

PSYCHOLOGY

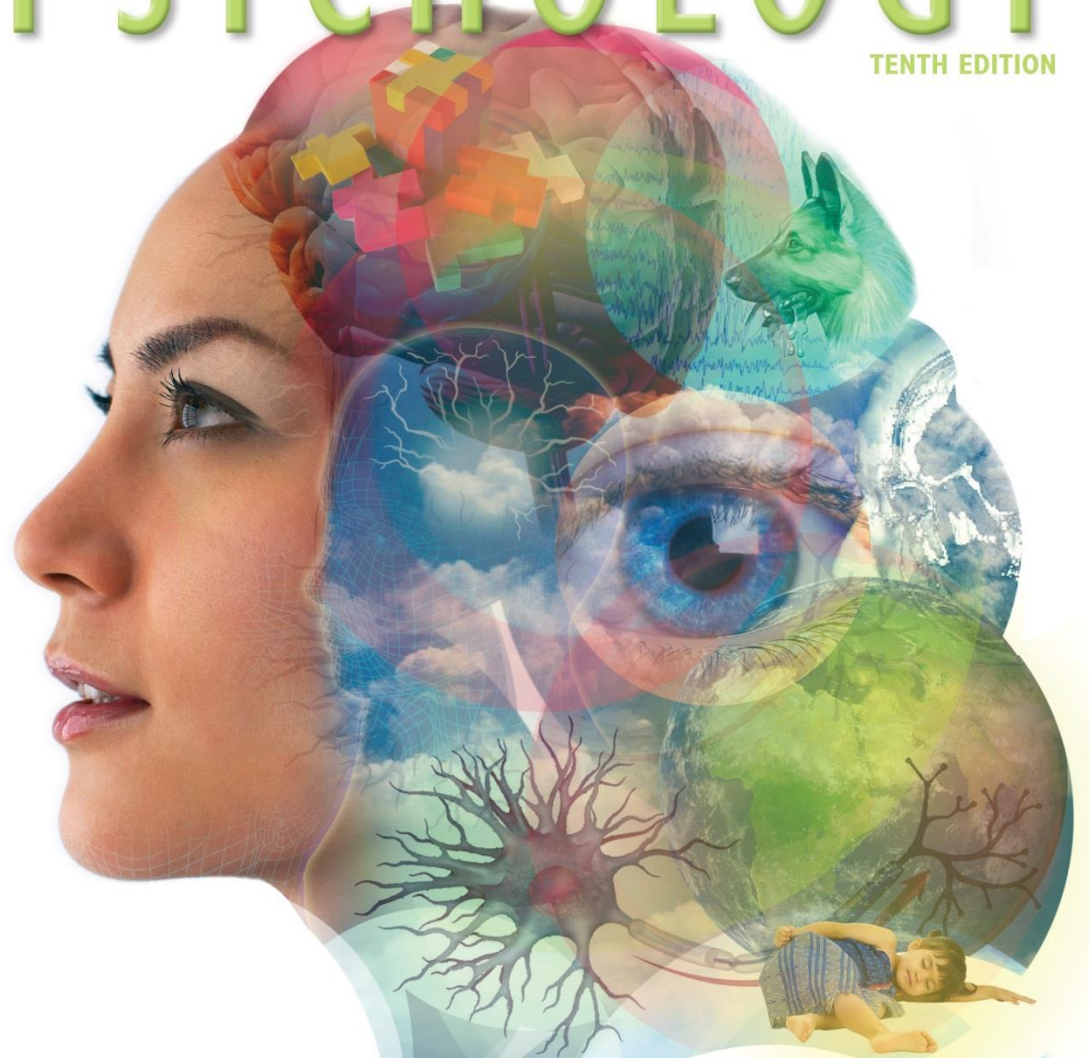
TENTH EDITION

Intelligence

Adapted from
PowerPoint
Presentation
by Asim Tarar

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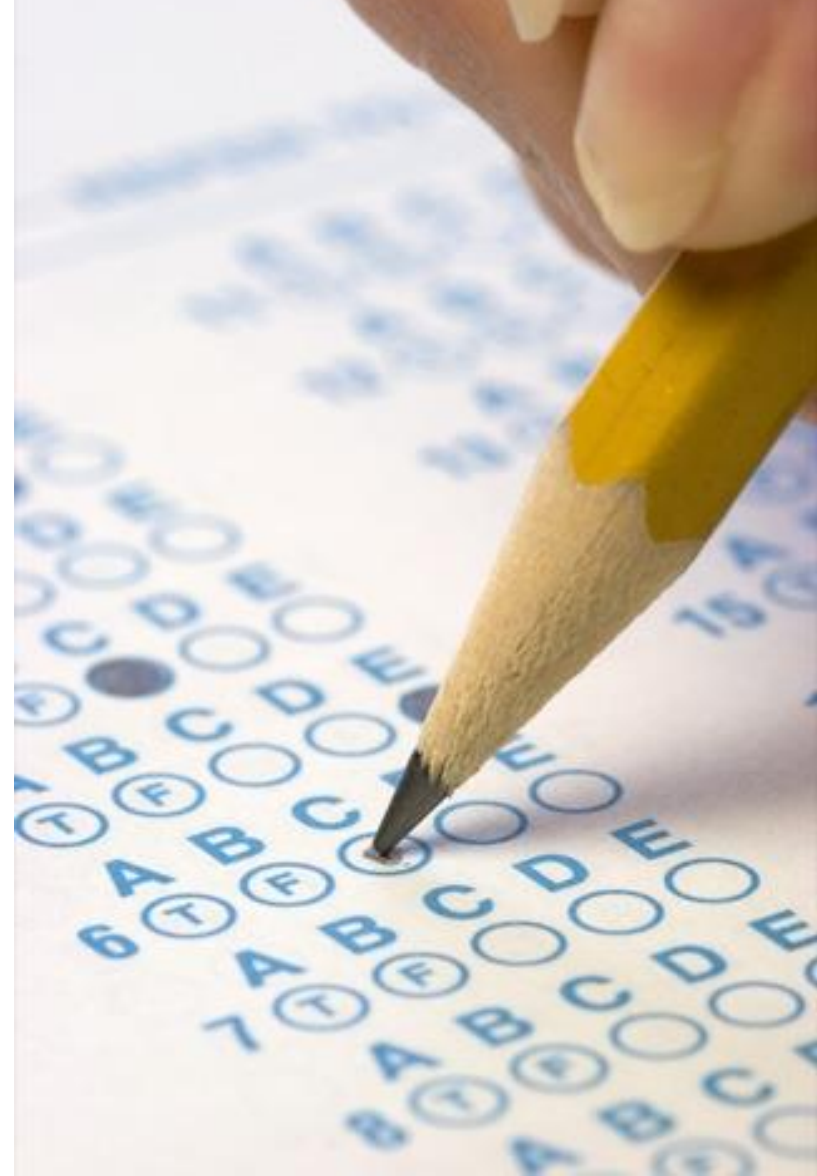
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David G. Myers

“Definition” of Intelligence

- **Intelligence** can be defined as “the ability to solve problems and to adapt and learn from experiences” (Santrock, 2014).
- According to Feldman “intelligence is the capacity to understand the world, think rationally, and use resources effectively when faced with challenges”.



Intelligence: Single or Multiple?

Is intelligence one general ability or several specific abilities?

Charles Spearman	general intelligence [<i>g</i>]
Howard Gardner	8 intelligences
Robert Sternberg	3 intelligences
Emotional intelligence	4 components

General Intelligence, also known as *g*

Charles Spearman (1863-1945) performed a **factor analysis*** of different skills and found that people who did well in one area also did well in another. Spearman speculated that these people had a high “*g*” (**general intelligence**).

***Factor analysis** refers to *a statistical technique that determines how different variables relate to each other; for example whether they form clusters that tend to vary together.*

General Intelligence

Spearman proposed that *general intelligence (g)* is linked to many clusters that can be analyzed by factor analysis.

For example, people who do well on vocabulary examinations do well on paragraph comprehension examinations, a cluster that helps define verbal intelligence. Other factors include a spatial ability factor, or a reasoning ability factor.

General Intelligence

L. L. Thurstone, a critic of Spearman, analyzed his subjects NOT on a single scale of general intelligence, but on seven clusters of *primary mental abilities*, including:

1. Word Fluency
2. Verbal Comprehension
3. Spatial Ability
4. Perceptual Speed
5. Numerical Ability
6. Inductive Reasoning
7. Memory

Multiple Intelligences

