

Activity and experimentation in environmental studies

(1) Project:

It is something which is done along with the curriculum to import practical, realistic and application based knowledge.

The most project method provides learning experiences suited to individual differences. Project is an activity willingly undertaken by the pupils for the solution of a felt problem and leading to learning as prescribed in the curriculum. It is concrete activity directed towards the learning of a significant skill or process.

(A) Basic Principles of the Project Method:

There are some basic principles of the project method that must be followed while performing activities in classroom.

- 1. Activity:** The project involves mental or motor activity.
- 2. Purpose:** Project should be purposeful, and fulfill the need of the pupils.
- 3. Experience:** Project should provide varied type of experiences to the pupils such as manipulative, concrete mental etc.
- 4. Reality:** Project should provide real experiences.
- 5. Freedom:** The pupils should be free to undertake the different activities connected with the project.
- 6. Utility:** The activities undertaken in a project should be useful.

(B) Steps of Project Method:

- 1. Providing:** A Situation First of all, the project should provide a suitable situation where the pupils feel a spontaneous craving for carrying out a useful activity. The teacher discovers the interests, needs, tastes and aptitudes of the children.
- 2. Choosing:** One of the important duties of the teacher is to guide the pupils that they may choose a good project.
- 3. Purposing:** Purposing is the most important thing. The teacher might fall a prey to the temptation of making the choice of the project himself due to desire to get quick and good results. This violates the most important principle of the method. The pupils should make the final selection of the project. By self – choice and self – imposition pupils work whole heartedly and energetically.
- 4. Teachers Role:** The teacher should see that the projects satisfy a real felt need of the children and also have educative potentialities. He should check that the pupils may not make a wrong choice. He should

expose the pros and cons of the project and let the students reconsider their decision if the choice is not good.

5. Freedom and Utility: The pupils should be free to undertake the different activities connected with the project. The activities undertaken in a project should be useful. He should supervise the activities and watch the progress of the project. He should coordinate the knowledge to be imparted through a project. The teacher should see that pupils get a variety of experiences and learn a good deal as they undertake the activities.

6. Evaluation: In evaluation or appraisal of the work done, the pupils must find out their shortcomings, good points, and review their work to find that nothing has been omitted and the work has been carried out in accordance with the plan laid down. He should see that mistakes committed are noted to serve as eye – openers for the future: Useful experiences and successes should be reviewed to serve as good examples. The pupils should critically appraise their work.

(C) Advantages of Project Method

1. Psychological: It provides the most natural conditions of learning. Therefore, the child remembers the principles learnt for a longer time.

2. Freedoms and Self – direction: Project method has an element of freedom. It is a method of self – direction. In it the child learns to improvise, to invent, to experiment, to know in all ways possible and to translate the knowledge into action. Thus, it develops the creative mind.

3. According to Maturity: According to the psychological concepts of maturation, the project method provides learning material that suits one's particular stage of mental development. **4. Social Benefits** As separate groups take responsibility for making their own contributions, which are subsequently pooled and become the class effort, project method results in social benefits.

4. Training: It develops the pupil's capacity to adapt themselves to their environment, to make use of whatever is available and to meet a situation resourcefully.

5. Doing after Knowing: In project method, the pupils learn and do because they understand the value of what they learn and do in the carrying out their purpose.

6. Practical: Project method provides learning through practical problems by encouraging pupils to achieve a deeper insight into principles by actually seeing them in operation.

7. Growth: Stimulated and encouraged by exploration of many materials, the student approaches other areas of learning in a similar manner.

8. Evaluation: Pupils learn to evaluate their own work, this evaluation reveals the mistakes and helps in rapid progress and true learning.

(D) Limitations of Project Method

- Less knowledge
- Difficult to formulate
- Lack of progress in instruction
- Requires highly qualified teachers

(2) Source Method:

According to source method, pupils build account about anything with the help of available sources, documents accounts, biographies and literature etc. Pupils learn to know about particular events to understand the process through which they arrive at the product.

(A) Objectives of Source Method

- To enable the pupils to develop critical thinking.
- To enable the pupils to form their own independent
- Judgment through a critical analysis of sources.
- To develop skills of collecting data, organizing the relevant data and interpreting them.
- To create proper atmosphere to make the people and events of bygone times more real to students.
- To stimulate the imagination of the students for reconstruction of the past.
- To develop and promote proper interest and right
- Perspective in the study of Environmental Science.

(B) Advantages of the Source Method

- 1. Creating a sense of Vividness and Reality:** Use of sources in the teaching of Environmental Science gives a touch of realism to the subject.
- 2. Satisfying the Curiosity of Children:** about the Question Sources give the children an insight into the methods by which Environmental Science have been built up.
- 3. Creating a Right Type of Atmosphere:** The sources vitalize the subject and create a congenial and motivating atmosphere for its study.
- 4. Mental Exercises:** These include right thinking and imagination, comparing and analyzing, drawing inferences, self – expression and discussion.
- 5. Illustration and Supplementation:** The original sources can be used to illustrate more important points in support of a lesson.
- 6. Initiation in Research:** The method initiates the pupil's research, which can later prove useful.
- 7. Use at all Stages:** Though most suitable for the pupils higher classes this method can be used by the pupils of primary classes also with advantage.

8. Meaning: The study of Environmental Science through source method makes the subject more concrete and meaningful.

(C) Limitations of Source Method:

Source method has many advantages, but it also has some limitations too. Some of them are.

- It is not easy for the teacher of schools to have easy access to the original sources.
- Use of sources is not easy for the teachers who are not trained in their use. Source method is too complex and technical.
- As the sources are available in many languages and scripts covering a period of more than three thousand years, the teachers cannot be conversant with sources in different scripts. This makes their use difficult.

(3) Supervised Study Method:

Immediate surroundings and community provide many opportunities for supervision. Concrete tangible, visible and describable data on cultural, industrial, political, geographic facts and relationships prove invaluable for the teaching of Environmental Science. Observation lends vitality to the subject matter of Environmental Science. Direct experiences are more effective in the process of learning; they are also retained for a longer period of time.

(A) Utilization of Supervised Study Method

- Environmental Science teacher's supervision provides the pupils ample opportunities for asking questions, gathering data and pooling information.
- Visit to telephone exchanges, newspapers and telegraph offices clarify ideas about communication. Study trips to airports and other transportation centre show how people and goods are moved.
- Production and consumption can be understood better when pupils see the stores, the markets and factories of the community.

(B) Techniques for Supervision Study

1. Field Trips: Field trips are undertaken for securing information, changing attitudes, awakening interests, developing appreciation, promoting ideas and enjoying new experiences.

2. Community Surveys: Community surveys foster comprehensive understanding of community structure and processes in their everyday operation, interaction and complexity. In stimulating deep insight into vital community problems and trends community surveys are very useful.

3. Suggestion for Supervision Study: Supervision study is a most scientific and new teaching method adopted by the Indian Education system. Under this method, the subject teacher observed and supervised the student to study. With the help of subject teacher students prepared their programme and completed their content.