

Intelligence

Intelligence is the ability to use knowledge to reason, make decisions, make sense of events, solve problems, understand complex problems, understand complex ideas, learn quickly, and adapt to environmental changes (page 323).

It is believed that there is one general intelligence that influences other abilities.

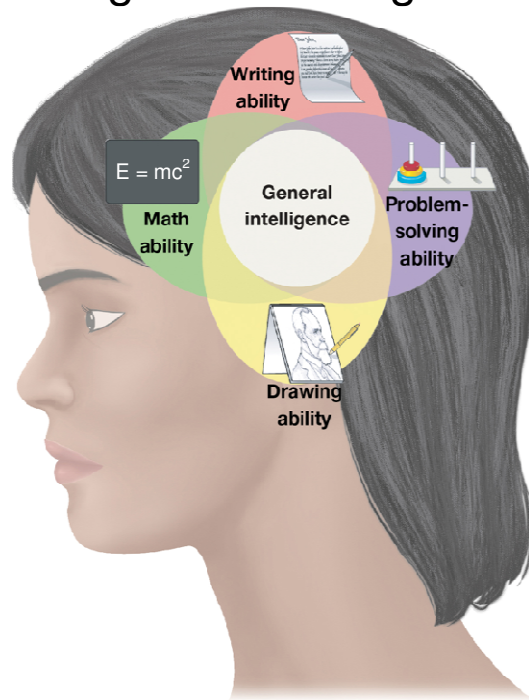


FIGURE 8.23

What is intelligence?

Intelligence is the ability to use knowledge to reason, make decisions, make sense of events, solve problems, understand complex problems, understand complex ideas, learn quickly, and adapt to environmental changes (page 323).

Many routine and predictable aspects of daily life such as figuring out what to eat, finding mates, recognizing friends and raising children (page 349, 4th edition) does not appear to be related to intelligence.

- However, general intelligence is predicted to be useful in novel and complex situations where adapting quickly to environmental challenges.

Although there is disagreement about the nature and definition of intelligence, experts generally agree on the following:

- Abstract thinking, problem solving and the capacity to acquire new knowledge are important elements of intelligence, which are typically assessed in intelligence tests.
- Adapting to one's environment is a significant factor in intelligence, but ¾ of those who agreed with this statement said intelligence test do not measure it.
- Creativity, achievement motivation, and goal-directed behavior are other important aspects of intelligence that are not assessed by intelligence tests.

Fluid and Crystallized Intelligence

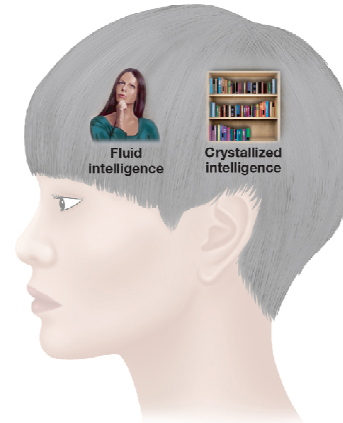


FIGURE 8.24

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While there does appear to be one general intelligence, general intelligence has two types--fluid and crystallized.

Fluid Intelligence	Crystallized Intelligence
Fluid intelligence involves information processing, especially in novel or complex circumstances. It is involved in reasoning, drawing analogies, and thinking quickly.	Crystallized intelligence involves knowledge gained through experience, such as vocabulary, spelling, and cultural information, and the ability to use this knowledge to solve problems.
Roughly analogous to working memory.	Roughly analogous to long-term memory.
Tends to decline in adulthood.	Tends to be fairly stable in adulthood.

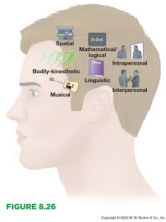
False Beliefs about Intelligence

It was argued that those with a larger brain were more intelligent. Although disease can reduce the mass of the brain, in healthy adult brains, intelligence isn't related to brain size. In spite of the evidence, this myth still persists and can manifest itself in sexist attitudes toward women and sometimes argue that women, on the average have smaller brains, and therefore less intelligent [this isn't true, but people claim it is true].

