

**EFFECTIVENESS OF CONSTRUCTIVIST  
APPROACH FOR LEARNING ACHIEVEMENT IN  
GEOGRAPHY AMONG  
VII CLASS STUDENTS**

A

**Dissertation**

**Submitted To**

**Barkatullah University, Bhopal**

**In partial fulfilment of the requirement for the Degree of**

**MASTER OF EDUCATION**

**Regional Institute of Education, Bhopal**

**Session: 2012-13**

विद्यया ऽ मृतमश्नुते



**एन सी ई आर टी  
NCERT**

**Supervisor:**

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**M.Ed.**

**REGIONAL INSTITUTE OF EDUCATION**

**(A Constituent Unit of National Council of Educational Research and Training, New Delhi)**

**SHYAML A HILLS, BHOPAL (M.P.)**

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## DECLARATION


I do hereby declare that the dissertation entitled, **Effectiveness of Constructivist Approach for Learning Achievement in Geography Among VII Class Students** has been carried out by me during the academic year 2012 – 2013 in partial fulfillment of the requirement for the degree of maters of requirement for the degree of maters of education of Barkatullah university, Bhopal, M.P.

This study has been conducting under the guidance and supervision of Dr. Ratnamala Arya, Associate Professor, Regional Institute of Education, Bhopal, M.P.

I also declare that the research work done by me is original and natural. This dissertation has not been submitted before other by me or by any other, for the award of any degree or diploma in any University.

Place: Bhopal

Date: 06/05/2013

  
Anuradha Pal

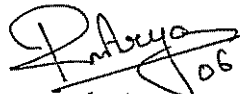
## CERTIFICATE

This is to certify that Ms. Anuradha Pal has worked on dissertation entitled “Effectiveness of Constructivist Approach for Learning Achievement in Geography Among VII Class Students” under my supervision for the session 2012-2013.

It is her genuine work and I consider it worthy of submission for the award of the degree.

Date: 06/05/2013

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Date: 06/05/2013

  
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Place: Bhopal, M.P.

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# **CHAPTER I**

# **INTRODUCTION**

# CHAPTER - I

## INTRODUCTION

### 1.1 INTRODUCTION

Education is the most important invention of mankind. It begins at birth and end at his death. It is a process of growth in which the individual is helped to develop his talents, power, interests and ambitions. This growth is an integrated and harmonious process. Education should aim at developing the innate potentiality and unique individuality of each child according to his nature therefore learning experience every attempt is made at all levels of education to match with the capability of the learner and for that suitable curriculum are framed. The concept of education is like a diamond which appears to be of a different color when seen from a different angel.

Education in a narrow sense is the modification of behavior of children in a controlled environment. To shape the behavior or to bring about some change it is necessary to study the teaching process, teaching is an activity which is designed and performed for multiple objectives in terms of changes in pupil behaviors.

Various learning theories have focused on how learning should take place. Behaviorists' understanding of learning has been in used for a long period which was followed by information processing. Thus the learner has himself become an active internal agent and information processing has become an extended behaviorism. The conception of learning has changed from information processing to the conception of learning as a construction of knowledge. Accordingly learning is an independently performed activity that is strongly embedded in situation.

Knowledge, content, abilities and so on are not being acquired or observed but constructed. This construction process never starts at ground zero, but always has its basis in an already existing knowledge structure. This existing knowledge or experience is the starting point for any interpretation of the

process of information that lead to learning as an construction of knowledge, such learning is not determined by general laws but depends very much on the situation and context in which it takes place.

Teaching is a dynamic and well-planned process. Its objective is to acquire maximum learning experiences. In order to achieve this great objective, various methods and techniques are used. The success of teaching depends on well-planning. A skilled teacher, while planning, thinks carefully about the teaching strategies. These operations of teaching depend upon contents task-analysis, teaching objectives, and nature of learning, types of learning, learning experiences, interest of pupils, their attitudes, capacities, needs and entering behaviours. Therefore, it is important to take decision about teaching operations; a teacher should perform in order to achieve the objectives of teaching. For this, it is necessary to select and use appropriate instructional strategy. The word strategy is the determination of some policy by planning before presenting the contents, which helps in achieving the objectives of teaching. Now, educationists are shifting from the positivists approach to the constructivists approach. The latest approach in teaching is **‘CONSTRUCTIVISM’**.

Constructivism is a philosophy founded on the belief that we construct our own understanding of the world by reflecting on our experiences. Learning is simple the process of adjusting our mental models to accommodate new experiences. This constructivist philosophy is rooted in **John Dewey Philosophy of Pragmatism**.

