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ASSESSMENT OF COGNITIVE SKILLS

CHILD:	Melanie P
ADDRESS:	3, The Close Medborough
AGE:	12 years 8 months
DATE OF BIRTH:	12/7/1994
DATE OF ASSESSMENT:	12/2/2008
DATE OF REPORT:	21/2/2008
ASSESSMENT BY:	An Associate
REPORT BY:	A Qualified Psychologist

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INTRODUCTION

This section tells you about the assessment and the scores it produces.

Melanie was assessed using the Wechsler Intelligence Scale for Children – 4th Edition UK. This is a clinical assessment instrument used to assess a wide range of thinking and reasoning skills in children and adolescents aged from 6 years to nearly 17 years. It is given on a one-to-one basis by a psychologist who has training and experience with this particular instrument. There are four main sections of the scale giving six main scores as follows:

Area of Assessment	***Skill Sector***
Verbal Comprehension	Language and Verbal Reasoning
Perceptual Reasoning	Practical and Non Verbal Reasoning
Working Memory	Short Term Memory
Processing Speed	Visual Matching and Visual Motor Skills
Full Scale	Aggregated Performance on the above four skill sectors
General Ability Index	Aggregated Performance on Verbal Comprehension and Perceptual Reasoning

The *Verbal Comprehension* score records results on listening to questions and giving spoken answers. This section of the report is made up of three subtests evaluating Melanie's skills in understanding verbal information, thinking and reasoning with words and interpreting actions that typically take place on an everyday basis – essentially explanation skills.

The *Perceptual Reasoning* results indicate performance on tasks that require practical thinking and reasoning to do with designs, pictures and puzzles that do not require the use of words to reach solutions. Some of the tasks require fast working against the clock so there are elements of both accuracy and fluency in the process of reaching a solution.

The *Working Memory* results refer to tasks involving the retention of numerical and letter information and the application of rules prior to recall. Work in this area requires short term memory, receptive attention and concentration in order to achieve success.

The *Processing Speed* Score sets out results in tasks requiring the ability to match symbols and make decisions about them according to prescribed rules - together with the facility to transfer information and make judgements at speed.

The Full Scale score is made up from a combination of the Verbal Comprehension, Perceptual Reasoning, Working Memory and Processing Speed subscales and gives an overall aggregated result.

The General Ability Index is made up of the first two scales namely Verbal Comprehension and Perceptual Reasoning only.

Reporting of Results

Here you can read about how to interpret and understand the results.

The scores in the tables below demonstrate Melanie's performance compared with a group of individual children or adolescents of the same age sampled from across the UK. On each of the scales there is a standard score computed from the results of the test. The highest possible score is 160 and the lowest possible score is 40. 50% of all those taking the test will score less than 100, and 50% will score more than a 100. An average score would be in the range from 90 to 109.

Another way of expressing the results is in the form of a percentile rank. This refers to the percentage of individuals of the same age that would be expected to score less than the subject's individual result on any of the subtests and scales. For example a percentile rank of 71 would mean that around 71% of young people taking the test would score lower than the subject.

It is important to appreciate that no psychological test is perfectly accurate as tends to be the case with a physical measurement such as length or weight. Any individual child or adolescent might score slightly higher or lower at any one time due to a number of factors such as motivation, fatigue, exuberance, confidence, determination, anxiety and poor general attention. Factors affecting performance can vary from day to day and even minute by minute with particular individuals – but compared to other similar type assessment this instrument is amongst the most accurate. Confidence limits indicate the range in which 'theoretically correct scores' can be found.

The table immediately below can be usefully applied in the process of interpreting results:

Test Score Interpretation Guide

Standard Scores	***Scaled Scores***	***Percentile Rank***	***Rating***
St.Sc 130 and above	16+	Percentile 98 and Above	Exceptionally High
St.Sc in the range 120 to 129	14 to 16	Percentile 91 to Percentile 97	High
St Sc in the range 110 to 119	12 to 14	Percentile 75 to Percentile 90	High average
St.Sc in the range 90 to 109	8 to 12	Percentile 25 to Percentile 74	Average
St.Sc in the range 80 to 89	6 to 8	Percentile 9 to Percentile 24	Low average
St.Sc in the range 70 to 79	4 to 6	Percentile 3 to Percentile 8	Below average
St.Sc 69 and below	4 or less	Percentile 2 and Below	Well below average

The following tables give Melanie's results.

