**Levels of Processing: Craik and Lockhart**

This is different to the other two theories as it does not consider different stores or physical components. Basically it believes

1. Depth of processing carried out on incoming information has a substantial effect on how well we remember it.

2. Deeper levels of analysis produce longer lasting and stronger memory traces than shallow levels of analysis.

**Shallow levels** of processing include simply noticing the physical characteristics of the material to be memorised, e.g. the shape of the letters such as upper or lower case. Learning by rote (or parrot fashion) is called maintenance rehearsal and is also seen as shallow.

**Medium levels** of processing include noticing the sound of the material to be learned, referred to as phonetic processing (e.g. does the word rhyme with…?).

**Deep levels** of processing are semantic since they consider the meaning of the material to be learned.

**Research into LOP**

**1. Craik & Tulving (1975)** presented participants with words via a tachistoscope. After each word they were asked one of four questions:

1. Is the word in upper case? (shallow processing)

2. Does the word rhyme with chair? (phonetic or medium processing)

3. Is the word a type of food? (semantic or deep processing)

4. Would the word fit into the sentence ‘He kicked the …… into the tree. (semantic or deep processing).

**Findings**: Participants remembered more of the words that had been semantically processed.

**2. Hyde & Jenkins (1973)** got participants to listen to lists of 24 words and carry out one of a number of different tasks, for example:

1. Estimate how often the word is used in the English language

2. Spot the letters ‘e’ or ‘g’ in any of the words

3. Decide whether the word is a noun, verb etc.

4. Decide whether or not the word would fit into a particular sentence.

Half the participants were told in advance that they would be tested on the words afterwards, the other half were not.

**Findings:** Whether the participants had been told to expect a test or not made little difference to their recall. This is what Craik & Lockhart would predict since they consider intention to learn to be unimportant in the learning process. Also, the words that were semantically processed were recalled better.

**Evaluation**

It is difficult to asses how deeply a word has been processed, this makes it difficult to test the theory. Some psychologists believe the arguments are circular. Effort rather than depth may be important. Tyler et al (1979) gave participants easy or difficult anagrams e.g. DOCTRO or OCDRTO. Later participants remembered the difficult anagrams better even though the type of processing was the same. What had altered was the effort put in.

Elaboration and distinctiveness may also be important, as we saw with the lovely Kylie.