

Distribution of Intelligence

Mental Age and Intelligence Quotient

Mental Age

The concept of mental age was first given by Binet. He used in 1908 in his Binet-Simon Scale. By mental age is meant that age which a person attains on the basis of an intelligence test. For example, if a child of 5 years of age is able to solve the questions of the intelligence test prescribed for his age, then his mental age will be considered to be 5 years. If he solves the questions meant for 6 years of age, then his mental age will be 6 years. Mental age does not include real or chronological age. If a child is able to solve the average questions meant for 4 years age group, then he is considered to be backward. Gates and others have said that by mental age is known general mental ability of a person found out by intelligence test at the time of its administration.

Intelligence Quotient

The German child psychologist, **William Stern** propounded the concept of intelligence quotient (I.Q.) in 1912. He named it mental quotient. Later, Terman used it in 1916 in his Stanford-Binet scale and named it intelligence quotient. Intelligence quotient is the ratio between mental age and chronological age. To calculate intelligence quotient, mental age is divided by chronological age and multiplied by 100.

Formula of intelligence quotient :

$$\text{Intelligence quotient, (I.Q.)} = \frac{\text{Mental age}}{\text{Chronological age}} \times 100$$

Example : If the mental age of a 10 year old child is 12 years, then how will his intelligence quotient be calculated?

$$\text{Intelligence quotient, (I.Q.)} = \frac{12}{10} \times 100$$

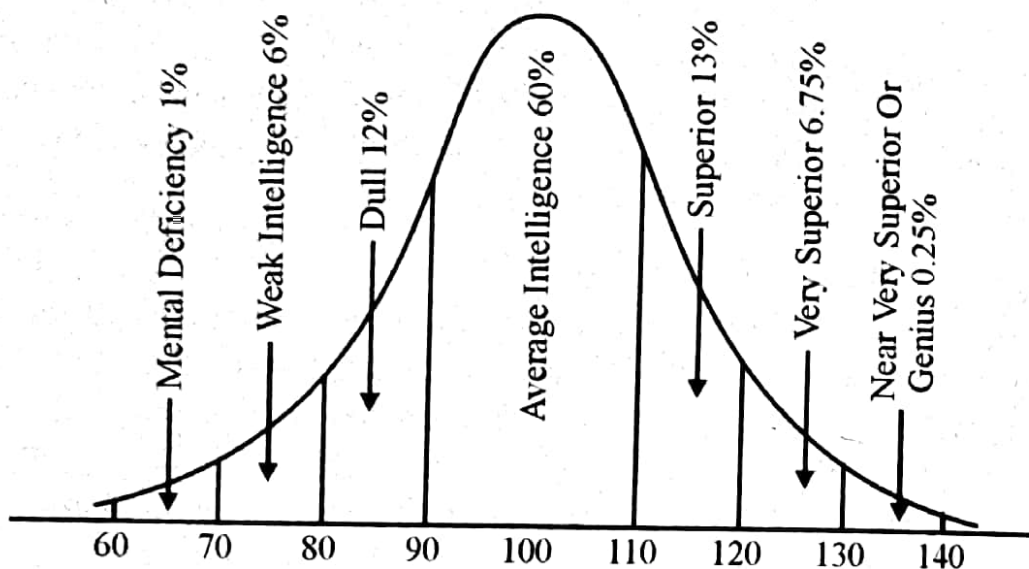
The intelligence quotient of this child will be 120, and this child will be sharp. Thus, we can know by intelligence quotient whether a child is normal, bright or dull.

Classification of Intelligence Quotient

Terman has classified intelligence quotient as follows :

Intelligence quotient	Class
140 or more	Genius
120 – 140	Very superior
110 – 120	Superior
90 – 110	Average
80 – 90	Dull
70 – 80	Mental deficient
70 and below	Feeble-minded
50 – 60	Moron
25 – 50	Infeull
25 or below	Idiot

The types of classes used in the above classification do not have a uniform abundance or uniform number of the people of those classes; rather, intelligence is distributed according to a common possibility curve, which can be explained by the following diagram :



There are three main classes in the classification of individuals on the basis of intelligence: (a) average intelligence, (b) dull intelligence and (c) superior intelligence. We shall explain only the dull and superior children.

1. Feeble-minded Children : A feeble-minded or dull child is the one whose I.Q. is below 70. There are three types of feeble-minded children : (a) idiots, (b) imbeciles, and (c) morons. The level of idiots is the lowest. They are incapable of preserving even their own body. An imbecile is somewhat better than an idiot. He may not have capability to earn his livelihood, yet he can preserve his body from physical hurt. A moron is better than an idiot or an imbecile. He can earn his livelihood if he is given favourable environment. A very feeble-minded child has some mental defect. It is possible to have some physical defect, such as defective

eye, ear, lip etc. Feeble-minded children have poor creative imagination, thinking power, logic, sensibility, speech power and attention.

2. Superior Children : Their I.Q. is above 110. There are three classes of superior children: (a) superior, (b) very superior and (c) genius. These classes are not types, rather they vary in amount. Generally, it is said that genius children are below average in physical development. They also have emotional imbalance and social maladjustment; however, it is not true. Several studies have revealed that in genius children, the extent of physical development, social development, emotional stability, school discipline, friendship and moral traits is better than other normal children. They possess a fine level of self-confidence and self-control. It is necessary for a teacher to know about their I.Q. in order to make the teaching style and class environment favourable to such students.

According to the extent of intelligence, we shall now discuss the meaning, characteristics and their educational system for four types of children, as follows :

1. Gifted children.
2. Backward children.
3. Mentally-retarded child.
4. Slow-learner children.