Coding, symbol search, digit span picture arrangement - weakness in hand/eye coordination, auditory & visual sequencing

Digit span - reversing digits – integration not fully established – auditory sequencing & processing - reading, spelling, listening, concentration

Picture arrangement – visual perception & sequencing, cause & effect relationships coding, symbol search.

Strengths – general knowledge, concept formation, arithmetic, vocabulary knowledge, logical reasoning in everyday situations, attention to visual detail, visual organization & spatial perception

**Auditory** – auditory & central processing – difficult to read, spell, listen & follow directions. High frequency sounds – s,ch,sh,th,f.

**Visual** – poor focusing stamina, difficulty maintaining good visual function – reading comprehension

**Physical Development** – significant difficulties fine & gross motor – poor upper body muscle control, inability to cross midline, inappropriate pencil grip, colouring in, cutting, difficulty forming letters a,b,c,d,f,g,l,p,q,& 1,3,6,7,8,9. Motor planning, organizational skills, spatial awareness & sequencing.

## RECOMMENDATIONS/INTERVENTIONS

**IQ** - Results discussed with the school measures put in place to address the child's needs. Parent and school together ensure maximum benefits in shortest time minimum stress on child

Occupational and physiotherapy - visual motor problems

Suggestions & information for school

**Auditory processing disorder** - SOMONAS sound therapy

**Developmental motor and perceptual skills** -therapy sessions twice weekly to get regular program

Development of home program - regular practice

Re-assessment 9 to 12 months

**Optical** - stress relieving lenses, yoked prism incorporated into prescription

Developmental movement activities to integrate primitive reflexes.

Eyelight, an innovative tool which is a type of goggle that flashes

intermittently on the non preferred eye to arouse the brain

# IDEAL CLASSROOM

*Teacher skilled in most areas*

*Friendly teacher but strict enough to make sure that you don't get out of good work habits and stuff*

*You would want every day to have a challenge you know*

*The work set just a tiny bit above your current level so that you slowly rise up*

*It would probably be try as hard as you can to basically just suit their needs and like in work and stuff, adequate level work so it's a challenge*

*I just don't like school and I really don't want to waste the holidays. I don't want the holidays to go by without me doing many really good things.*

*The main thing is homework, I absolutely **hate** homework. It's so annoying having to review things you already know because I don't exactly see how asking questions in a book is going to help me learn that much.*

*I had singing lessons. They had homework and voice exercises and as I said I hate homework really.*

*She did understand things and the way she thinks.*

## CHILD AWARENESS

*I had a really bad teacher who couldn't recognise any talent from any student and thought they were all basically equal. So he gave very uninteresting work, I basically learnt only one thing in an entire year which was vertical addition in year 3 so that wasn't very interesting at all and I started getting into bad habits.*

*I think it might have been in year 1 when I just kept on being able to figure out the easiest way to do certain things in maths and that, whereas like in handwriting I kept finding it tricky to get my hand to make the e's curved and perfect.*

*I type rather than write*

*Well there's a big array of resources on the computer*

*Easier file storage*

*I'm not very organised so that is why I do it on the computer*

*Easier to edit*

*Can create art*

*Usually I might have somewhere like where I can just put all the information, where a computer's handy because I can just open up one of my documents and there it is*

*Email access so can send stuff from home to school and vice versa*

# CHILD AWARENESS

*Maths rules are very easy. As in maths it's simple because basically there's a formula that explains why and I can figure out the reason why. Spelling seems completely illogical, that I has to go before E. And IE makes this sound whereas EI makes that sound. I usually get there by basically just remembering. I can remember things that make sense and much easier to understand.*

*Years 5 & 6 were quite good where I had a teacher who was skilled with computers which was good. She challenged me and I learnt a fair bit because there was stuff that was above my level which I could rise to the challenge basically.*

*I have a plan in my head of what it would look like but it doesn't always work out and I want it to.*

## PARENT COMMENTS

*We were at a loss, it was just a nightmare to live with, it was just so awful and we didn't know why this was happening.*

*He bullied his best friend, their parents rang up and said their kid was too scared to go to school because Adam had threatened to do something to him, beat him up or something. It was just verbal bullying not physical.*

*Adam had anger management problems and they really escalated in year 3, it's taken quite a few years to get it under control and it's gradually, every year it's been better and better.*

*Glad to go to the school counsellor because it got him out of that teacher's lesson and he had someone sensible to talk to. He was getting detentions every day.*

*I'm saying that he's not going to improve his behaviour until he gets some stimulation, that's what the problem is. He could not see that Adam's behaviour had anything to do with him not being stimulated in class. She said to me that a nine year old should not be bored. She couldn't understand how a nine year old could be bored and so I thought she doesn't know much about gifted children either if she can't understand that kids can be bored.*

*I remember Adam trying to talk to the principal and I was there and it was really interesting that he was trying to engage the principal on an adult level to discuss the causes and problems and the like and he just wouldn't engage with him. He would just not recognise that someone Adam's age had a right to talk at that kind of level to him about the nature of the problems and how things could be improved. It was terrible to watch.*

