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IN

MORPHOLOGICAL PROCESSES

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Chapter,1,

Chapter 1

Introduction

1.0.Orientation

One of the most frequently mentioned variables involved in learning is "memory". The significance of memory is so enormous that many experts in the field of learning and teaching have come to regard it as synony-mous with learning-one is usually said to have learned something when he is capable of retaining it in his memory, i.e, the langer the retention the better the learning (Edwards 1972).

In general, learning is dependent on memory, no matter what one may try to learn, he has to resort to his memory capacity to retain the input material for further mental operations (Morgan, et al, 1986).

The above facts certainly apply to learning . a

language as well. In order to master a first, a second, or a foreign language system, the learner should constantly integrate the new material into what he has stored in his mind already. On the other hand, to handle any novel linguistic situations, a structured or an unstructured one, he has to resort to the agregate of his past linguistic (as well as pragmatic) experience. So, it seems logical to conclude that memory and learning are interdependent and mutually influencial (Stevivk, 1969).

1.1 Memory

What is memory? How is its structure, mechanism(s), processes etc? What are the theories of memory, and finally what are the factors affecting memory?

Here an attempt is made to present, as vividly as possible, a picture of the phenomenon by answering the above questions.

Memory, in general, is defined as the ability of the

human organism to process, retain and retrieve information (Burns & Dobson, 1984).

One of the best methods to explain a certian phenomenon is by way of drawing an understandable and tangible picture which may, on the basis of the avialable data demonstrate, as closely as possible, the structure and the machanism(s) involved. A well-known and widely-used example of such attempts is that of a model.

1.1.1 "A model of memory structure and mechanisms"

Several models of memory have been presented in the past decades, however, many of these models have described three stages of the processing of information for memory (Atkins & Shiffrin, 1978). The stages mark changes in the form of information and in the methods of handling that information.

Information is first received in a sensory register.

Certain features of that information pass to a short-term

store or primary memory and further processing may pass it to a long-term store or secondary memory. Figure 1 illustrates the steps.

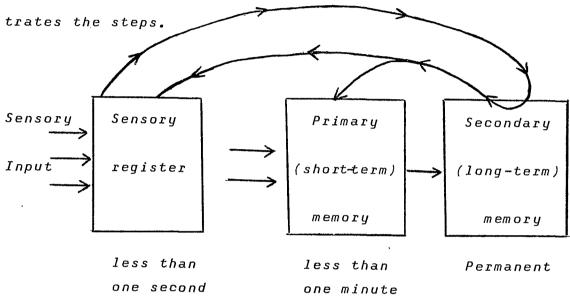


Fig 1.A Schematic representation of a three stage memory theory.

In each stage, there is a potential loss of incoming information. The sensory register may lose all the information in a fraction of a second. Only certain features are passed to the short-term memory. The short-term store has a limited capacity and a high decay rate, it may lose all the information in about 20 seconds (Edwards, 1972).

The long-term store has little losses through the passage of time, but much information is assumed to be lost through competition and the interference of cues and memories (Stevick, 1969).

In the sensory register, certain processes known as the control processes select information features that may be interpreted by reference to the long-term store. The interpreted features are then placed in the short-term store along with possible supplementary information from the long-term store. Thus, the image from the top of a shoe, for example, is interpreted by use of the information in the long-term store (Edwards, 1972).

Without the subject's control processes, there is a limited storage capacity in the short-term store and the first few items stored are lost in less that a minute (Stevick, 1969; Edwards, 1972).

One primary feature of the short-term store is the

rehearsal mechanism. Rehearsal is a control process whereby the sensory units are repeatedly emitted and thus reentered in the short-term store.

Entry into the long-term store from the short-term store comes about via some control processes. The information in the short-term store always passes to the long-term store, but the effectiveness of the later retrieval of the information depends on the control processes of the original entrance (Edwards, 1972).

A feature of memory deserving more study is the retrieval process. Familiar items often present resistance for recall and apparently uncalled-for-memories appear spontaneously. Many different small cues may elicit a memory together. Occasionally, a few cues will not elicit a desired memory, but will bring out additional related cues and a sense that the item would be immediately recognized, if it were revealed. These memories are commonly

described as being on the tip-of-the-tongue.

The memory search during retrieval may be orderly or it may be without apparent control. In any case, a failure of retrieval may reflect the disordering of a retrieval process or a loss of the memory trace in the long-term store (Morgan et al. 1986).

Entry into the long-term store depends on subject designed control processes. The practical control of memory follows the development of effective control processes of entry and retrieval.

1.1.2 "Theories of memory and forgetting"

Three theories describing the mechanism of forgetting have been advanced (Edwards, 1972). The theories complement one another, but differ primarily in the approaches that the investigator applies to the study of progetting.