

**BA BED 4 SEM**

**EDUCATION**

**UNIT 4**

ALKA ASATI

**INTELLIGENCE**

**THEORIES OF INTELLIGENCE**

**TERMAN'S STANFORD BINET INDIVIDUAL INTELLIGENCE TEST**

(1906) Lewis Madison Terman, an American cognitive psychologist, published a revised and perfected Binet-Simon Scale. •

In 1916 he adopted William Stern's suggestion that that the ratio between mental & chronological age be taken as a unitary measure of intelligence multiplied by 100 to get rid of the decimals.

$IQ = \text{mental age} \div \text{chronological age} \times 100.$

**L.L THURSTONE'S MULTIPLE FACTORS THEORY OF INTELLIGENCE (1938)**

Louis L. Thurstone was an American psychometrician who studied intelligence test &

tests of perception through factor analysis

the 7 primary mental abilities:

- Verbal comprehension,
- word-fluency,
- number facility,
- spatial visualization,
- association
- speed and
- reasoning.

**CATTELL'S THEORY ON FLUID AND CRYSTALLIZED INTELLIGENCE •**

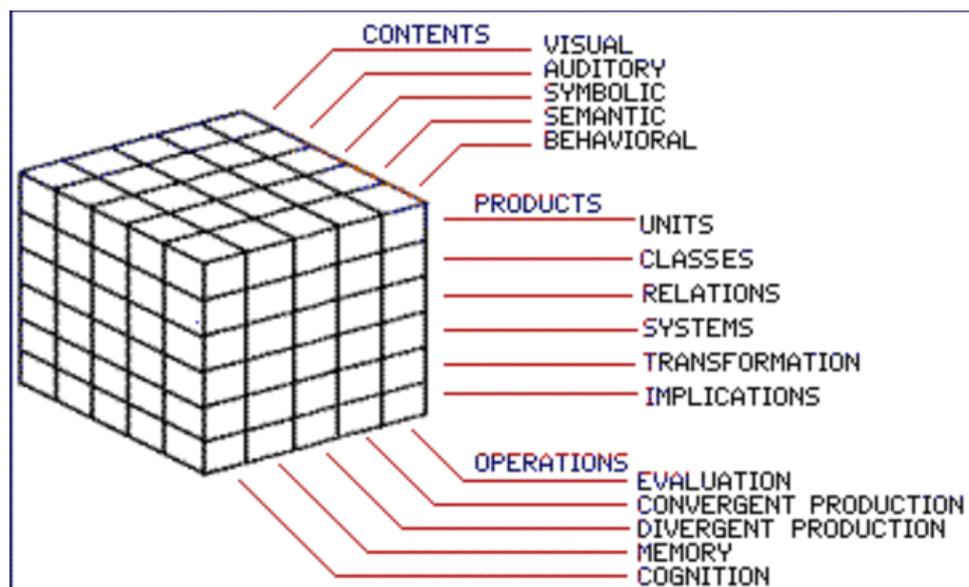
Raymond B. Cattell, a British- American psychologist theorized that there are 2 types of intelligence.

A. FLUID INTELLIGENCE- is essentially nonverbal & relatively culture free. It involves adaptive & new learning capabilities, related to mental operations & process on capacity, decay, selection & storage of information. It increases until adolescence.

B. CRYSTALLIZED INTELLIGENCE - It develops through the exercise of fluid intelligence or a product of acquisition of knowledge & skills that are strongly dependent upon exposure to culture. It continues to increase through middle adulthood.

### GUILFORD'S THEORY ON THE STRUCTURE OF THE INTELLECT (1967)

J.P Guilford, an American psychologist, advanced a general theory of human intelligence whose major application is for educational research, personnel selection & placement and education of gifted and talented. (SOI) advances that human intelligence is composed of 180 separate mental abilities.



4 TYPES OF CONTENTS ARE

- Figural-senses
- Symbolic-letters, numbers, symbols, designs
- Semantic-words & ideas
- Behavioural-actions & expressions

5 Kinds of Operations are:

1. COGNITION- ability to gain, recognize & discover knowledge.
2. MEMORY- ability to retain, store, retrieve & recall the contents of thoughts.
3. Divergent production- ability to produce a variety of ideas, or solution to a problem.
4. Convergent Production- ability to produce a single best solution to a problem.
5. EVALUATION- ability to render a judgment & decide whether the intellectual contents are correct or wrong.

6 KINDS OF PRODUCTS are:

1. UNITS- single number, letter or word.
2. CLASSES- higher order concept. Men & women.
3. RELATIONS- connection between
4. SYSTEMS- process of ordering/classification of relations.
5. TRANSFORMATION- process of altering or restructuring of intellectual concept.
6. IMPLICATION- process making inferences from separate pieces of information.

### **Robert Sternberg: Triarchic Theory of Intelligence**

Psychologist Robert Sternberg defined intelligence as "mental activity directed toward purposive adaptation to, selection, and shaping of real-world environments relevant to one's life. Sternberg proposed what he referred to as "successful intelligence," which involves three different factors:

- Analytical intelligence: Your problem-solving abilities.
- Creative intelligence: Your capacity to deal with new situations using past experiences and current skills.
- Practical intelligence: Your ability to adapt to a changing environment.

### **Howard Gardner: Multiple Intelligences**

One of the more recent ideas to emerge is Howard Gardner's theory of multiple intelligences. Instead of focusing on the analysis of test scores, Gardner proposed that numerical expressions of human intelligence, such as in the IQ test, are not a full and accurate depiction of people's abilities. His theory describes eight distinct types of intelligence based on skills and abilities that are valued in different cultures.<sup>5</sup>

The eight kinds of intelligence Gardner described are:

Visual-spatial intelligence

Verbal-linguistic intelligence

Bodily-kinaesthetic intelligence

Logical-mathematical intelligence

Interpersonal intelligence

Musical intelligence

Intrapersonal intelligence

Naturalistic intelligence<sup>5</sup>