Howard Gardner's Multiple Intelligences

- Howard Gardner (1983, 1993, 2002) noted that different people have intelligence/ability in different areas.
- He believes there are many specific intelligence.

Gardner proposed the theory of multiple intelligences instead of just a singular intelligence. The multiple intelligence theory proposed eight different types of intelligence including:

Howard Gardner's Eight Intelligences



Multiple Intelligence model

1. Linguistic Intelligence:

The ability to communicate thoughts and ideas well, speak and write language or new languages. Such as: writers, poets and communications.

2. Logical-Mathematical Intelligence:

The ability to perform and solve complex mathematical problems. Also, the ability to engage in logical arguments/conversations. Such as: mathematicians and math teachers.

Multiple Intelligence model

3. Musical Intelligence:

The ability to learn how to read and write music and play an instrument well. Such as: composer and musician.

4. Bodily-kinesthetic Intelligence:

The ability to use the body to perform different tasks in a fluid motion. The ability to run, jump, and dance fluently and with rhythm. Such as: dancers and athletes.

Multiple Intelligence model

5. Interpersonal Intelligence:

The ability to connect with others on an emotional level. The ability to assess a situation and understand and sense how others are feeling, as well as how to handle an emotional situation. Such as: teachers, psychiatrist/psychologist and counselors.

6. Intrapersonal Intelligence:

Intrapersonal intelligence is knowing yourself inside and out. This is the ability to know your own strengths and weaknesses. Such as: entrepreneur.

Multiple Intelligence model

7. Naturalistic Intelligence:

The ability to work with biology and work with and around natural settings. Such as: naturalists and biologists.

8. Spatial Intelligence:

The ability to visually perceive items such as reading a map or arranging items to make them fit into a predetermined space. Such as: navigator and artist.

Thank You