

It is clear that cognitive as well as affective learning takes place simultaneously and with the same content of learning.

GAGNE AND BRIGGS CLASSIFICATION OF TEACHING AND INSTRUCTIONAL OBJECTIVES

According to this classification, the learning outcomes fall under one of the following categories.

1. **Intellectual Skills:** These skills are crucial for dealing with the environment. They include concept learning, rule learning and problem solving.
2. **Cognitive Strategies:** These include methods and techniques for one's own learning, remembering and thinking skills.
3. **Verbal Information:** It refers to organized bodies of knowledge that an individual acquires.
4. **Motor Skills:** They are basically about motions carried out when the brain, nervous system and muscles work together.
5. **Attitudes:** They refer to an internal state of an individual.

The teaching objectives can be put in the following forms also:

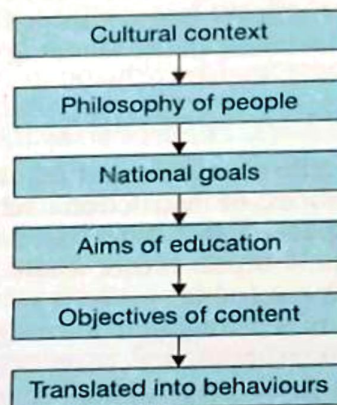


FIGURE 1.7 Hierarchy of Formulation of Objectives

Effective Teaching Practices

MAXIMS OF TEACHING

A maxim is a ground rule or a fundamental principle that has evolved over a period of time. It is a guide for future action or behaviour. Teaching also has its own set of maxims, which have been discussed below.

1. **From Simple to Complex:** The teacher should start with simple things and ideas, and these can be done with day-to-day examples, if possible. Then gradually, a teacher can move towards concepts and technical terms. This creates interest among learners to acquire new knowledge. This is helpful for better retention.
2. **From Known to Unknown:** This is related to the first maxim. Retention is always better if new knowledge can be linked with what is known.

3. **From Seen to Unseen:** Students should be imparted knowledge about the present, and then they can understand the past and the future better.
4. **From Concrete to Abstract:** The mental development of students happens better with the concrete objects they become familiar with and define micro-words for them at a later stage.
5. **From Particular to General:** The students should be presented with examples first and then general laws and their derivations can be explained to them. The experiments and demonstrations serve this purpose.
6. **From Whole to Part:** Gestalt psychologists have proved that we first see the whole object and then its parts. For example, we first perceive the tree and then its trunk, branches, leaves, etc. Thus, the introduction or overview of the topics is important.
7. **From Indefinite to Definite:** The teacher should help transform indefinite knowledge into definite knowledge and aim to clarify the doubts of students.
8. **From Psychological to Logical:** During initial stages, psychological order is more important, whereas for grown-up learners, logical order is emphasized more.
9. **From Analysis to Synthesis:** Initially, the students have little or vague knowledge about the topics. Analysis means dividing problems into its constituent parts, and then those are studied.
 Synthesis means understanding by connecting the knowledge acquired through analysing the parts. A teacher should use analytic-synthetic method.
10. **Follow Nature:** It means to regulate the education of a pupil according to his nature.
11. **Training of Senses:** The sense, sight, sound, taste, smell and touch are gateways to knowledge. It is better if all or maximum of these senses can be applied in teaching. Montessori and Fröbel are the main proponents of this maxim.
12. **Encouragement to Self-study:** Dalton's system is based on self-study.

PRINCIPLES OF TEACHING

They are closely related to maxims. Teaching methods are based on two types of principles, general principles and psychological principles.

General Principles

1. **Principle of Motivation:** It creates curiosity among students to learn new things.
2. **Principle of Activity (Learning by Doing):** Fröbel's Kindergarten (KG) system is based on this principle. It includes both physical and mental activities. For example, students are asked to make charts and models.
3. **Principle of Interest:** By generating genuine interest among the learner's community, the effectiveness of the teaching-learning process can be increased.
4. **Principle of Linking with Life:** Life is a continuous experience, and learning linked with life can be more enduring.

5. **Principle of Definite Aim:** This is important for optimum utilization of teaching resources and making learning more focused.
6. **Principle of Recognizing Individual Differences:** Every student is unique in terms of intelligence, attitude, abilities and potentialities, and socio-economic background. The teaching method should be devised in such a manner that it makes all students avail equal opportunities in life.
7. **Principle of Selection:** The horizon of knowledge is expanding every single day. The teacher should be able to pick contents that can be more relevant and updated to the learners' objectives.
8. **Principle of Planning:** Every teacher has certain time-bound objectives, and hence, teaching should be systematic, to make optimum use of resources within the time limit.
9. **Principle of Division:** To make learning easier, the subject matter should be divided into units and there should be links between the units.
10. **Principle of Revision:** To make learning enduring, the acquired knowledge should be revised immediately and repeatedly.
11. **Principle of Creation and Recreation:** This principle is a must to make the classroom environment humorous and creative.
12. **Principle of Democratic Dealing:** It involves students in planning and executing different activities; it helps in developing self-confidence and self-respect among the learners.

Psychological Principles

1. **Principle of Motivation and Interest:** A teacher needs to understand that every student is a unique psychological entity, and a student can be motivated after identifying his or her motives and needs.
2. **Principle of Recreation:** Recreation is necessary to tackle fatigue after attending lengthy classes. This breaks monotony and prepares students for learning again.
3. **Principle of Repetition and Exercise:** This is especially true in case of small children.
4. **Principle of Encouraging Creativity and Self-expression:** This is specifically applicable in subjects such as mathematics and languages.
5. **Principle of Sympathy and Cooperation:** This principle is required for the motivation of students.
6. **Principle of Reinforcement:** Students should be suitably rewarded for their desired behaviour.
7. **Principle of Imparting Training to Senses:** The use of multimedia makes many senses get involved simultaneously, which is crucial for enduring learning.
8. **Principle of Remedial Teaching:** This principle is necessary for the teacher to identify mistakes and suggest better answers to the problems.