
UNIT 2 OBJECTIVES OF TEACHING ENVIRONMENTAL STUDIES

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2.1 INTRODUCTION

In the previous unit you have studied about the concept and need for teaching Environmental Studies at the Primary Level. This unit is about the formulation of instructional objectives for environmental studies.

As the main objectives of education is the all round development of the child or the learner, we have to keep in mind all the aspects of his personality, i.e., mental, physical, emotional, social while formulating any educational objectives. This holds true for Environmental Studies as well as.

To achieve the laid down objectives pertaining to Environmental Studies, the following aspects have been discussed in this unit.

- i) Formulation of instructional/objectives of teaching EVS at primary stage.
- ii) The three main domains of instructional objectives along with their specifications/ competencies.
- iii) Essential learning outcomes (ELO) of some units as sample.

2.2 OBJECTIVES

After going through this unit you will be able to :

- identify the objectives of teaching Environmental Studies;
- develop skills of writing instructional objectives on the basis of global-national and local considerations; pertaining to environmental studies;
- formulate unit-wise Essential Learning Outcomes (ELOs).

2.3 FORMULATION OF INSTRUCTIONAL OBJECTIVES

We all know that learning is a complex phenomena. The development of ideas and understanding goes hand in hand with the development of skills and attitudes. There is an essential interdependence of these aspects of learning. Learning with understanding involves development of ideas through learners own thinking and action and in environmental science it means that skills are used and through use are developed to deal with new situations. Attitudes being more generalised components of behaviours than skills and concepts, depend upon bring fostered in a wide range of experiences since there is no way of teaching attitudes directly. This essential interconnectedness of understanding or concepts and ideas, skills and attitudes is not denied by focussing on each one at a time as is being done here. We are simply looking at different facts of a whole. This has to be borne in mind while formulating objectives.

What is an Objective? An objective is simply a clear statement that identifies a behaviour the teacher deems important. It usually consists of one or two sentences describing how the child will behave when he has reached the desired goal. The outstanding characteristic of behavioural objectives is that they must be based on behaviour that the teacher can actually see. As indicated above, objectives can and should cover many areas of learning rather than just the cognitive domain.

Pros and Cons of Using Behavioural Objectives

In the late 1960s and 1970s the pros and cons of using such objectives were hotly debated by educators. Some believed that using them stifled and narrowed educational purposes. They cited cases in which writing objective required much of the teacher's time and then they were never looked at again. They disapproved of objectives because they believed they encouraged a cut-and-dried approach to teaching based mainly on the principles of behaviour modification. Others argues that some of the more valuable kinds of social and emotional learning could not be specific if behavioural terms. Another criticism was that often such objectives were writter to specify behaviour that had the sole virtue of being readily observed but that was of little importance otherwise.

There is no denying that objectives can be miswritten or misused. However, when objectives are properly employed, they can help teachers to understand that which goals have the greatest value. They also enable teachers to clearly define how they will be able to tell when the child has reached these goals.

Consider the following excerpt from the diary of a school teacher teaching environmental studies: "Our little school situated in a beautiful valley, has as its goal, the development of the whole child — We want her to be mentally healthy, physically able, authentically creative and socially sensitive". There is nothing wrong with this statement as a long range, general foundation for teaching environmental studies but many teachers never bother to ask themselves seriously what practical steps they will take to translate such goals into the daily reality of the children's lives. Behavioural objectives can play a role here by helping teacher bridge this gap between broad purposes and actuality.

Instructional objective are formulated or designed to bring about desired changes in pupil's behaviour after completion of a particular area of learning. The objectives can be grouped into the following three domains:

- i) Cognitive
- ii) Psychomotor (skill) and
- iii) Affective.

Let us discuss these domains in detail.

2.3.1 Cognitive Domain

What is a cognitive domain objective? It is concerned with the **mental ability of the learner**. It includes recalling or remembering, explaining, reasoning, interpreting and problem solving of an area of learning.

Psychologists and educationists have identified four levels or expected behaviour outcomes under the cognitive domain. These are

- knowledge,
- comprehension/understanding,
- application, and
- creativity

Knowledge (K) : This objective includes remembering of facts, figures, letters, words, etc. It involves mental process of recognition, recall, recollection and so on.

Comprehension / Understanding (U) : This objective lays stress on relationship and discriminating various content areas. It involves change in the thinking of the learner. The specific behaviour includes the ability to cite similar examples, identify, relationships, differentiate, classify things and make generalisations.

