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“All men can think because it is possible to put things before our eyes, the way those who invent trained memory techniques teach us to construct images.”

Aristotle

What Is Memory?

Memory is defined as the “ability to remember; capacity to retain or recall that which is learned, experienced; what can be recalled to mind,” *The World Book Dictionary*. The *Webster Dictionary* defines memory as “the act or power of remembering—all that one remembers.”

All memory, whether trained or untrained, is based on association. It is the ability—consciously or subconsciously—to relate what needs to be remembered, to an event, situation, object, place, or person previously experienced. The process of successfully retrieving desired information from our mental library is memory. The basic memory rule is, “you can remember any new piece of information if it is associated with something you already know or remember” (Lorayne & Lucas 1974).

A Brief History of Memory

Researchers trace the origin of formal memory training systems to the Greeks and Romans. Orators from these cultures delivered lengthy speeches with unfailing accuracy because they learned the speeches, phrase for phrase, by applying memory systems. Their basic approach was to associate each segment of the speech with a familiar object, e.g., a painting, a piece of furniture, a tool, and/or with a familiar place, e.g., a certain room of their house, a tree, a garden, window, etc. Paivio (1971) credits Simonides (circa 500 B.C.) as having developed the first mnemonic system. "We should never have realized how great the power (of a trained memory)," wrote the philosopher Quintilian, "nor how divine it is, but for the fact that it is memory which has brought oratory to its present position of glory." (citation from *The Memory Book*, Lorayne & Lucas, 1974.)

In 1491, Peter of Ravenna wrote *The Phoenix*, which became the best known of all early memory-training books and brought the art of trained memory out into the lay world. In a book titled *Memory*, William Stokes, a philosopher and memory teacher of the late 1800's, emphasized the importance of memory when he said, "Let us hope that the day will come when it shall be considered as great a disgrace not to use memory systems as it is at present not to read."

The Importance of Memory

Memory is the concern of everyone. It is a process that involves the entire spectrum of learning and living. The mere fact that new information is accelerating at a much faster rate requires us to learn more, and learn it faster. Memory is the corner stone of learning. Virtually all learning is based on memory. Any student knows that the more s/he remembers, the better grades s/he will get from the teacher. To succeed in school one must learn the art of memorization. Every course, every subject demands students to memorize mountains of information, each day, each week. Developing good memory skills is the major "key" to high academic achievement. It is also crucial for achieving high scores on the SATs. Research indicates that the SAT scores are the single best predictor for success in college. The complexities of the business world are such that memory has become one of the most valued personal attributes of any business person.

A good memory can also lead to a more productive and successful life.

Why Is Imagery So Important To Memory Training Systems?

The pioneers in psychology—such as William James and Francis Galton—felt that imagery was a fundamental psychological aspect of the mind. Ahsen (1977) states, “if you are striving for a higher degree of personal excellence and achievement, you cannot experience the power of imagery without being changed, motivated and inspired to positive action. It represents a new science and practice based on the magic of image creation. One of the delights of mental life is the discovery of mental images. For they are among our most precious possessions. Imagery has become the lightning rod of human energy.”

Perhaps the major breakthrough on the use of imagery in learning-memory was Paivio’s (1971) construction of the dual-coding theory of memory. According to this construct incoming pictures and concrete words are assimilated via pictorial imagery and verbal coding concurrently. Today, numerous mnemonic techniques employ the use of imagery.

It is the image-making part of mind which makes the work of higher processes of thought possible. Hence the mind never thinks without some form of mental pictures. The thinking faculty of the mind thinks of its forms in pictures.

The image can scan material with amazing speed. Images can be manipulated and repeated—they can be highly interactive, vivid and powerful. Through imagery one can bring to mind an experience long forgotten. Imagery uses the whole psychological system. The image gives us pictures . . . from the pictures (images) we receive somatic responses in the form of emotional feelings . . . from the pictures and the emotional feelings come our thoughts and meanings.

Forming associations is the key to effective memorization—when these associations include “images”—“mental pictures”—the associations become rich, deeper and longer lasting. This fact has been substantiated in a number of research investigations. In the next section there are a number of studies presented that clearly demonstrate the effectiveness of using imagery for increasing memory and learning. In his excellent and extensive review of the literature, Kenneth Sheinen (1985) found that imagery is a viable and effective means for improving memory skills in children.

Major Purposes of This Text

1. To familiarize the reader with the nature and variety of memory training systems.
2. To demonstrate the effectiveness of using imagery for enhancing memory skills.
3. To provide the reader with many practical exercises for improving his or her memory skills.
4. To demonstrate how these memory training systems can increase one's rate of learning, level of productivity and self-image.
5. To encourage the wide scale use of memory training systems in our educational institutions, in our businesses, and in our homes.

Review of The Research

This section contains brief descriptions of thirteen studies which support the hypothesis that imagery has a significant effect on learning and memory. These studies are evidence that imagery has a positive impact as an instructional methodology.

A) Vander Veur, B. W.: 1975 (Reading)

Reported: Hypothesized that the more vivid images would be remembered better than less vivid ones. She devised imagability rating (high, medium, low) for the 1,000 most frequently used words. She found that five-to-seven year olds learned and remembered high imagery words significantly more readily than low imagery words.

Vander Veur, B.W. (1975) Imagery ratings of 1,000 frequently used words. *Journal of Educational Psychology*, 67. 44-56.

B) Montague, W. E. & Carter, J. F.: 1973 (Reading)

Reported: Found that more vivid passages are retained more readily than less vivid ones and concluded that imagery serves as a mediator between verbal learning and memory.

Montague, W. E. & Carter, J. F. (1973) Vividness of imagery in recalling connected discourse. *Journal of Educational Psychology*, 64. 72-75.