Because they are less intelligent [this isn't true].









- make fewer contributions to society [this isn't true] and
- therefore, aren't entitled to equal pay compared to men.

The false belief about intelligence and gender provides a false, but cohesive story and justification for why women are paid less than men and avoids dealing with the problem.



Multiple Intelligences and Gardner

Gardner believes that there are multiple “intelligences” that must be defined within a culture. These eight intelligences are considered to be independent of one another.

Intelligence	Examples	Abilities	Occupations
 Verbal-Linguistic	Reading comprehension Writing	Adept at use of language	poet, writer, public speaker, native storyteller
 Logical-Mathematical	Solving math and logic problems	Logical, mathematical, and scientific intelligence	scientists, mathematician, navigator, surveyor
 Bodily-Kinesthetic	Balance Strength Endurance	Control of bodily motions and capacity to handle objects skillfully	athlete, dancer, craftsman
 Visual-Spatial	Judging distance Map reading Geometry	Excels in ability to mentally visualize the relationship of objects or movements	sculptor, painter, expert chess player, architect
 Musical-Rhythmic	Appreciating and creating music Music theory	Ability to create, synthesize or perform music	Musician, composer, singer
 Interpersonal	Listening Cooperation Sensitivity to others	Understanding other people’s emotions, motives, intentions	politicians, clinical psychologist, salesperson
 Intrapersonal	Knowledge of self	Understanding one’s own emotions, motives and intentions:	essayist, philosopher
 Naturalistic	Appreciate nature Ability to work with plants and animals	Ability to discern patterns in nature	ecologist, zoologist, botanist

*naturalistic intelligence is not included in this version of Gardner's multiple intelligences

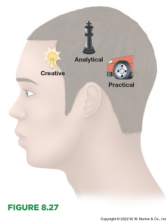





FIGURE 8.27

Sternberg's Triarchic Theory of Intelligence

Intelligence		Examples	
	Analytic	Analyzing Comparing Evaluating	<ul style="list-style-type: none"> • <u>Analytical intelligence</u>: The ability to solve problems. These skills are what are assessed by traditional intelligence tests.
	Practical	Applying Using	<ul style="list-style-type: none"> • <u>Practical intelligence</u>: The ability to adapt to the environment, skills necessary to cope with everyday demands, and to manage oneself and others effectively. It often reflects what is commonly called “street smarts”.
	Creative	Inventing Designing	<ul style="list-style-type: none"> • <u>Creative intelligence</u>: The ability and skills to deal with novel situations by drawing upon existing skills and knowledge. (e.g. “Iron Chef”, World’s Greatest College Essay, by Hugh Gallagher)

Emotional Intelligence

Higher general intelligence is associated with good performance at school and work. Lower general intelligence is associated to early death—especially if you rate low on emotional intelligence.

Emotional intelligence consists of

- Managing one’s emotions
- Using one’s own emotions to guide thoughts and actions
- Recognizing other people’s emotions and
- Understanding emotional language

	High intelligence	Low intelligence
High emotional intelligence	Live longer lives	Live shorter lives
Low emotional intelligence		Live shorter lives!!!

A lower general intelligence may be related to less formal education and a lower socio-economic status. Performing well in academic settings, lead a person with a less dangerous and/or higher paying jobs (higher SES) and more likely to have access to health care that lead to living a longer life.

Emotional Intelligence

People high in emotional intelligence recognize emotional experiences in themselves and others, then respond to those emotions in a constructive manner. They are good at regulating emotions, resisting impulses and temptations ([page 328](#)). I would also include being able to recognize the difference between something that makes them uncomfortable (treating people fairly) and something that is harmful is part of emotional intelligence (discriminating against people for unrelated criteria).

