Psychology Factsheets

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Gifted Children

This Factsheet summarises how psychologists can identify and assess gifted children and discusses how to help the gifted child in school.

• **Terms in bold are explained in the glossary**.

What does being 'gifted' mean?

- Children who are gifted have one aspect in common; they have the *potential to excel* in one or more areas.
- This covers a whole range of abilities, from general skills to the creative (art and music) to specific talent in mathematics, science or performing arts.
- 'Giftedness' is a term that refers to children who have a special ability, beyond that of their peers, which identifies them as different.

An example of giftedness:
Ruth Lawrence was a gifted child. She went to Oxford at twelve years old, receiving her BA degree two years later and a PhD at seventeen (Child, 1997).

IQ (Intelligence quotient): IQ is a quantitative measurement of cognitive ability. It is calculated from answering a series of cognitive questions. IQ is norm referenced as an individual's IQ is measured against a normal distribution of scores. The formula is:

$$\frac{\text{Intellectual age}}{\text{Chronological age}} \times 100 = \text{IQ score}$$

- Children who are 'gifted' in some ability (e.g., art, maths, history, etc) learn faster, retain more information and gain higher grades than others within that subject. They are also able to spend considerable amounts of time concentrating and learning within that dimension.
- Factors that apply to giftedness are:
  - o inherited ability;
  - o personal attributes;
  - o the environment of the child;
  - o learning experiences of the child; and
  - o talent.
- The problem is that there is no one single agreed definition of giftedness and there are a number of characteristics of giftedness.
- Defining and measuring giftedness is extremely difficult as 'potential' is a vague factor and a child's environment can be a factor in the assessment of giftedness.

A HMI report (1992, cited in Child, 1997) states:
"The majority of educationalists working in this field accept criteria which include general intellectual ability, specific aptitude in one or more subjects, creative or productive thinking, leadership qualities, ability in creative or performing arts and psychomotor ability. The term 'very able' is intended to refer broadly to the top 5% of the ability range in any of these areas, while the term 'exceptionally able' refers to that tiny minority…functioning several years beyond their age group."

How can we identify giftedness?

There are many traits involved in giftedness. These include general traits and more specialised characteristics for different areas of giftedness. These are summarised in the tables below.

Table 1. General traits

Author(s)	Child (1997)	Shore and Kanevsky (1993)	Renzulli, Reis and Smith (1981)
Traits	- High intelligence. - Good memory. - Acute creative thinking abilities. - Early development in talking, reading, writing, perseverance and concentration.	- An exceptional memory and knowledge base. - Very good **metacognitive** abilities. - A very quick response to test questions. - Understanding problems very clearly – understanding what is missing and what is relevant. - Awareness of how to use knowledge effectively. - Flexibility. - Preference for complexity in problem-solving tasks.	- High ability (high achievement or high IQ). - High creativity. - High commitment.

Table 2. Specialised characteristics for different areas of giftedness

Specific area	Visual and performing arts	Creative thinking	General intellectual ability	Specific intellectual ability
Characteristics	- Excellent spatial relationships - Good motor co-ordination - Expresses creativity well - Can express emotions well	- Independent thinker - Creates various solutions - Inventive - Improvises	- Works well with abstraction - Formulates new ideas - Learns rapidly - Inquisitive - Self-motivated	- Good memory - Internalises basic-skill knowledge quickly - High academic interest in a chosen subject area - Commitment to interest area - Advanced comprehension

Assessing giftedness

- Assessment can come from parents, teachers, the students themselves and **IQ** tests.
- A parent, teacher, psychologist or employer may all measure giftedness in different ways.
- There is no one test that measures giftedness. A number of different ability tests are used, such as IQ tests. The use of IQ tests is looked at in the text box below.
- **Norm referencing** is generally used to measure the performance of gifted children. Norm referencing assesses students by comparing their performance against a norm for students of their own age or ability.
- Children can also be assessed using checklists of characteristics of gifted children and parental perceptions (see Tables 1 and 2).

Using IQ to assess giftedness

- The level of giftedness can be as measured using an IQ score.
- A child with an IQ of 130 plus is termed as gifted.

Term	IQ score
Bright	115+
Gifted	130+
Highly gifted	145+
Exceptionally gifted	160+
Profoundly gifted	175+

The terms 'exceptionally gifted' and 'profoundly gifted' are interchangeable.

