



The cognitive approach to psychology

This Factsheet summarises and evaluates the cognitive approach. It is relevant to all A-level specifications.

What is cognitive psychology?

- Cognitive psychology is the study of mental processes. These mental processes are also known as cognitive processes.
- Cognitive processes happen in the mind/brain. They include perception, memory, attention, language, problem-solving, decision-making, thinking and so on.
- The word 'cognitive' comes from the Latin word *cognoscere* which means to understand, know and/or recognise.
- Behaviourism was the dominant approach in psychology before cognitive psychology.
- Whereas behaviourism was only interested in directly observable behaviour, cognitive psychology was concerned with the processes going on in our minds which we cannot directly observe.
- Cognitive psychology replaced behaviourism as the main approach in the 1950s. The 'cognitive revolution' is considered to have started in 1956 when a conference was held which featured some of the most significant people in cognitive psychology, such as George Miller and Noam Chomsky.
- The cognitive approach was the dominant one by the 1970s.



- This existing knowledge is represented as schemas. A schema is a network of knowledge about an item (people, actions, objects, abstract concepts) which includes the item's attributes and associations.

Exam Hint: You should know the strengths and limitations of the research methods used in cognitive psychology.

A. The computer analogy and the information-processing model

Cognitive psychology uses the computer as an **analogy** (see glossary) - humans are like computers as both process information. The information-processing model views our cognitive processes as working like a computer and cognitive psychologists use computer terms to talk about the mind. For example, the brain is like hardware and mental processes are like software. These mental processes are discussed in terms of how information is input, stored and retrieved. The mind is seen as an information-processing system which *actively* organises and manipulates information.



Assumptions of the cognitive approach

1. Cognitive psychology explains our behaviour in terms of what is going on in our minds (our mental processes).

- Cognitive psychologists aim to explain how our mental processes operate and how our behaviour relates to these.
- They examine how we take in information from the world around us and how we process this information in order to make a response (e.g., an action or emotion).
- As we cannot directly observe the processes going on in our minds, researchers need a way to work out what is going on. To do so, they propose theories of how these processes work and, based on these, make predictions about what will happen. For example, researchers can predict what the output will be, based on what information is input and how it is thought to be processed. If the actual output matches what is predicted, then this can be taken as support for the theory.
- Research in this area studies the mental processes by which we:
 - receive information through our senses and make sense of this information (perception);
 - how we store and retrieve information (memory); and
 - how we manipulate that information (thinking).

2. Cognitive psychology mainly uses the research methods of experiments and case studies of brain-damaged individuals.

3. Cognitive psychology is characterised by the information-processing approach (see text box A).

4. A predominant concept in cognitive psychology is the schema (plural schemas/ schemata).

- Cognitive psychologists reason that our mental processing constructs an internal model of the external world around us.
- This internal model comprises information coming in through our senses and what we already know (existing knowledge) about the how the world works.

Evaluation of cognitive psychology

The cognitive approach is criticised for:

- ✗ Being an overly simplistic view of behaviour (being **reductionist**).
- ✗ Lacking **ecological validity** as most research is done in laboratories using experimental methods.
- ✗ Not taking into account that social and emotional factors can affect behaviour.



The strengths of the cognitive approach are:

- ✓ It investigated areas which behaviourism had ignored.
- ✓ It has increasingly integrated with, and influenced, other approaches. For instance, social cognition examines how our thinking affects how we interact with others.
- ✓ Research evidence in this area is applied to a wide range of matters, such as improving eyewitness testimony, improving attention and providing therapies (e.g., therapy which helps people with disordered thoughts).
- ✓ The cognitive approach does now include social and emotional factors more.
- ✓ The information-processing approach nowadays no longer views information as being processed serially; from input, to storage, to output. It now includes parallel processing where we can process more than one thing at a time. It also takes into account how our existing knowledge can influence how we interpret new information coming in (top-down processing).



Exam Hints: You should be able to describe and evaluate the cognitive approach. Make sure that you know at least two assumptions of the approach and can explain the information-processing approach. You may need to be able to apply your knowledge of this approach to some material in the exam paper.

Worksheet: The cognitive approach to psychology

Name _____

1. What does cognitive psychology study?

2. When did the cognitive revolution start and which approach did it replace?

3. In what way do cognitive psychologists work out how our mental processes operate, given that they are not directly observable?

4. What are the main research methods used in this approach?

5. Give a strength and a limitation of one of the research methods mentioned in your answer to question four.

6. What is a schema?

7. What is the information-processing model?

8. Give two strengths and two criticisms of the cognitive approach.

Example exam question

Outline two key assumptions of the cognitive approach to psychology.

To answer this question, write about two of the assumptions mentioned in this factsheet. You can refer to the fact that cognitive psychology is the study of mental processes and explains our behaviour in these processes. You could also discuss the information-processing model, the use of schemas and so on.

Glossary

Analogy: A comparison used to show a similarity.

Ecological validity: The extent to which evidence from an investigation generalises to real-life settings.

Reductionist: Explaining behaviour by reducing it to its basic parts.

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