

Multi store model and levels of processing psychology essay



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During this assignment the memory models that will be compared are Atkinson and Shiffrin's (1970) multi- store model and Craik and Lockhart's (1972) Levels of processing. We will not only be comparing the memory models but also evaluating and looking at the opposing studies. The case studies and theorists that are looked at develop very supportive and detailed views although not all studies will be necessarily correct or wrong. Through out this assignment the research and studies are based on studies from Milner (1970), Atkinson and Shiffrin's Multi- store model (1970), Craik and Lockhart's (1972), Craik and Tulvings (1975) and Morrison (1985). Although the studies and theories are based on research that was completed and evaluated over 40 years ago we can look and see how it has affected us through every day life.

The case study, HM Milner (1970) supports the views that there is more than one store for memory. HM suffered brain damage due to surgery. After the surgery, HM was left with normal short term memory and only few memories from before the operation (which he had in order to stop seizures). HM was now unable to create new long term memories, which suggests that short term memory is separate too long term memory and is not one store. This shows that HM was unable to encode and transfer information, from short term memory to long term memory. This provides support for the multi- store model.

Craik and Lockhart (1972) were not in full agreement for the multi- store model. Craik and Lockhart had a theory that the levels of processing were more complex and depended on how the information was given to how we would recall information back at later dates and times. They believed it

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wasn't just how many times it was repeated and rehearsed but how the information is being given as there are many levels of processing:

- Shallow/structural level - visual/ how something looks
- Intermediate/ phonetic level- the sound or way something is said
- Deep/ semantic - the meaning or the connection to the subject

(AQA Psychology B; Nelson Thornes; page 172)

The reconstructive model was to also prove our long term memory and short-term memory were not separate stores. This model also provides support for levels of processing theory (Bartlett 1932).

Milners (1970) case study supports the Multi- store Model because they found that there are three overall stores (Sensory store, Long term memory and Short- term memory) which also needed the processes and stages of memory (encoding, storage and retrieval). The memory stores and processes of memory, together make Atkinson and Shiffrin's (1970) multi- store model very useful and supportive.

Craik and Tulvings (1975) study also supports the theory of levels of processing. They found that there are three different types of encoding (semantic, acoustic and visual) which showed us after the study took place, that semantic encoding which is a deeper thinking process, was a more useful and effective way of remembering information. As the experiment was conducted, there were three basic rules;

- Participants were shown 60 words
- One at a time
- They all had one word at each level (semantic, visual and acoustic)

All of the words had to “ fit in to a sentence”; “ be of upper or lower case” or Asked if they “ rhymed”. After the experiment a list was given to the participants with all 60 words, plus an additional 120. The participants were asked to recognise the original words. This experiment was to prove how rehearsal was more important than Atkinson and Shiffrin’s (1970) “ simplistic” multi- store model actually was. (AQA Psychology B; Nelson Thornes; page 174).

Although both of these studies oppose against each other, they both have three stages and show different ways to recall information for long term memory and short term memory in different detail. Morrison (1985) created a study, making up false football results to a handful of people, to see how participants with and without interest would remember and recall information correctly. The study found that people with interest recalled the most results correctly even though they were false. These results contradicted the multi- store model. Tyler (1979) also created a study that opposed against the levels of processing theory. The study showed us that the recall on harder words was higher than the recall on easier words (essential AS Psychology; Richard Geoff and Geoff Rolls; AS Module 1; page 9-12)

Atkinson and Shiffrin (1971) Multi- store model suggests the capacity, duration and encoding are the key points to the short term memory and long term memory, where as the reconstructive model and levels of processing (Craik and Lockhart 1972) believe it is not just how deeply processed and relevant the word(s) are. The rehearsal is crucial for the transformation of information from short-term memory to long term memory, where as the reconstructive model shows us semantic (rhyming words/questions) and shallow processing (case questions/answers) arte how we store information based on short term memory and long term memory is one store, unlike levels of processing suggests.

Our long term and short term and short term memory is used every day without realising it. It affects the quality and how we behave for every human and animal. Elizabeth Loftus 1974) constructed an experiment to see how reliable an eyewitness testimony actually was. A video was shown to a bunch of participants, of a car accident. After viewing the video half were asked what they saw, using the word “ smashed”, Whilst the other half had the word “ hit” in the sentence. They were also asked to write down the speed of the car in their opinion. More people with the word “ smashed” in the sentence, said they saw broken glass. There was also an average speed of 41 miles per hour when “ smashed” was used the other half estimated an average of 34 miles per hour when hearing the word “ hit”.

Ley (1978) also experimented how reliable remembrance was, by conducting a study on visiting the doctors. 10 per cent of doctor’s patients remembered what was said after he wrote a booklet for doctors on how to give advice. As the first result showed only patients with medical background remembered
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over half, whereas patients without did not remember as much. (Discovering Psychology; Barbra Woods; page 120-121)

All of these studies have affected the way in which questionnaires and eye witness testimonies are now conducted. There are many factors that can affect on how we remember information and our environmental situation can also affect our recall. This could also be proven to be a flashbulb memory. This is when an individual remembers an incident or memory when it relates to something i. e. millennium, new year (December 1999- January 2000) you will remember certain things about that particular moment (where you were? What you wore? Who you were with?) There are many things that contradict levels of processing and the multi- store memory.

There are a lot of reliable studies to prove memory models and theories but there are some things that can not actually prove how deep we process information or how much we can process over many years. Block and organisation helps us to process and retain information easier although effort is needed. Distinctiveness makes the information unique. Along with elaboration which allows us to expand information. (Essential AS Psychology; Richard Gross and Geoff Rolls; AS Module 1; Page 13)

We cannot also prove why rehearsal is sometimes not needed, it is also described as a “ two-way flow of information” i. e. Morris (1985) the multi-store model is also seen as too simplistic as it doesn't always transfer to long term memory from short term memory, even after rehearsal.

In conclusion throughout this comparison of models we have compared analysed and researched different studies. All studies put forward strong and <https://assignbuster.com/multi-store-model-and-levels-of-processing-psychology-essay/>

supportive evidence for each, even though most oppose against each other. The multi- store model and the levels of processing studies both have positive outcomes. They have both helped us to realise we cannot rely on eyewitness testimonies and have helped people on giving advise that is comprehensible and understandable. So to conclude, this assignment shows us how different studies can be correct but are not necessarily wrong. All of the studies need to be researched more today to be able to carry on in supporting all views as the memory models will continue to be compared.

AQA Psychology B: Nelson Thornes; 1988

PSYCHOLOGY for AS LEVEL; Michael W. EYSENCK and CARA FLANAGAN 2000

ESSENTIAL AS Psychology; Richard Gross and Geoff Rolls

Discovering psychology; BARBRA WOODS