

COURSE NAME: EXPERIMENTAL PSYCHOLOGY- II
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THINKING: NATURE AND TYPES OF THINKING

NATURE OF THINKING

Thinking is the base of all cognitive activities or processes and is unique to human beings. It involves manipulation and analysis of information received from the environment. For example, while seeing a painting, you are not simply focusing on the colour of the painting or the lines and strokes, rather you are going beyond the given text in interpreting its meaning and you are trying to relate the information to your existing knowledge. Understanding of the painting involves creation of new meaning that is added to your knowledge. Thinking, therefore, is a higher mental process through which we manipulate and analyse the acquired or existing information. Such manipulation and analysis occur by means of abstracting, reasoning, imagining, problem solving, judging, and decision making. Thinking is mostly organised and goal directed. All day-to-day activities, ranging from cooking to solving a math problem have a goal. One desires to reach the goal by planning, recalling the steps that one has already followed in the past if the task is familiar or inferring strategies if the task is new. Thinking is an internal mental process, which can be inferred from overt behaviour. If you see a chess player engrossed in thinking for several minutes before making a move, you cannot observe what he is thinking. You can simply infer what he was thinking or what strategies he was trying to evaluate, from his next move.

Some definitions of thinking are as follows:

Thinking is the activity of human reason as a process of strengthening the relationship between stimulus and response. 2. Thinking is a reasonable working of various views with the knowledge that has been stored in the mind long before the emergence of new knowledge. 3. Thinking can be interpreted to remember something, and questioned whether there is a relationship between what is intended. 4. Thinking is processing information mentally or cognitively by rearranging the information from the environment and the symbols are stored in the memory of his past. 5. Thinking is a symbolic representation of some event train of ideas in a precise and careful that began with the problem. 6. Thinking is a mental process mental representations newly formed through the transformation of information by interaction, attributes such as the assessment of mental abstraction, logic, imagination and problem-solving.

Building Blocks of Thought

There are a few important elements involved in the thinking process:

1. Images:

As mental pictures consist of personal experiences of objects, persons or situations, heard and felt. These mental pictures symbolize actual objects, experiences and activities. In thinking, we usually manipulate the images rather than the actual objects, experiences or activities.

2. Concepts:

A concept is a general idea that stands for a general class and represents the common characteristics of all objects or events of this general class. Concept, as a tool, economize the efforts in thinking, for example, when we hear the word 'elephant' we are at once reminded not only about the nature and qualities of elephant as a class but also our own experiences and understanding of them come to the surface in our consciousness to stimulate our thinking at that time.

3. Symbols and signs:

Symbols and signs represent and stand for substitute of the actual objects, experiences and activities. For example, traffic lights, railway signals, school bells, badges, songs, flags and slogans all are symbolic expressions, they stimulate and motivate resultant thinking because they tell us what to do or how to act.

4. Language:

Is the most efficient and developed vehicle used for carrying out the process of thinking. When a person reads, writes or hears words or sentences or observes gesture in any language one is stimulated to think. Thus reading and writing of documents and literature also help in stimulating and promoting the thinking process.

5. Muscular activities:

Thinking in one way or the other shows the evidence of the involvement of some incipient movements of groups of our muscles. A high positive relation has been found to exist for the thinking and muscular activities of an individual. The more we engage ourselves in thought, the greater is the general muscular tension and conversely as we moved towards muscular relation, our thought processes gradually diminish.

6. Brain functions:

Whatever may be the role of the muscles, thinking is primarily a function of the brain. Our mind is said to be the chief instrument of the thinking process. The experiences registered by our sense organs have no meaning, and thus cannot serve as stimulating agents, or instruments for thinking unless these impressions are received by our brain cells and properly interpreted to derive some meaning.

The mental pictures or images can be stored, reconstructed or put to use only on being processed by the brain. What happens in our thought process is simply the function or product of the activities of our brain.

TYPES OF THINKING

Thinking can be classified as follows:

1. Perceptual or Concrete Thinking:

This is the simplest form of thinking the basis of this type is perception, i.e. interpretation of sensation according to one's experience. It is also called concrete thinking as it is carried out on the perception of actual or concrete objects and events.

2. Conceptual or Abstract Thinking:

Here one makes use of concepts, the generalized objects and languages, it is regarded as being superior to perceptual thinking as it economizes efforts in understanding and problem-solving.

3. Reflective Thinking:

This type of thinking aims in solving complex problems, thus it requires reorganization of all the relevant experiences to a situation or removing obstacles instead of relating with that experiences or ideas.

This is an insightful cognitive approach in reflective thinking as the mental activity here does not involve the mechanical trial and error type of efforts.

In this type, thinking processes take all the relevant facts arranged in a logical order into an account in order to arrive at a solution of the problem.

4. Creative Thinking:

This type of thinking is associated with one's ability to create or construct something new, novel or unusual. It looks for new relationships and associations to describe and interpret the nature of things, events and situations. Here the individual himself usually formulates the evidences and tools for its solution. For example; scientists, artists or inventors.

Skinner, the famous psychologist says creative thinking means that the prediction and inferences for the individual are new, original, ingenious and unusual. The creative thinker is one who expresses new ideas and makes new observations, new predictions and new inferences.

Characteristics of Creative Thinking:

a. Creative thinking, in all its shapes and forms is absolutely an internal mental process and hence should be considered as an important component of one's cognitive behaviour.

b. Every one of us is capable of creative thinking and hence it is a universal phenomenon.

c. Creative thinking results in the production of something new or novel including a new form of arrangement of old elements.

d. Creative thinking in all its dimensions involve divergent thinking instead of the routine and final types of convergent thinking. The mind must have complete freedom to wander around to create a new idea.

e. The field of creative thinking and its out part is quite comprehensive and built wide. It covers all the aspects of human accomplishments belonging to an individual's life.

5. Critical Thinking:

It is a type of thinking that helps a person in stepping aside from his own personal beliefs, prejudices and opinions to sort out the faiths and discover the truth, even at the expense of his basic belief system.

Here one resorts to set higher cognitive abilities and skills for the proper interpretation, analysis, evaluation and inference, as well as explanation of the gathered or communicated information resulting in a purposeful unbiased and self-regulatory judgement.

An ideal thinker is habitually inquisitive, well-informed, open-minded, flexible, fair-minded in evaluation, free from personal bias and prejudices, honest in seeking relevant information, skilled in the proper use of the abilities like interpretation, analysis, synthesis, evaluation and drawing conclusion and inferences, etc.

The critical thinking is of a higher order well-disciplined thought process which involves the use of cognitive skills like conceptualization, interpretation, analysis, synthesis and evaluation for arriving at an unbiased, valid and reliable judgment of the gathered or communicated information or data as a guide to one's belief and action.

6. Non-directed or Associative Thinking:

There are times when we find ourselves engaged in a unique type of thinking which is non-directed and without goal. It is reflected through dreaming and other free-flowing uncontrolled activities. Psychologically these forms of thought are termed as associative thinking.

Here day-dreaming, fantasy and delusions all fall in the category of withdrawal behaviour that helps an individual to escape from the demands of the real world by making his thinking face non-directed and floating, placing him somewhere, ordering something unconnected with his environment.