Table 1: WISC IV Test Scores (Composite)

Scales of WISC IV UK	Standard Score Ave=90 to 110	Range of probable results allowing for errors 95% of the time	Percentile Rank Ave=25 to 75	Qualitative Range
Verbal Comprehension (VCI)	104	**97-111**	61	Average
Perceptual Reasoning (PRI)	133	**123-138**	99	Very Superior
Working Memory (WMI)	97	**90-105**	42	Average
Processing Speed (PSI)	112	**102-120**	79	High Average
Full Scale (FSIQ)	117	**112-121**	87	High Average

Table 2: Subtest Scores

Verbal Comprehension Subtest Score Summary (Total Raw Score to Scaled Score Conversions)

Subtests	Scaled Score	Percentile Rank
Similarities	10	50
Vocabulary	11	63
Comprehension	12	75

Perceptual Reasoning Subtest Score Summary (Total Raw Score to Scaled Score Conversions)

Subtests	Scaled Score	Percentile Rank
Block Design	15	95
Picture Concepts	14	91
Matrix Reasoning	17	99

Working Memory Subtest Score Summary (Total Raw Score to Scaled Score Conversions)

Subtests	Scaled Score	Percentile Rank
Digit Span	8	25
Letter-Number Sequencing	11	63

Processing Speed Subtest Scores Summary (Total Raw Score to Scaled Score Conversions)

Subtests	Scaled Score	Percentile Rank
Coding (CD)	12	75
Symbol Search (SS)	12	75

Melanie was given all 10 subtests of the Wechsler Intelligence Scale for Children -- 4th Edition (WISC IV).

Interpretation of WISC-IV Results

This section details Melanie's profile

Melanie's unique set of thinking and reasoning abilities make her overall intellectual functioning difficult to summarise by a single score on the Wechsler Intelligence Scale for Children – Fourth Edition (WISC-IV). Her nonverbal reasoning abilities are much better developed than her verbal reasoning abilities. Processing complex visual information by forming spatial images of part-whole relationships and/or by manipulating the parts to solve novel problems without using words is a strength. Making sense of complex verbal information and using verbal abilities to solve novel problems is a less well-developed ability for Melanie but nonetheless average.

Melanie's verbal reasoning abilities as measured by the Verbal Comprehension Index are in the Average range and above those of approximately 61% of her peers (VCI = 104; 95% confidence interval = 97-111). The Verbal Comprehension Index is designed to measure verbal reasoning and concept formation. Melanie performed comparably on the verbal subtests contributing to the VCI, suggesting that these verbal cognitive abilities are similarly developed. Melanie performed much better on abstract categorical reasoning and concept formation tasks that did not require verbal expression (Picture Concepts = 14) than on abstract categorical reasoning and concept formation tasks that required verbal expression (Similarities = 10).

Melanie's nonverbal reasoning abilities as measured by the Perceptual Reasoning Index are in the Very Superior range and above those of approximately 99% of her peers (PRI = 133; 95% confidence interval = 123-138). The Perceptual Reasoning Index is designed to measure fluid reasoning in the perceptual domain with tasks that assess nonverbal concept formation, visual perception and organisation, simultaneous processing, visual-motor coordination, learning, and the ability to separate figure and ground in visual stimuli. Melanie performed comparably on the perceptual reasoning subtests contributing to the PRI, suggesting that her visual-spatial reasoning and perceptual-organisational skills are similarly developed.

Melanie's ability to sustain attention, concentrate, and exert mental control is in the Average range. She performed better than approximately 42% of her age-mates in this area (Working Memory Index = 97; 95% confidence interval 90-105).

Melanie's abilities to sustain attention, concentrate, and exert mental control are a weakness relative to her nonverbal reasoning abilities. A relative weakness in mental control may make the processing of complex information more time-consuming for Melanie, draining her mental energies more quickly as compared to other children her age, and perhaps result in more frequent errors on a variety of learning tasks.

