

Intelligence

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Intelligence

It is the capacity to organize information from the environment ,or it is a capacity for adaption to a new situation .

Ability & capacity

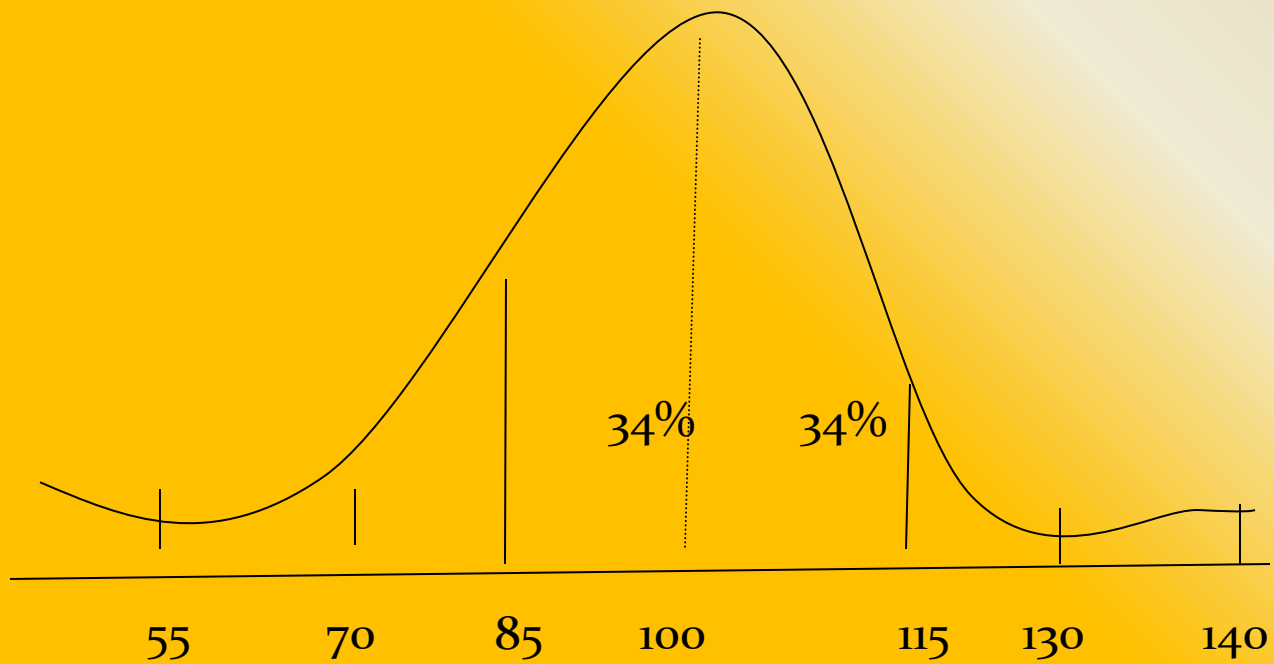
The capacity is the basic potential for abilities. we say one Dr .has good surgical abilities &another has good administrative abilities . While the good surgeon may or may not have the capacity of being a good administrative .First medical students have no clinical ability has the capacity to develop such abilities .

Age –scale

Binet could observe in children ,the things they could do at present and could only make inference about they might be capable of doing in future . Binet devised age –scale which give age value . Which the expected age to be able to do a given task. I.Q = (Intelligence quotient)

$$\text{I.Q} = \frac{\text{mental age}}{\text{chronological}} \times 100$$

Measuring intelligence



1. The curve is symmetrical about average .
2. The no. of people who have to be exam before a smooth distribution of score is large .
3. The shape of curve show few individual at extremities .
4. The curve have mathematical properties , calculate the area covered by the curve .
5. Mean I.Q 100 is the exact mid point such that 50% above & 50% below . I S.D = 15 degree .
6. SD.....= +, - (1)

So I SD (100 +15=115) I S.D (-ve)= (100-15=85)

Area between 85 -115 =67% of population

Factor approach by (Spearman)

There are a no. of effects of intelligence, that determine the extent of general intelligence called factor analysis.

General .f : that determine the extent of general intelligence.

Specific. f : mathematical ability : Given 2 individual of exactly the same level of general I.Q. one could be better than other at mathematics :

Idiot Savant :

Thurston use 7 factors

Verbal comprehension

Word fluency

Numerical ability

Spatial ability

Memory

Perceptual ability

Reasoning

Constancy of I.Q

There is a fluctuating about 5-10 points over a period of 5 years .

Bright child –has great deal of fluctuation 8 points .

Dull child –has less deal of fluctuation 5 points

I.Q and environment

The intelligence is innate and determined by hereditary factors so it is free from influence if environment .

Vernon

Study group of children 9 yrs old has same I.Q &Re- tested when they were adult .Some of these group has gone to university –has **12** points of I.Q higher than who left school at 15 yrs so constancy of I.Q depend on constancy of environment .

Effect of Age

The curve of I.Q. begins to slow down at age **13** & then flattens at **15** yr. It means maximum growth of I.Q. is at age of 15 yr.

Testing Adult intelligence

Raven

Use both the capacity to acquire experience and the capacity to use experience :

2. Measures

1. Progressive Matrices .
2. Mill .Hill vocabulary scale :both is used for measurement of general intelligence
progressive matrices –reach their peak at maturity and then decline while M.H vocal stay a steady for long time after maturity.
The decline in parallel to the stability of capacity to use experience .

Wechsler Adult intelligence scale (W.A.I.S)

Use different test of intellectual ability

6-Verbal test

5-Performance test –patient presented with special material and asked to arrange it or manipulate it in some manner

Verbal

1. Information : ask 29 General knowledge .
2. Comprehension : ask 14 of common sense ,
3. Arthmatics : 14 in order of difficulty :
4. Similarities : 13 paired words
5. Digit span : a series of no . from 3-9 of digit is read to person and ask to repeat .
6. Vocabulary : 40 words arrange in order of difficulty & ask person to define each word .

Performance

1. Digit simple
2. Picture completion
3. Block design
4. Picture arrangement
5. Object assembly

$$\frac{\text{Verbal I.Q.} + \text{performance I.Q.}}{\text{Total}} =$$

Stanford Binet scale :

It is originally version of Binte scale done in 1905. First test use for measurement of general intellectual ability for children