Application (A) : This objective involves the ability to use the knowledge or it information acquired in different / new situations. It requires the mental process of reasoning, framing hypothesis and inferring. These behaviours are linked with problem solving abilities.

Creativity: This should be considered the main objective of the learning process. It involves the ability to analyse an unfamiliar or new situation / problem and development of something unique by the individual. It also involves ability to identify distant relationship between things; to imagine new situations, to develop new and original design/machine or model. It is the quality of creativity which leads to the production of something new and desirable.

2.3.2 Psychomotor Domain

In this domain learning depends on mastery of a physical skill,

It includes the **demonstrative skills and performing specific tasks**, for example, writing, reading, making illustrations, diagrams and maps, etc. This domain has not however received the attention and development of the cognitive and affective domains. It is an important area in environmental studies.

2.3.3 Affective Domain

These objectives aim to **develop certain interests, attitudes, appreciation and values** among pupils. Interests are most temporary of these and values are the most permanent; Attitudes and appreciation lie somewhere in between. But all the four components are connected with one's feeling. For example, your interest in improving sanitation in your school campus may be temporary. But if all your actions, habits, motivation and concerns are directed towards environmental sanitation and improvement of it may be permanent.

In a learning situation, the teacher must aim at the development of all aspects of learner's personality. That is why a **child centred approach is always recommended to achieve effective results**. **Instructional objectives, written in behavioural terms** with proper action verbs are called behavioural objectives. Behavioural objectives are testable but an overemphasis should be avoided. Behavioural objectives need only be used as a thumb rule because they

indicate what a learner has to learn and what a teacher has to evaluate. Given below are examples of instructional objectives under each domain.

<p>1. Cognitive Domain</p> <p>i) Knowledge, Recognition, Identification, Recall/Recollection</p> <p>ii) Understanding, Seeing, Relationship, Discrimination, Classification, Interpretation, Generalisation</p> <p>iii) Application involves the mental ability to use laws, principles, theories, concepts in a new and concrete situation and to make prediction.</p>	<p>Expected Behavioural Outcomes</p> <p>Example</p> <ul style="list-style-type: none"> • The learner recalls the name of a place of worship located in his neighbourhood. • The learner classifies given things into living or non-living things. • The learner explains why we wear woolen clothes during winters. • The learner predicts that cutting of forests may endanger our life.
<p>2. Psychomotor Domain Skills</p> <p>Correctness</p> <p>Accuracy</p> <p>Speed</p> <p>Co-ordination</p>	<p>(i) To draw a labelled diagram of a male human body.</p> <p>(ii) To complete and label the parts in a given diagram.</p>
<p>3. Affective Domain</p> <p>Appreciation</p>	<p>The learner appreciates the importance of various natural resources in a region say, the oil resources in Assam and Arunachal Pradesh.</p>

To achieve the objectives of teaching Environmental Studies, children should be made to : collect information and data; classify and analyse it, find relationships among the components; interpret giving reason and draw inferences. In this process children also develop psychomotor skills, such as making models, drawing, maps, locating places in the map, etc. Teaching of Environmental Studies also helps children to develop desirable attitudes, values, and behaviour pattern necessary for environment friendly life style.

Check Your Progress

Notes: a) Write your answers in the space given below.

b) Compare your answers with the one given at the end of the unit.

1. List three main domains of learning.

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2. Arrange the following levels of cognitive domain in correct sequence: Creativity, Comprehension, Knowledge, Application.

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3. The evaluation of which of the domain is difficult? Why?

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2.4 TERMINAL OBJECTIVES OF PRIMARY EDUCATION IN EVS

The curriculum of EVS has been built around ten major competencies. It is expected that at the primary stage these competencies should be achieved by all children. These major competencies are listed below.

- i) Development of awareness about his/her well-being in the context of social and natural environment.
- ii) Exploring important aspects of his/her socio-civic environment, and understanding its various aspects.
- iii) Knowing about various people at work and appreciating the importance about the world of work.
- iv) Understanding and interpreting the relationship between man and his environment.
- v) Understanding the relationship between man's past and present, while holding the past in its perspective;
- vi) Sensing common but simple and easily observable socio-economic situations and problems, analysing them, and seeking their possible solutions.
- vii) Understanding the factors affecting human health, and the essential requirements for maintaining good health.
- viii) Developing skills to gather and classify information about living things from one's environment and making simple inferences from the gathered information.
- ix) Observing and examining some common characteristics of non-living things.
- x) Observing simple phenomena on the earth and in the sky, knowing their reasons and drawing inferences.