### **1.1.1 GUIDING PRINCIPLES: NCF -2005**

1. Connecting knowledge to life outside the school.
2. Ensuring learning is shifted away from rote method.
3. Enriching the curriculum to provide for overall development. of children rather than remain textbook centric.
4. Making examinations more flexible, non-threatening and integrated into classroom life.
5. Nurturing an over-riding identity informed by caring. Concerns with in the democratic polity of the country.

### **1.1.2 WHAT IS CONSTRUCTIVISM?**

Constructivism may be considered an epistemology (a Philosophical framework or theory of learning) (Jean Piaget), which argues humans construct meaning from current knowledge structures. Formulation of the theory of Constructivism is, generally, attributed to Jean Piaget, who articulated mechanisms by which knowledge is internalized by learners. He suggested that through process of accommodation and assimilation, individuals construct new knowledge from their experiences. When individuals assimilate, they incorporate the new experience into an already existing framework without changing that framework. This may occur when individuals' experiences are aligned with their internal representations of the world, but may also occur as a failure to change a faulty understanding; for example, they may not notice events, may misunderstand input from others, or may decide that an event is a fluke and is therefore unimportant as information about the world. In contrast, when individuals' experiences contradict their internal representations, they may change their perceptions of the experiences to fit their internal representations.

According to theory, accommodation is the process of reframing ones mental representation of the external world to fit new experiences.

### **1.1.3 CONCEPTUAL FRAMEWORK**

Constructivism is a term that should be used with caution. It is widely used in many disciplines. This entry is about constructivism in education. But even in the more limited area of education, it is obvious that the term constructivism is used with very different meanings. It is used to describe learning and teaching as well as curricula and assessment. It is also used in a more philosophical or epistemological meaning. This entry will try to describe some of these different meanings. It will take an historical perspective, since this may shed light on the development of the use of the term constructivism, and some of the origins for the current, somewhat confusing situation. Particular emphasis will be given to science and mathematics education, mainly because the influence has been largest in these fields.

Constructivism is a philosophy of learning founded on the premise that, by reflecting on experiences we construct our own understanding of the world we live in. Each of us generates our own 'rules' and 'mental models' which we use to make sense of our experiences. Learning, therefore, is simply the process of adjusting our mental models to accommodate new experiences. The term refers to the idea that individuals, through their interaction with the environment, construct their own knowledge and meaning (Fosnot, 1999; Steffe and Gale, 1995). Construction indicates that each learner individually and socially constructs meaning as he/she learns. This metaphor of construction comes from that idea that humans are builders, shapers, and designers, who throughout the history have created artifacts from the pots to skyscrapers. The emphasis of the constructivist theory, is on the **PROCESS** rather than the **PRODUCT** of learning. Constructivists' theory focuses that the learner in working memory constructs knowledge. In this approach, the students determine how much they have learned as well as the process by which they learned. It changes the dynamics of the traditional class room by empowering the learner as the focus and architect of the learning process while redefining the role of the instructor to be a guide and helper, rather than the source and conduit of knowledge.

Fundamentally, constructivism says that people construct their own understanding and knowledge of the world through experiencing things and reflecting on those experiences.

#### **1.1.4 WHO CONTRIBUTED TO CONSTRUCTIVISM?**

**Jean Piaget**

**Jerome Bruner**

**Lev Vygotsky**

**John Dewey**



**Piaget** developed the cognitive learning theory. He believed learning occurs by an active construction of meaning, rather than by receiving it passively. He states, " when we, as learners, encounter an experience or situation that

conflicts with our current way of thinking, a state of imbalance is created". We must alter our thinking to restore equilibrium or balance.

**Jerome Bruner** Very influential psychologist. His concern with cognitive psychology "led to a particular interest in the cognitive development of children... and just what the appropriate forms of education might be" (Smith)

**Lev Vygotsky** Developed the social cognition theory which "asserts that culture is the prime determinant of individual development" because humans are the only creatures to have created cultures and therefore it effects our learning development. Lev Vygotsky believed that the meanings are constructed and shared with references to social and cultural context which situate the individual in the classroom, learning involves interaction between learner and teacher and amongst learners

**John Dewey's** philosophy is based on the assumption that knowledge and ideas emerge from situations in which learned had to draw them out of experience that had meaning and importance to them. These situations had occurred in a social context such as classroom where students join in manipulating materials and thus created a community of learners who built their knowledge together. Dewey emphasized the role of activity in learning. He laid the foundation for constructivism. According to him learning occurs through adaptation to interactions with the environment

### **1.1.5 THEORETICAL BACKGROUND OF CONSTRUCTIVISM**

Constructivism emerged in the 1980's and 1990's and was based on the study of human learning in increasingly realistic settings. This philosophy has a long history. The major philosophies behind this theory are of Dewey, Montessori, Piaget, Vygotsky and Novak. Later on Posner 1982, driver 1989, novak 1993, and others conducted studies on 'how children construct knowledge' and 'how teacher can provide interventions to help children construct their own concept'. According to the knowledge construction view, the learner is a sense maker, whereas the teacher is a cognitive guide who provides guidance and modeling on authentic academic tasks.