*Oh that's a bit drastic, changing schools, won't they all be the same.*

*The principal herself is gifted I think, it's quite obvious and the way she took us around. It was obvious she had the right approach.*

*He was absolutely hating repeating, he made absolutely no new friends in the other kindergarten, he still kept his friends from the previous year that were his age. He had an absolutely dreadful year.*

*We do modify behaviour. You don't go any where you've got to wait in a queue (this for the father as well as the boys). We make sure they have a fairly active and varied life, went canyoning in the school holidays. We try and plan that there's something to do most of the time, plan activities like going to the beach where they can run wild rather than somewhere indoors. Indoors just doesn't work. Organised activities that are heavily organised, we avoid those.*

*I don't think it's all bad because I mean you have to engage a lot more with the kids and find really good activities for them to do. I don't think it's necessarily detrimental and we share a lot of time with the kids compared to most I think far more. We do more things with our kids than most people.*

## Case Study Emma Assessments

WISC III - 24/4/03

WISC IV - 24/12/04

Stanford-Binet Intelligence Scale: Fifth Edition - 12/12/05

Neale Analysis of reading 22/4/03 (CA 6.5 yrs)

23/02/04 (CA 7.3yrs)

24/12/04 (CA 8.1yrs)

18/7/06 (CA 9.8yrs)

South Australian Spelling test 22/4/03 (CA 6.5yrs)

23/02/04 (CA 7.3yrs)

24/12/04 (CA 8.1yrs)

Rey Auditory Verbal learning test

**Auditory processing skills** – 30/4/03 -

Clinical Evaluation of language fundamentals-3 (CELF-3)

Receptive language

Clinical Evaluation of language fundamentals-3 (CELF-3)

Expressive language

Lindamood Auditory Conceptualisation Test (LAC)

Articulation

Clinical Evaluation of language fundamentals-4 (CELF-4)

Receptive language

Clinical Evaluation of language fundamentals-4 (CELF-4)

Auditory processing skills	Supplementary subtests
Tests Phonological Awareness	Phonological Awareness Test (PAT) Test of Auditory Perceptual Skills-Revised TAPS-R Fisher's Auditory Problems Checklist
Literacy Skills	Woodcock reading mastery tests <b>X2</b> Test of Reading Comprehension (TORCH) Test of Written Spelling
Learning ability evaluations	Peabody picture vocabulary test III A Detroit test of learning aptitude Detroit test of learning aptitude – 2 Slosson Oral Reading Test Revised Wide Range Achievement Test revised 3 Gray oral reading test Gray Oral Reading Test – 3 Informal Test of Reading
Threshold Order Processing Test (TOP)	
SCAN test	
Benton Visual Retention Test	
Behavioral Optometry Assessment	GMH Visual Recall Test of Visual Memory Test of Visual Perceptual Skills (non motor) Computerized Visual Test 1 & 2 Computerized Reading Fluency Assessment

Woodcock-Johnson III – Test of cognitive abilities & achievement

Sequencing

Counting & Numbers

Alphabet & hand writing

Reading

Spelling & Story writing

Auditory processing

Movement & catching

**Research Project** –Receptive Syntax – TROG - 2

Expressive Syntax - Recalling Sentences subtest of the CELF – 4 **(4X)**

Receptive Semantics – BPVS - 2

Receptive & Expressive Phonology – NEPSY **(4X)**

Expressive Phonology – Goldman Fristoe test of Articulation -2

Word Reading – Castles & Coltheart regular & irregular word lists **(X6)**

Phonological Decoding - Castles & Coltheart non word lists **(X6)**

**Research Project –**

Sustained Attention **(3X)**

Arithmetic – **(3X)**

Sound Discrimination – **(2X)**

Test of Written Spelling – **(5X)**

Phoneme Discrimination – **(8X)**

Word Retrieval & Expressive Phonology – **(3X)**

**Physical Development –** Coordination skills

Integration testing

Lazy eight test

Loops test

<b>Verbal IQ (VIQ)</b>	Low average	85 - 16%ile	Information	8
			Similarities	2
			Arithmetic	10
			Vocabulary	9
			Comprehension	8
			Digit Span	9
<b>PIQ</b>	Very superior	144 – 99.8%ile	Picture completion	14
			Coding	16
			Picture arrangement	17
			Block Design	19
			Object assembly	17
			Symbol search	19
<b>Index summary</b>			Verbal comprehension	83 - 13%ile
			Perceptual organisation	141 – 99.7%ile
			Freedom from distractibility	98 - 45%ile
			Processing speed	140 – 99.6%ile

## EFFECTS

**IQ - Weakness - Similarities** -- verbal reasoning skills, auditory discrimination & short term auditory memory,

Information – dependent on motivation,

Vocabulary – breadth of reading

Comprehension – social awareness

Digit span - short term auditory sequential –auditory processing & attention

Coding – difficulty conveying thoughts to paper – time constraints, note taking

Strengths – Block design – non verbal reasoning

Symbol search – visual motor coordination, visual motor processing abilities

Perceptual organization – unlearnt fluid intelligence

## Learning – reading laboured & stilted –

Said	came	written	come
	at		sat
	where		why
	wished		wish
	our		your

## Spelling & writing –

Wrote	libeyiy	instead of	library
	rede		read
	soohl		school
	tock		took
	et		it
	feed		fed