To develop these competencies grade by grade, they have been further divided into sub-competencies. These sub-competencies are also related to specific content areas.

2.5 NATIONAL POLICY ON EDUCATION (1986) AND MINIMUM LEVELS OF LEARNING (MLL)

One of the important recommendation of the National Policy of Education - 1986 (Revised 1992) was regarding the standing of learning to be achieved by all children at each stage of education. In NPE was mentioned that 'Minimum Levels of Learning will be laid down for each stage of education'.

In order to bring about uniformity in the standard of education throughout the country, all children must be given access to education of a comparable standard. The major focus of policy formulation behind identifying Minimum Levels of Learning is on equity and quality.

The levels of learning should be achievable by every child. The MLLs were formulated keeping in mind the age, aptitude and abilities of children and also the variety of learning climates available in the primary schools of the country.

The other implications of this exercise are:

- lightening the curriculum of its textual load and also the burden of memorizing irrelevant facts;
- enabling teachers to relate the textbook information to reality in day-to-day life by making teaching-learning interesting, learner-centred and activity-based.
- developing in children the basic skills and competencies to such a level that these are sustainable;
- mastery learning of the skills and competencies so that these are retained permanently;
- mastery learning of skills and competencies are not directed to only a few brighter pupils but to all children including vast majority of first generation learners in the primary school.

2.5.1 Basic Features of MLL

The following are some basic features of MLLs :

- These must meet the purpose of increasing **learning attainment** and **severe performance** goals for teacher.
- These should be functional and relevant to the child.
- These should be stated in a way that is **comprehensible** to the teachers and can be evaluated by them.
- These should be mastered by all children.

Thus you can see that the purpose of formulating the Minimum Level of Learning has been that these should correspond to the learning outcomes that can be achieved by all learners.

2.5.2 A Word of Caution

What are the implications of formulating Minimum Levels of Learning and their attainment by all pupils at the Mastery level?

You are aware that there exists a great variation in the conditions under which a primary school functions. These are variations from one region to another and at the same place. For this reason there should be a flexibility in implementation. The aim should be to help pupils achieve these minimum levels of learning. But effective inputs should also be provided to help each and every pupil achieve these levels of learning. A simple over emphasised application of MLLs in the teaching-learning situations is not required. Again, like the behavioural objectives these need to be kept in mind only as a frame for reference. Once a child is helped to achieve these levels of learning, it will help reduce not only the wastage of resources but also the drop out.

In the context of the above discussion, let's chalk out the role of the teacher:

- identify the goals of your teaching which are within reach of each and every child;
- direct your teaching-learning activities towards achieving specific goals;
- improve your teaching; give the requisite inputs in the process.
- assess your pupils more precisely whether they have attained the pre-defined levels of learning;
- identify children who have mastered core learning outcomes necessary for tackling situations in day-to-day life, help the other children to come to the same levels.
- communicate more precisely with parents on the attainment levels of learning by pupils, seek their help and involvement.

2.6 LET US SUM UP

In this unit the need of formulating instructional objectives has been discussed. Instructional objectives are actually the desired changes in pupil's behaviour which she is expected to acquire after completion of a particular area of learning. Since all aspects of her personality have to be developed these objectives are formulated in terms of competencies pertaining to their domains.

- Cognitive domain (mental/intellectual aspects)
- Psychomotor domain or (manipulative skills)
- Affective domain (Socio-emotional aspects)

Each domain can further be classified into different areas, each area has its own competencies. Cognitive domain has four levels of objectives. These are — knowledge, understanding, application and creativity, Psychomotor domain includes skills and performing tasks. Under affective domain foundation of certain attitudes, interests, appreciation and values are included.

The use of behavioural goals and objectives in planning teaching of environmental studies can be a helpful strategy. If properly developed, they can help you, as teachers examine your value systems, select goals which you feel are significant and translate lofty ideas into practical expectations for the children in their groups.

Objectives may also be written according to a less formal style and phrased in terms of what the teacher wants the child to accomplish. However, it is not sufficient to write objectives. Checks must be made during the year whether the objectives are being implemented in the actual curriculum, and evaluations of children's behaviours should be carried out to determine whether the teaching has been effective.

ANSWERS TO CHECK YOUR PROGRESS

1. i) Cognitive, ii) Psychomotor and iii) Affective domains.
2. i) Knowledge, ii) Comprehension, iii) Application, and iv) Creativity.
3. The effective domain because it is linked with one's feelings and aims to develop certain attitude, attitudes and values.