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| **Learning Table 1 – Features of Each Store of Memory** |
| **AO1 (Knowledge and Understanding)** | **AO3 (Evaluation)** |
| **Coding**Coding is converting information from one form to another. Baddeley (1966) gave different lists of words to four groups of participants to remember:Group 1: *acoustically similar*: words sounded similar (e.g. cat, cab, can)Group 2:*acoustically dissimilar*: words sounded different (e.g. pit, few, cow)Group 3: *semantically similar*: words with similar meanings (e.g. great, large, big)Group 4:*semantically dissimilar*: words that all had different meanings (e.g. good, huge, hot)PPs were shown original words and asked to recall them in the correct order. When they had to do thisImmediate recall task (STM recall) = they did worse with acoustically similar wordsDelayed recall task (20 minute interval) (LTM recall) = they did worse with semantically similar words.This suggests that information is coded semantically in the LTM. | **Lacks Mundane Realism**P: One issue with Baddeley’s research is that it lacked mundane realism.E: For example, the task used was memorising a word list that had no meaning to the PPs, and could be seen as very artificial material. E: This is an issue because it is not an every-day task to be asked to memorise words that mean nothing to you, so we should be cautious about generalising the findings to different kinds of memory tasks. It may be that when processing more meaningful information, people may use semantic coding even for STM tasks.L: As a result, the credibility and the applicability of the results of Baddeley’s research is compromised. |
| **Capacity****Digit Span**Jacobs (1887) measured the digit span (therefore the capacity i.e. how much it can hold) of the STM. He gave the PP a list of digits that they have to recall (e.g. 4 digits: 3476). If they recall these out loud correctly then they can move on to recall 5 digits and so on until they get it wrong. This determines an individual’s digit span.Jacobs found that the mean span for digits across PPs was 9.3 items. The mean span for letters was 7.3.**Span of Memory and Chunking**Miller (1956) noted that things often come in 7s: there are 7 notes on the musical scale, 7 days of the week, deadly sins etc. This suggest the capacity (span; how much it can hold) of the STM is about an average of 7 items. The rule is 7+/-2.However, Miller noted that we can recall 5 words as well as 5 letters – this is because of chunking. We group sets of digits or letters into units or chunks to make it easier to recall. | **Lacks Validity**P: One weakness of Jacobs’ study is that it lacked control over extraneous and confounding variables.E: For example, early psychology research such as this often lacked adequate control, which saw PPs become distracted while they were being tested so they wouldn’t perform as well. E: This is an issue because if there is a lack of control, particularly over extraneous and confounding variables, the results could be seen to lack internal validity because they haven’t measured what they set out to measure (in this case, the capacity of STM).L: As a result, the credibility of Jacobs’ research can be drawn into question. |
| **Duration****Duration of STM**Peterson & Peterson (1959) tested 24 undergrad students. Each one took part in 8 trials (1 trial is one ‘test’). In each trial the student was given a trigram (3 letters e.g. YCG). They were asked to count backwards from a 3 digit number e.g. 300 in 3s until told to stop – this was to prevent any rehearsal. On each trial they were told to stop after a different amount of time (3, 6, 9, 12, 15 or 18 seconds). This is called the retention interval. Their findings suggested that STM has a short duration (around 18 seconds) if information is not rehearsed.**Duration of LTM**Bahrick et al (1975) studied 392 PPs from Ohio, America aged between 17-74. High school yearbooks were obtained from either PPs or their old schools. Recall was tested in various ways:1. Photo-recognition test consisting of 50 photos, some from the PPs high school yearbook
2. ***Free recall*** test where PPs recalled the names of their graduating class

PPs who were tested within 15 years of graduation were about 90% accurate in photo recognition. After 48 years, recall declined to about 70% for photo-recognition. Free recall was not as good as photo recognition. After 15 years this was about 60% accurate, dropping to 30% after 48 years. This shows LTM has a very long duration. | **Issues with Research Design**P: Furthermore, another issue surrounds the fact that Peterson and Peterson used a repeated measures design. E: For example, they all took part in each trial and accuracy of recall became worse as the trials went on.E: This is an issue because it may be that trigrams presented early on caused confusion for later trigrams.L: Consequently, this affects the internal validity of the experiment as p’s may have got muddled and therefore P&P may not have been measuring the duration of STM.**High External Validity**P: One strength of Bahrick et al.’s study is that has high external validityE: For example, real-life meaningful memories were studied rather than artificial stimuli.E: This is a strength because it has been shown that when studies on LTM have used meaningless pictures, recall rates were lower. This shows that mundane realism in research gathers more valid results.L: As a result, the credibility of Bahrick et al.’s research into the duration of the LTM is increased. |