Although clearly weaker than her nonverbal reasoning abilities, Melanie's ability to exert mental control is still within the Average range and better than that of approximately 42% of her age-mates (Working Memory Index = 97; 95% confidence interval 90-105).

Melanie's ability in processing simple or routine visual material without making errors is in the High Average range when compared to her peers. She performed better than approximately 79% of her peers on the processing speed tasks (Processing Speed Index = 112; 95% confidence interval 102-120). Processing visual material quickly is an ability that Melanie performs less well than her nonverbal reasoning ability. Processing speed is an indication of the rapidity with which Melanie can mentally process simple or routine information without making errors. Good speed of simple information processing may free cognitive resources for the processing of more complex information, and ease new learning. Students with superior reasoning ability often tend to perform less well, although still adequately, on processing speed tasks.

Personal Strengths and Weakness

This section tells you what kinds of things your child is best at. Here you can see that Melanie has great strengths in visual (or non-verbal) logic.

Melanie's performance was significantly better on the Matrix Reasoning subtest than her own mean score. Further, she performed much better than most of her age-mates, thus demonstrating very strong abilities on the Matrix Reasoning subtest. The Matrix Reasoning subtest required Melanie to look at an incomplete matrix and select the missing portion from five response options. This subtest assesses fluid visual information processing and abstract reasoning skills; (Matrix Reasoning scaled score = 17).

Conclusions from this Assessment

Melanie is a 12-year-old child who completed the WISC-IV. Her overall cognitive ability, as evaluated by the WISC-IV on this occasion, cannot easily be summarised because her nonverbal reasoning abilities are much better developed than her verbal reasoning abilities. Melanie's reasoning abilities on verbal tasks are generally in the Average range (VCI = 104), while her nonverbal reasoning abilities are significantly higher and in the Very Superior range (PRI = 133). Melanie's general working memory abilities are in the Average range (WMI = 97), and general processing speed abilities in the High Average range (PSI = 112). Melanie's abilities to sustain attention, concentrate, and exert mental control are a weakness relative to her nonverbal reasoning abilities. Melanie's ability to process visual material quickly is a weakness relative to her nonverbal reasoning ability.

You can see that Melanie has very strong nonverbal abilities and is far more able in this respect than other children her age – in fact, she is genuinely gifted in this area. However, although her verbal abilities are average, the difference between the two areas might cause her some difficulty. Such difficulties are relatively common when large discrepancies exist between abilities in different areas. We can provide advice on how to help your child maximise their strengths and manage any difficulties they have. Initially, we can direct you to appropriate resources such as books and websites. Then you can choose to book a telephone consultation if you want more individual input. We can also help you decide if further assessments are necessary.

How to use this information

This assessment should be seen in conjunction with other information before considering further action. We would suggest you look at some of the resources listed at the bottom before deciding on how to proceed.

This assessment can be used as a basis for discussion with an educational or clinical psychologist if you choose to commission a telephone consultation. It will also be possible to discuss specific issues connected with the assessments and any concerns related to educational or other matters. It may be that additional assessments or interventions will need to be considered. Advice in relation to this can be part of the discussion.

In order to maximise the efficiency of the time available we would suggest that you formulate a list of questions for discussion. You may want to e-mail these to us once you have booked the telephone consultation.

Resources

You may want to look at information about the following issues:

- ***Giftedness*** – i.e. having superior abilities in particular areas
- ***Discrepancies*** in IQ scores – i.e. having large differences between abilities

Giftedness (sometimes called Asynchronous Development)

http://www.nagcbritain.org.uk – UK site about gifted children

http://www.sengifted.org – Supporting Emotional Needs of the Gifted

http://www.hoagiesgifted.org – General website (US based)

http://www.nagc.org – US version

http://www.nexusresearchgroup.com/gifted_kids/gifted.htm - A New Zealand site

Discrepancies (sometimes called Twice Exceptional)

"Uniquely Gifted : Identifying and Meeting the Needs of the Twice Exceptional Student" by Kay Kiesa – you can view pages on Amazon by clicking here (note, this is the US site i.e. www.amazon.com).

http://www.hoagiesgifted.org/asynchrony_squared.htm - page on the site above.

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