



International School

Chapter 4: Education

4.4 Intelligence and educational attainment



Key concepts in 4.4

- **KC 1 – Inequality and opportunity**
- KC 2 – Power, control and resistance
- KC3 – Social change and development
- **KC4 – Socialisation, culture and identity**
- KC5 – Structure and human agency



The key concepts for Cambridge International AS & A Level Sociology



The difficulties in defining intelligence

- Theory of multiple intelligences
- Gardner (1999) - seven types of intelligence
 - Conventional (linguistic, mathematical and spatial abilities)
 - Musical
 - Interpersonal/emotional
- Ogundokun and Adeyemo's (2010) study of Nigerian secondary school students found it is possible to measure and quantify it. They found a strong correlation between levels of emotional intelligence and academic achievements.

- Make a list of reasons why is it difficult to define intelligence.
- What does intelligence mean?





IQ Tests and the extent to which they are influenced by social factors

Intelligence quotient (IQ): a specific measure of individual intelligence, where a score of 100 is the average, conventionally based on tests of mathematical, verbal and spatial skills.

- **UK** - IQ testing was used between 1950 and mid-1970s to separate children into different schools at the age of 11:
 - grammar schools - academic curriculum
 - modern schools - vocational curriculum
- Most children attend comprehensive education - no entry test
- USA - Scholastic Aptitude Tests (SATs) cover skills of:
 - Critical reading
 - Essay-writing
 - Mathematics





IQ Tests and the extent to which they are influenced by social factors

- IQ tests - objective tests of natural (innate) intelligence
 - Reliably and validly measure intelligence
 - Independently of cultural influences such as class, gender and ethnicity.
- Supporters claim it is an important tool for revealing the natural variations in intelligence
 - Based on a theory that certain levels of intelligence are inherited from parents (it doesn't vary throughout the lifetime).

If an education system is meritocratic, any differences in achievement can be explained by natural variations in intelligence!



IQ Tests and the extent to which they are influenced by social factors

- Criticism of intelligence testing:
 - Are they really 'culture-free' or 'culture-neutral'?
 - IQ tests measure cultural learning - those who are familiar with the question formats are likely to perform better than those who are not.
 - Test of verbal reasoning and comprehension make cultural assumptions that disadvantage children from ethnic minorities.
 - Certain questions assume that something is a common knowledge (minority cultures might not know it).





IQ Tests and the extent to which they are influenced by social factors

- **Kaplan (1998):** How well a person does on an IQ test depends on a variety of factors, not only on intelligence. These include education, reading habits, experience with and attitudes towards taking test, cultural upbringing, mental and physical health.
- Other criticisms of IQ testing question validity of such test and what they measure.
 - Flynn (1987): what IQ test actually measure are two possible types of intelligence - those that involve linguistic and logical-mathematical abilities.
 - Why they are designed to measure some abilities but not others?





IQ Tests and the extent to which they are influenced by social factors

- They measure those abilities most valued by powerful social groups. Therefore, IQ testing is part of a process of cultural reproduction..
- Power to define and objectively measure intelligence is a valuable social resource:
 - Intelligence is defined in ways that reflect the particular class, gender or ethnic interests of powerful groups.
 - If lower-ranking social groups accept, or are unable to challenge, this definition it both cements their lower position and justifies differential treatment they receive.

IQ tests and concepts of intelligence they embody are part of the ideological state apparatus!





IQ Tests and the extent to which they are influenced by social factors

- Find an example of an IQ test on the internet. Try answering the questions, but also think about whether the questions are accessible to everyone. For example, do any questions depend on having learnt a subject in school, or practising a skill?
- Do you think tests like this are a fair way of measuring intelligence? Think of alternative ways to measure aspects of intelligence.





Intelligence as an influence on educational attainment

- Relationship between achievement and intelligence: agnostic, positive, negative
- Agnostic
 - No generally agreed definition
 - No consensus of how it can be reliable
- Positive - IQ test - cognitive skills
 - Saunders (2002): not determined by birth - differs between social classes
- Negative - not to education but to various cultural factors





Intelligence as an influence on educational attainment

Agnostic

- We don't know if there is a real relationship between intelligence and achievement:
 - No generally agreed definition - we don't know what is being measured
 - No consensus of how it can be reliably and validly measured
- If it is contextualised as relationship it means it is dynamic and created by individuals
- Intelligence develops through cultural practices and ways of learning rather than something we are born with.
- People can be intelligent without being able to demonstrate it by passing exams.





Intelligence as an influence on educational attainment

Positive

- We can assume IQ tests measure significant aspects of intelligence in the form of cognitive skills (ability to solve mathematical problems or understand logical arguments).
 - Those skills are similar to those valued in both education and workplace
 - It make sense to test relationship between intelligence and achievement.
- In the UK, **Saunders (2002)** argues that intelligence, while not determined at birth, differs between social classes.
 - Middle-class children are, on average, more intelligent than working-class
 - Those who are most academically able rise to the top of the class structure
 - Middle-class who fail will fall back to working class





Intelligence as an influence on educational attainment

Negative

- Educational achievement is not related to intelligence but related to cultural factors inside and outside the education system - cultural factors relating to class, gender and ethnicity explain higher IQ and achievement levels.
- Long-term studies suggest a significant 'school effect':
 - **The Robins Report (1963)** - social class was a significant factor in achievement in the UK.
 - **Murayama et al.'s (2012) German study of mathematical achievement**
 - IQ was important in initial development of mathematical competence
 - Long-term intelligence showed no relationship to mathematical achievement
 - Students abilities to learn involve motivation and study skills that can nurtured by education

