'Rehearsal is the key to understanding human memory.'

'To what extent does psychological research support Atkinson and Shiffrin's model of memory?'

'Learning is the acquisition of knowledge and memory is the storage of an internal representation of that knowledge.' Blackemore (1988)

The multi-store model consists of three main stores - the sensory memory store, the short-term memory (STM) store and the long-term memory (LTM). The sensory memory transfers information to STM. It is made up of five stores, one for each sense. The model sees STM as a crucial part of the memory system as without it information cannot get into or out of the LTM. Information can only be stored into LTM by passing through STM and can only be retrieved from LTM by entering STM.

Rehearsal is the repetition of information in order to retain it in the STM. The multi-store model states that the longer information is in the STM and the more it is rehearsed, the more likely it is to be transferred to LTM. There is some evidence to support this view.

In one particular experiment, participants were asked to rehearse a list of items out loud. In general, the more frequently an item was rehearsed the more likely it was to be recalled from LTM (Rundus, 1971).

However, evidence from everyday situations implies that rehearsal is a lot less important than the multi-store model suggests. Eysenck & Keane (1995) said that people rarely rehearse information in their everyday lives yet information is constantly entering LTM.

Furthermore, Tulving (1967) conducted an experiment where participants were asked to rehearse a list of words. These were then included in a longer list, which the participants had to recall. However, the old words were not recalled any more frequently than the new ones on the longer list. Therefore, rehearsing words does not increase the probability of their recall. Additionally, according to Craik & Lockhart (1972), it is the level of processing rather than the frequency of the rehearsal that affects the durability of the memory.

The multi-store model sees no divisions within STM and LTM - they are seen as unitary stores. However, both STM and LTM may well have different memory systems operating within them.

Baddeley & Hitch (1974) argue that the picture of STM painted by the multi-store model is far too simple. Their working memory model presents a far more complex view of STM. It is not a unitary system. On the contrary, it has a number of components, each of which specialise in particular tasks. Its also states that information is analysed, evaluated and 'worked on', not just rehearsed in STM.

KF suffered brain damage from a motorcycle accident, which severely impaired his STM but left his LTM intact. In terms of the multi-store model, this cannot happen since all information in LTM passes through STM. However, KF's STM impairment was mainly for verbal material. His STM for visual material and meaningful sounds was largely unaffected (Shallice & Warrington, 1974). This suggests possibility of more than one STM store.

Furthermore, LTM contains an enormous range of diverse material. Most researchers have now rejected the view that this vast range of diverse information is contained in a simple, unitary LTM store. Thus, the multi-store presents an oversimplified view of memory store.

The multi-store model is a linear one where information travels in a straight line through the different stores, i.e. from the sensory store to STM to LTM. It doesn't consider the possibility that LTM influences or directs other parts of the system. There is evidence for this.

Chunking into meaningful units is only possible if STM knows what a meaningful unit is - and that requires the use of LTM to chunk information in the first place. This suggests that LTM plays an active role in memory, influencing and directing, STM.

Finally, the multi-store model has been criticised for presenting a passive and rather mechanical model of memory. There is a vast amount of evidence present to suggest that it is not the best model to use. It is branded as presenting an oversimplified view of memory and researchers seem to reject most concepts of the model as new models are developed.

However, since its development in 1968, Atkinson and Shiffrin's multi-store model has been very influential. The model itself is based on evidence from a wide range of studies. Early research conducted by George Sperling (1960) provides evidence for the presence of subsystems within sensory memory. In addition, there is considerable evidence for the existence of sensory memory, STM and LTM and as separate memory stores. Furthermore, the model led to large amounts of research in order to investigate the different aspects presented by the model and most researchers still accept the broad and basic ideas underlined by the multi-store model.

In conclusion, although it may be branded as too simple and sometimes even rejected, it still presents some of the basic facts that everyone agrees with. Therefore, it should be taken into consideration.