|  |  |  |
| --- | --- | --- |
| **Learning Table 2 – Multi-Store Model of Memory** | | |
| **AO1 (Knowledge and Understanding)** | | |
| Atkinson and Shiffrin’s (1968, 1971) multi-store model describes how information flows through the memory system. The model suggests that memory is made up of three stores linked by processing.  Input from the environment  **Sensory Memory** (Iconic, Echoic and other sensory stores)  **Short Term Memory**  **Long Term Memory**  *Encode*  *Attention*  *Output or Response = remembering*  *Maintenance Rehearsal*  *Prolonged Rehearsal = transferred information*  *Retrieval* | | |
| **Sensory Register** | **STM** | **LTM** |
| * Stimulus pass from environment to sensory register e.g. sound of someone’s name, sights, smells etc. * Iconic memory: visual information is coded visually * Echoic memory: sound (auditory) information is coded acoustically * Duration: less than half a second * Capacity: very large (think of all of the little cells you have in your eyes registering information!) * If we pay attention to the information (which we do, but to a very small percentage) it will pass further into the memory system | * Only a certain number of ‘things’ can be contained before *forgetting* takes place * Capacity: 7+/-2 * Information is coded acoustically * Duration: 18-30 seconds (unless it is rehearsed and transferred further through the system…) * Maintenance rehersal: repeat (rehearse) material to ourselves over and over again * If we repeat it enough times, information will be transferred to the LTM | * Capacity: unlimited * Duration: very long (years) * Coding is semantic (by meaning) * If we want to recall information from the LTM, it needs to be transferred back to the STM by a process called retrieval * This retrieval happens to all memories – none of them are recalled directly from the LTM |
| **AO3 (Evaluation)** | | |
| **Supportive Evidence: The Case of HM**  P: One strength of the MSM is that there is supportive evidence to support the theory  E: For example, the case of HM explains that during a surgery to try and cure his epilepsy, HM suffered a change to his neuroanatomy (his hippocampus was removed) which has been linked to our memory function. HM is still alive but has marked problems in long-term memory after brain surgery. He has remembered little of personal (death of mother and father) or public events ( Watergate, Vietnam War) that have occurred over the last 45 years.  E: This is a strength because it provides support for the theory that our memory is made up of separate stores for different types of memory e.g. short-term memory and long-term memory.  L: As a result, the explanatory power of the MSM as a model for memory is strengthened. | **Over-Simplifies Memory**  P: One issue with the MSM is that it can be seen to over-simplify memory stores.  E: For example it describes the STM as one unitary store, however Shallice and Warrington (1970) studied a patient with amnesia known as KF. KF’s STM for digits was very poor when they read it aloud to him, but if he read the digits for himself his recall was much better.  E: This is a weakness because research into KF and other similar amnesia case studies suggest that there could be an entirely separate STM stores for processing visual information and auditory information.  L: As a result, the theory of a unitary STM store is questioned, weakening the credibility of the MSM overall. | **More than one type of rehearsal**  P: A further issue with the MSM is the suggestion that there is only one type of rehearsal.  E: For example, Craik and Watkins (1973) found that what really matters about rehearsal is the type. They discovered two different types; maintenance rehearsal (repetition that actually only leads to the information being stored in STM, and not, as suggested, being transferred to the LTM), and elaborative rehearsal (linking information to existing knowledge, or thinking about what it means).  E: This is a weakness because the MSM cannot explain why sometimes we can remember events or information that we have not rehearsed. As suggested by more recent findings, it could be due to the information meaning something to us e.g. being in a car accident, or telling someone you love them for the first time.  L: As a result, research such as Craik and Watkins’ casts doubt over the explanatory power of the MSM and the role of rehearsal. |