GAGNE'S HIERARCHY OF LEARNING

By

Monojit Gope

Research Scholar

INTRODUCTION

- Gagne's Hierarchy of Learning was developed by Robert M. Gagne, an American educational psychologist. Gagne's work was influenced by the work of B.F. Skinner, a behaviorist psychologist who believed that learning is the result of conditioning. However, Gagne also incorporated cognitive elements into his theory, such as the idea that learners need to have prior knowledge in order to learn new things.

- Gagne's Hierarchy of Learning was first published in his book, The Conditions of Learning (1965). The hierarchy has been revised several times since then, but the basic structure has remained the same.

- The hierarchy is based on the idea that learning takes place in a series of steps, from simple to complex.

PRINCIPLES OF LEARNING

- Gagne's Hierarchy of Learning is based on the following principles:

❑Learning is a hierarchical process.

❑Different instructional strategies are needed for different types of learning.

❑Instruction should be tailored to the individual learner's needs.

❑Instruction should be designed to promote transfer of learning.

❑Learning is an active process.

❑Learning is cumulative.

❑Learning is facilitated by feedback.

❑Learning is motivated by goals.

GAGNE'S HIERARCHY OF LEARNING

- Gagne's Hierarchy of Learning is a model of learning that describes eight different types of learning, arranged in a hierarchical order from simple to complex. The hierarchy is based on the idea that higher levels of learning build on the lower levels, and that each type of learning requires different instructional strategies. The eight types of learning in Gagne's hierarchy are:

- Signal Learning.
- Stimulus-Response Learning.
- Chaining.
- Verbal Association.
- Discrimination Learning.
- Concept Learning.
- Rule Learning.
- Problem Solving.

SIGNAL LEARNING

- This is the simplest form of learning, and involves the association of a stimulus with a response.
- **For example**, a dog might learn to associate the sound of a bell with the presentation of food.
- **For signal learning**, teachers can use techniques such as classical conditioning and operant conditioning. For example, a teacher might use a bell to signal the start of a math lesson. Over time, the students will learn to associate the bell with the start of the lesson, and they will begin to pay attention when they hear the bell.

STIMULUS-RESPONSE LEARNING

- Stimulus-response learning is a type of learning in which a learner associates a stimulus with a response. This type of learning is often used in behaviorist psychology, and it is based on the idea that learning is the result of conditioning.

- This type of learning involves the association of two stimuli, such as the sight of a car with the sound of its engine.

- **For stimulus-response learning**, teachers can use techniques such as chaining and fading. For example, a teacher might teach a student how to tie their shoes by chaining together the following steps: grasp the laces, cross the right lace over the left, wrap the right lace around the left lace, and pull the laces tight. The teacher can then fade out the prompts, so that the student eventually learns to tie their shoes without any help.

CHAINING

- This type of learning involves the linking together of a series of stimulus-response pairs. For example, a child might learn to tie their shoes by chaining together the following steps: grasp the laces, cross the right lace over the left, wrap the right lace around the left lace, and pull the laces tight.

VERBAL ASSOCIATION

- This type of learning involves the association of words or concepts. For example, a student might learn to associate the word "dog" with the concept of a four-legged, furry animal that barks.

- **For verbal association**, teachers can use techniques such as mnemonic devices and chunking. For example, a teacher might teach students the names of the planets by using a mnemonic device such as "My Very Excellent Mother Just Served Us Nine Pizzas." The teacher can also help students to chunk information by grouping related concepts together. For example, the planets can be grouped into the inner planets and the outer planets.

DISCRIMINATION LEARNING

- This type of learning involves the ability to distinguish between two or more stimuli. For example, a student might learn to distinguish between a cat and a dog.

- **For discrimination learning**, teachers can use techniques such as concept attainment and concept mapping. For example, a teacher might teach students to distinguish between a cat and a dog by using concept attainment. The teacher would present the students with a series of examples and non-examples of cats and dogs, and the students would be asked to identify the common features of cats and dogs. The teacher could then help the students to create a concept map that shows the relationships between cats, dogs, and other animals.

CONCEPT LEARNING

- This type of learning involves the ability to understand the relationships between concepts. For example, a student might learn that a cat is a type of mammal, which is a type of animal.

- **For concept learning**, teachers can use techniques such as concept mapping and categorization. For example, a teacher might teach students about the concept of mammals by using concept mapping. The teacher would create a concept map that shows the relationships between mammals, other animals, and the characteristics of mammals. The teacher could also help the students to categorize mammals into different groups, such as carnivores, herbivores, and omnivores.

RULE LEARNING

- This type of learning involves the ability to understand and apply rules. For example, a student might learn the rule that "all mammals have fur.“

- **For rule learning**, teachers can use techniques such as rule induction and rule application. For example, a teacher might teach students the rule that "all mammals have fur" by using rule induction. The teacher would present the students with a series of examples of mammals, and the students would be asked to identify the common feature of all mammals. The teacher could then help the students to apply the rule to new examples of mammals.

PROBLEM SOLVING

- This type of learning involves the ability to solve new problems by applying previously learned knowledge and skills. For example, a student might learn to solve math problems by applying the rules of arithmetic.

- **For problem solving**, teachers can use techniques such as problem-solving heuristics and problem-solving strategies. For example, a teacher might teach students how to solve math problems by using problem-solving heuristics such as working backward and checking their work. The teacher could also help the students to develop problem-solving strategies that they can use to solve new problems.

EDUCATIONAL IMPLICATION

- Gagne's Hierarchy of Learning has a number of educational implications. These include:

- Instruction should be arranged in a hierarchical order.
- Different instructional strategies should be used for different types of learning.
- Instruction should be tailored to the individual learner's needs.
- Instruction should be designed to promote transfer of learning.

CONCLUSION

- Gagne's Hierarchy of Learning is a valuable tool for educators. It can help them to understand how learning takes place, and to design instructional strategies that are effective for different types of learners.

THANK YOU