When someone tries to trigger you by insulting you or by doing or saying something that irritates you, take a deep breath and switch off your ego. Remember that: if you are easily offended, you are easily manipulated.



Those high in emotional intelligence is a good predictor of high school grades and cope best with the challenges of college exams ([page 343](#)).

Emotional Intelligence

Generally, I think the following make people uncomfortable, but not harmful.

- Women's attire (generally, it is more for women than men)
- Swearing
- Negative information (not misinformation and disinformation)
- Sex education

Does a high IQ predict success in life?

There are common beliefs about people with a high IQ such as:

- (1) People believe a high IQ predicts success in life.
- (2) People believe a high IQ is associated to
 - social and personal maladjustment,
 - physical weakness, and
 - mental instability.

This means that as IQ increases, social and personal maladjustment, physical weakness and mental instability increase. Likewise, as IQ decreases, social and personal maladjustment, physical weakness and mental instability decreases.

If we have these beliefs, how would we casually test these beliefs to reinforce them?

Does a high IQ predict success in life?

To investigate these beliefs, Lewis Terman identified children with an IQ above 140 and tracked their progress through adulthood (140 was considered genius level IQ).

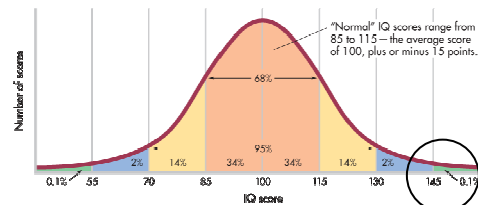


Figure 7.3
Hockenbury/Molm, Psychology, 8e, © 2018 Worth Publishers

From the group of people who had an IQ greater than 140, he found the following:

- They were socially well-adjusted.
- They were taller, stronger, healthier than average children, with fewer accidents and illnesses.
- They performed exceptionally well in school.
- The average income in 1955 of these adults was \$33,000, while the average income in 1955 was \$5,000.
- Two-thirds of these adults had college degrees with many advance degrees.
- There were no creative geniuses such as Picasso, Mozart or Einstein.
- Many were employed as doctors, lawyers, scientists, university professors, business executives and other professional occupations.

Does a high IQ predict success in life?

However, when he compared the **100 least** successful men and the **100 most** successful men, each with an IQ greater than 140, there were large differences.



100 least successful men with an IQ greater than 140		100 most successful men with an IQ greater than 140
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Of the **100 least** successful men with high IQs

- only a handful were professionals, and none were doing exceptionally well.
- their earnings were slightly above the national average, whereas the **100 most** successful men with high IQs were earning five times the national average.
- they were less healthy, had higher rates of alcoholism and were three times as likely to be divorced than the **100 most** successful men.

Does a high IQ predict success in life?

What accounted for the difference?

- Terman found that the **100 most** successful men with high IQs were much more likely to display
 - "prudence and forethought,
 - will power,
 - perseverance and
 - the desire to excel as children."
- As adults, the **100 most** successful men with high IQs were rated higher on three traits:
 - goal-orientation,
 - perseverance and
 - self-confidence.
- In addition, many different personality factors are involved in achieving success, such as
 - motivation,
 - emotional maturity,
 - commitment to goals,
 - creativity, and
 - perhaps most important—a willingness to work hard.

None of these are assessed by traditional IQ tests.

Does a high IQ predict success in life?

What does this suggest about success and intelligence?

- Intelligence helps, but individual characteristics are important too, such as motivation, emotional maturity, commitment to goals, creativity and the willingness to work hard, which are not measured by traditional IQ tests facilitate success.
- IQ predicts academic success, but not success beyond school (other factors affect your work performance, such as creativity, problem solving, working well with others, etc.).
- These findings might not match your mental representation or schema, making it difficult to remember. Or we might remember instances that match their belief and forget instances that do not match their belief (the fallacy of positive instances).