Significant difficulty

blending sounds - affecting decoding & comprehension

discriminating words with different beginning & ending sounds

spelling - not hearing appropriate sound within words

expressing verbal relationships – demonstrate or own terminology

Word substitution

Articulation difficulties

Reduced visual processing – reading speed, fluency, comprehension, memory

# RECOMMENDATIONS

**IQ** - Inclusion in a G & T program

Auditory processing assessment

Visualizing & verbalizing Program

LindaMood Bell Program

Similarities – sameness & differences

Counselling for frustration & low self esteem

Kinaesthetic & visual stimuli

Innate intelligence nurtured & acknowledged

Occupational therapy

Computer keyboard skills

Social awareness

## Classroom strategies –

Concrete rather than abstract

Dissimilar objects that have commonality

Learning style – mind maps, flow charts, imagery - adapted teaching strategies for visual learning preference

Auditory memory – instructions in short sentences & chunk sentences

Provide tasks that build up in complexity

Remembering strategies

Reading & spelling remediation

Teach more concepts & less facts

Make school aware of her difficulties

Encourage use of dictionary – **father says she won't**

Early introduction to design, computer studies, algebra, geography, science & art – high level of abstract visual processing

Allow her to find her own way to the answer

Do not expect her to do the same work over & over

Emphasize information important to memorize

**Under no circumstances should she be requested to read aloud in front of peers**

## **Specific programs**

Phonological awareness program

Auditory integration training

Learning Creations Five Day Program – follow up support – 4 one hour sessions per week

Spalding Method of Literacy

Nanci Bell's Visualizing & Verbalizing Program

Plan & graphic organizers

Earobics – CD – phonological skills

Cognitive training – 4hours daily over 6 weeks

Temporal Visual Processing Program – 10 – 12 weeks

# **INTERVENTIONS**

Speech Pathology – 30 weekly sessions

Private tutoring – one on one

Temporal Visual Processing Program

Macquarie Centre for Cognitive Science

Visual Program

FastForWord Program

School Reading Program

## CHILD AWARENESS

*I'm having trouble saying words & things like that.*

*I usually read sentence & then I'll probably skip a sentence & then go onto the next paragraph & miss a whole couple of lines.*

*Possibly like swap the letters around & then say the wrong thing.*

*Pretty bad at spelling.*

*Now I put a bookmark under each sentence & when I finish that sentence I put it down again. So I see where I am up to instead of going all the way.*

*Don't like the bullies. They usually punch and kick me.*

*I want extra work in science & art and I probably want to be in more reading groups to get it better, like my reading up.*

*I just want to stop doing all these test things. It's just interfering and stuff like that.*

*Like I want to spend more time with friends & family instead of going out and doing reading and stuff like that.*

*Last year I probably went to three or four speech pathologists for different things.*

*Well that puts me down – like when I'm reading because I usually get words muddled up as I said before – I feel bad about myself.*

## IDEAL CLASSROOM

*Want to do what other kids are doing but also different.*

*He helped me when I was struggling.*

*There's a guy at our school that helps everybody with reading & writing & stuff like that then I'd probably say can you get me more lessons with him.*

## PARENT COMMENTS

*I was shocked, well we knew she was behind in reading so we always thought that might have been it but we didn't know she was gifted as well.*

*That's one thing she lacks. The same as I always did, that's the drive and conscientiousness that momentarily she'll want to do it and she has the ability to do it but she'll just kind of lose interest real quickly and not have the drive to continue long enough to keep with it .*

*I used to tell my mum that you can't battle against your innate self, but in the long run you can't really overcome it you'll always be brought back to that.*

*I don't have the solution for me yet, I'm just saying that whatever I've found that I tend to be a bit on the lazy side or I might drift off and I force myself to concentrate I'm going to force myself to do this and for a little while it'll happen but sooner or later you drift back to what you basically are.*

*Well you know when I said it in fact there are too many of these – she seems to be tested to within an inch of her life & she does really well with it.*

*It's hard on me too getting dragged to all these things.*

*She was supposed to stick the homework sheet on one page & do her spelling words on the other & she was doing it the opposite way around & then changing it the following week & her teacher kept picking on her for little things like that.*

*In year 2 she had five teachers job sharing each week.*

*Principal got up and said there are children in this school who are visual spatial but we don't want them to learn that way we want them to learn the auditory way.*

*Picked to do math Olympiad but she was getting the questions wrong I think because they had such a long story.*

*Taking her temperature everyday, taking it every day, hoping it, she'd get that magic number 38 every single day. She would get up and go and get the temperature and ask is it 38 yet?*

*She said if I get the other teacher I'm walking out.*

**“THE WHOLE ART OF TEACHING IS  
ONLY THE ART OF AWAKENING  
THE NATURAL CURIOSITY OF  
YOUNG MINDS FOR THE PURPOSE  
OF SATISFYING IT AFTERWARDS**

Anatole France – novelist, essayist, Nobel laureate 1844 - 1924