The IQ score is how giftedness is assessed but it is not giftedness itself. The IQ score is a sign that giftedness possibly exists.

- It is difficult to identify giftedness due to the wide variety of factors that are involved. Tests that are available are not always adequate to test the abilities of all children.
- The test that is used can depend upon the sensitivity towards the child's environment, which is an important factor in the identification of giftedness. Freeman (1979) studied this issue. See the text box below.
- It is important to use appropriate tests to assess for giftedness. For example, Newcomb-Belcher and Fletcher-Carter (1999) showed that basing the identification of giftedness on measures from children with a high economic status background can exclude culturally and linguistically different children. See the study in the text box below.

Newcomb-Belcher and Fletcher-Carter (1999) looked at the assessment of giftedness in a Hispanic community in America. They argued that the use of **norm-referenced** tests was not a fair measure for culturally diverse populations. So, they developed and gave a more appropriate measure to the community's parents, teachers and students to assess for giftedness.

- By comparing the results of a standard assessment and the new community-based assessment, they found that the number of students identified as gifted rose from 3 to 24.
- The results clearly showed that the standard assessment tools are inadequate for children from ethnic minority families.

Freeman (1979)

Aim: to investigate the relationship between a high IQ and the environment the child grows up in.

Procedure: Three groups of 70 children were selected from members of the National Association for Gifted Children (NAGC). A random control group was also selected on the basis of having gained the same score on the **Raven's progressive matrices test**. All children were then assessed using a variety of tests based upon intelligence, personality, creative and musical ability tests. Afterwards, children and their parents were interviewed.

Results: The control group scored lower on the general ability tests than the other 'gifted' groups. The mothers of the 'gifted' group had reached higher-level occupations than the control group. They placed greater pressure on their children and complained more. There were no differences on physical and emotional development. Personality profiles also showed no differences.

Conclusions: Freeman concluded that children with parents who believed their children to be gifted tended to score higher on general ability tests but no different on the culture-fair Raven's test. This showed that the difference in performance had something to do with background and not ability. A measure must be used that will identify all gifted children, irrespective of social background. Using only general IQ measures to identify children as "gifted" would miss those from poorer educational backgrounds.

Helping the gifted child in school

- **Pacing -** the speed at which material is delivered through instruction optimises the pace at which the material is presented and the rate of learning for the student. Gifted children often prefer a faster pace.
- One problem is that the gifted person can become isolated outside of the group. By being different you can become atypical and attract unwarranted attention in the form of pressure from other form members. The important factor for giftedness is that it is not a disablement but an acknowledgement that some children can work much quicker than others and assimilate information quicker than others.
- **Enrichment** involves modifications of the curriculum which provides the child with alternative/additional resources so that they can meet their potential
- Renzulli, Reis and Smith (1981) developed an enrichment model called the '**revolving door model**'. This program targets children within the top 25% of students within a school setting. It provides them with different materials and strategies to other children and the child can enter or leave the program whenever they want. This can be criticised in that these children can become isolated from their peers because they are being treated differently to the rest of the class.
- Rogers (1993) proposes that gifted children should be taught together rather than alone. However, this has practical problems. In Britain, children are taught within subject groups. Due to the nature of giftedness it would be impractical to group gifted children together as they are working within different areas and have different needs for subject material.
- **Acceleration** is the faster presentation of content to more closely match the speed at which the gifted student learns. This can often be confused with grade skipping. This is where a gifted child moves to a higher grade but can still learn at an accelerated rate. Often, gifted children will still outperform their peers at this higher grade for their age.

Worksheet: Gifted Children

Name _____

1. Give a definition of giftedness.

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2. What factors are involved in giftedness?

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3. Identify one problem with defining giftedness.

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4. Name two general traits of giftedness and two traits of specific areas of giftedness.

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5. Explain how IQ tests can be used to assess giftedness.

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6. Describe one study of giftedness, explaining its aims, procedure, results and conclusions.

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7. Why should we use 'appropriate' tests to assess for giftedness?

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Glossary

Metacognitive: Thinking about how we think. Our knowledge of how we use strategies to enhance our thought processes.

Norm-referenced: A term that refers to measuring against a norm or average.

Raven's progressive matrices test: A culture-fair measure of intellectual aptitude.

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