

STRATEGIES FOR MEMORY IMPROVEMENT

Introduction

Techniques for aiding memory which are considered unusual and artificial are called **mnemonics**. There are many different kinds of mnemonic, and these can be categorised as **verbal**, **visual**, or **verbal and visual**.

How are mnemonics used to improve memory?

Verbal mnemonic techniques make associations with *words*, and include the following:

Rhymes: "In fourteen hundred and ninety two, Columbus sailed the ocean blue."

Acrostics: "Richard Of York Gave Battle In Vain."

Acronyms: HOMES = The 5 Great Lakes in the United States

Associations: E for envelope to distinguish stationery from stationary

Notice that some of these techniques use **reduction coding**, in which the information is stripped down to its bare minimum (e.g. acrostics). However, other techniques use **elaboration coding**. This involves adding something to the material (e.g. acrostics). This can result in more rather than less information having to be stored in memory. However, the material is easier to recall because it is organised into a cohesive whole rather than just a series of unrelated words. Provided you can remember what the first letter of each word represents, the mnemonic is effective.

Visual mnemonic systems use *imagery*, and include perhaps the most well known mnemonic, the **method of loci**. In this, the things that have to be remembered are incorporated into a meaningful story, sometimes involving a familiar journey from one place to another. At various points on the journey, an item is deposited. The items are remembered by mentally re-taking the journey, and remembering where each of the items was deposited.

Another visual system is **Herdson's method**. This involves imagining numbers as objects. For example, 1 might be remembered as a pencil, 2 as a swan, and so on. The items to be remembered are then imagined

interacting with their relevant number. For example, if the first items as a clock, an image might be formed of a clock with a pencil for one of the hands.

Verbal and visual mnemonic devices use both *words* and *images*. They include the **key- or peg-word system**. In this, a rhyme such as "One is a bun, two is a shoe" and so on is used to associate an items with each number in the rhyme. The items to be remembered are then paired (or 'hung on the peg') with the peg word by means of a mental image. For example, if the first item to be remembered is a clock, an image of a bun with a clock face could be formed. The items are remembered by reciting the rhyme, which 'triggers' the mental image that was previously formed.

The **link-word method** is primarily used in foreign language learning. It involves constructing a concrete link word (or words) to represent the foreign word to be learned. For example, the French word for tablecloth is 'nappe', which is the same sound as the English word 'nap'. So, an image of a person taking a nap on a tablecloth would be formed. Once the image has been formed, which involves thinking about it very hard for around 10 seconds, the meaning of the word can be obtained by retrieving the link word 'nap' and then the stored image that links this word to 'tablecloth'.

How can encoding-specificity and state-dependency improve memory?

Another way of improving memory is to apply Tulving's encoding-specificity principle. Remember, this says that recall will be better if the same cues are present during recall as were present during the original learning. This suggests that if we learn material in a particular place, we will remember it better if we try to recall it in the same place. There is evidence to suggest that students do perform better if they are tested in the room in which they were taught, and it is even helpful to imagine that we are in that place when we try to recall material.

Research also suggests that we remember things better if we are in the same **physiological state** as when we encoded them. This is called **state-dependent learning**. For example, if people encode material under the influence of alcohol, recall is better when the intoxicated state is re-created compared with recall in a non-intoxicated state. Similarly, some research has shown that people remember things better when they are in the same **mood** or **emotional state** as they were when the information was encoded.