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For IB HL Psychology
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Paper 1 Essay Pack

Ten Questions and Model Answers for Practice for Section 1(C)

Q.1) In the context of learning and cognition, to what extent can schema theory be effectively investigated using one or more methods of measurement? [15]

In the context of learning and cognition, **schema theory** is an important explanation of how existing knowledge influences the way new information is processed, stored, and recalled. A **schema** is a mental framework that organizes knowledge about objects, people, or situations based on past experience. Schemas cannot be directly observed, so psychologists use methods of **measurement** such as laboratory experiments and memory tests to indirectly investigate their existence. This results in the question of whether schema theory can be effectively investigated through such methods.

This essay will outline the extent to which schema theory can be investigated using psychological methods, with reference to the laboratory experiment conducted by **Brewer and Treyens**. It will argue that although experimental methods can give controlled and measurable evidence for the influence of schemas on memory, they also have limitations. Schemas are internal cognitive structures that cannot be directly measured; and laboratory tasks may oversimplify real-life cognition.

One important method used to investigate schema theory is the laboratory experiment, which helps researchers measure memory processes in controlled conditions. Brewer and Treyens aimed to investigate whether people's memory of objects in a room would be influenced by their schema of a typical office. Participants were individually asked to wait in a room designed to look like a university office for approximately 35 seconds before the supposed experiment began. The room contained several objects that were consistent with an office schema - a desk, typewriter, and stationery. However, some expected objects were deliberately missing, such as books, while other unusual items that did not fit the office schema were present - a skull, a picnic basket, and a piece of bark. After leaving the room, participants were taken to another room where they were asked to recall the objects they had seen in the office either by writing a list or drawing the room. They then completed a recognition task in which they were shown a long list of objects and asked to identify which ones had been present in the office.

The results showed that objects consistent with an office schema were recalled more frequently than unusual objects. Also, participants often recalled objects that were not actually present in the room. During the recognition task, however, many participants correctly identified some unusual objects they had failed to recall earlier. It was concluded that schemas influence the retrieval of information rather than preventing encoding. Participants had encoded the unusual objects but were less likely to retrieve them when recalling the room because they did not fit their office schema.

This study showed that the **experimental method can reliably investigate schema theory by providing measurable evidence of memory distortion due to schema**. The controlled environment of the laboratory helped the researchers to manipulate the presence of schema-consistent and schema-inconsistent objects while keeping other variables constant. For example, by deliberately including objects like a skull with typical office objects, the researchers were able to directly test whether prior knowledge influenced memory. The systematic recall and recognition tasks gave objective data showing that schemas affect how information is remembered. This indicates that experimental methods are useful ways for investigating cognitive processes that cannot be directly observed.

However, **an important limitation is that schemas themselves cannot be directly measured**. Instead, researchers indirectly infer their existence from test performance like memory errors or false recall. In the Brewer and Treyens study, the conclusion that schemas influenced retrieval is based on participants remembering objects that matched an office schema even though they were not present. While this pattern strongly suggests the influence of schemas, it does not give direct evidence of them. This means that the method depends on interpretation, which reduces the certainty with which schema theory can be tested.

Another limitation is that **laboratory experiments lack ecological validity when investigating everyday cognition**. In the Brewer and Treyens study, participants observed the room for only thirty-five seconds while waiting for an experiment to begin. In real life, people interact with environments for much longer periods and with different goals. For example, someone working in an office may actively attend to objects they need, whereas participants in the study had no reason to carefully observe the room. As a result, although laboratory experiments provide strong control, they may not fully represent the complexity of real-life cognitive processing.

Despite these limitations, **the experimental method still gives useful insights into the processes involved in learning and cognition.** The method helps researchers compare different explanations, such as whether schemas influence encoding or retrieval. By using both recall and recognition tasks, Brewer and Treyens were able to show that unusual objects had been encoded but were less likely to be retrieved without cues. This shows how carefully designed experimental tasks can bring about the underlying processes of cognition.

In conclusion, experimental methods are useful for investigating schema theory, but they cannot fully investigate the complexity of how schemas operate in everyday cognition. Future research could combine experimental methods with more naturalistic approaches, such as real-world observation or longitudinal studies of learning, to give a more complete understanding of how schemas influence cognition over time.

A set of 9 more questions and model answers are available upon purchase of this pack - covering all 6 concepts, all 4 contexts and various content topics. This is a sample preview only

About the Author

With **over 12 years of international teaching experience, JYOTIKA VARMANI** has guided students across the world to achieve **7s in IBDP Psychology**, A*s in Cambridge, AQA, Edexcel and OCR A-Levels Psychology, 5s in AP Psychology and top grades in GCSE and IGCSE Psychology. Her students study across the UK, UAE, India, Australia, New Zealand, Europe and the US.

Known for **highly exam-focused teaching**, detailed essay training and markscheme-based preparation, she specializes in simplifying difficult psychological concepts into clear, structured answers that match exactly what examiners expect in IBDP Psychology. Her excellent mentorship encourages both SL and HL students to pursue their **EEs in Psychology** as their preferred subject of choice.

Jyotika is the Psychology Teacher at **Modern College Mauritius** and Subject Expert for at **Podar International School, Mumbai**. Her psychology resources, notes and videos are used internationally by students, teachers and schools, with millions of readers across educational platforms and psychology websites.

These notes are designed not just to help students study Psychology, but to help them write high-scoring answers confidently in the IBDP examination.

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