Constructivism believes that students do not come to the class with 'Tabularasa'- clean slate and their previous experiences, beliefs and ideas affect the interpretations they make of their observations (Driver 1983). Constructivists' and improvement of knowledge based on experiences and observations.

### **1.1.6 BASIC ASSUMPTION AND PRINCIPLES**

Its **basic assumptions** could be listed as:

1. Knowledge acquisition is a constructive or generative process and each student's knowledge is personal and idiosyncratic (Fisher and Lipson, 1986).
2. Students hold intuitive ideas that are both identifiable and stable and have enough commonality to make it worth in planning and instructional strategies (Clough and Driver, 1986).
3. Misconceptions may originate as a result of students' interaction/experiences with the real world and/or because of his/her misinterpretations of the world of ideas presented to him (Driver and Easley, 1978).
4. Development of alternatives frameworks or misconceptions is from the same mechanism that leads to the development of conception. In addition, some modes and sequences of presenting information during teaching may result into development of misconception (Eylon and Linn, 1987).
5. Due to their different conceptual ecologies, different students can 'incorporate' the same new experiences/ideas differently in their conceptual structures/frameworks (Jordan, 1987).
6. The process of concept formation is a continuous process of successive approximation and refinement (Fisher and Lipson, 1986)

#### **Basic Principles**

1. Learning is a search for meaning. Hence, learning must start with the issue around which students are actively trying to construct meaning.

2. Meaning requires understanding wholes as well as parts. Parts must be understood in the context of wholes. Hence, the learning process focuses on primary concept not isolated facts.
3. In order to teach well, the teacher must understand the mental models that students use to perceive the world and the assumptions they make to support those models.
4. The purpose of learning for an individual is not just memorise the 'right' answers but to construct his or her own meaning.

*Brooks and Brooks (1993)* opined that there are two basic principles of constructivism. They are as follows;

1. What a person knows is actively assembled by the learner and Learning serves as an adaptive function of storage of useful information.
2. Learning serves as an adaptive function of storage of useful information.

### **1.1.7 CHARACTERISTICS OF CONSTRUCTIVIST APPROACH**

1. Learning is an active meaning making process required to solve meaningful problems. It is not a passive receptive process.
2. Meaningful learning occurs within authentic learning task.
3. New learning depends on the learners' previous knowledge and experience.
4. Social interactions facilitate learning.

### **1.1.8 ROLE OF THE TEACHERS**

Teachers play a pivotal role in this approach. In constructivist learning teacher plays multiple roles such as cognitive guide, facilitator or helper, stage setter and encourager to ask questions. Constructivism believes that students do not come to the class with 'Tabularasa'- **clean slate**, and their previous experiences, beliefs and ideas affect the interpretations they make of their observations (Driver, 1983). Constructivists' intervention includes continual

testing, modification, restructuring and improvement of knowledge based on experiences and observations.

### 1.1.9 ROLE OF THE STUDENTS

A constructivist teacher should have the knowledge of the role of the student to be performed in the constructivist approach.

1. **Constructor of knowledge:** Students do not act as to 'acquire knowledge' but also act as a 'knowledge constructor'. Knowledge construction depends upon the previous knowledge and experience of the students.
2. **Question poser:** Students ask question to the teachers. A student analyses, interprets his/her own ideas with others ideas and tests hypotheses and discusses results. Also, compares results and findings with the others and draws conclusions.
3. **Self-directed learning:** Students develop the habit of self-directed learning. Individual students take the responsibility of his/her own learning. Students can work on independent projects.
4. **Academic freedom:** This theory provides academic freedom to students. Students share thoughts among peers. Students work co-operatively and can carry-out collaborative project work.

### 1.1.10 THE LEARNING SITUATION

#### *Process- Situation*

1. **Observation:** Learners make note of the events of behavior or the situation or the scenes.
2. **Contextualisation:** Learners relate their analysis to the text or relate the content or the story with the illustrations of the background material.
3. **Cognitive apprenticeship:** Teacher illustrates or demonstrates how he/she would analyse and interpret information using the example of the content studied or the teacher models how to integrate the content studied and the illustrations of the background material.

4. **Collaboration:** Learners form groups to work on the task or to generate interpretations while the teacher suggests/guides them as they proceed.
5. **Interpretation Construction:** Learners analyse and generate evidence to verify their hypothesis or analyse and generate their own interpretations
6. **Multiple interpretations:** Learners provide explanations and defend their ideas and hypothesis using their analysis and text both within and between groups. Evidence and arguments along with the text expose them to various ways of finding answers or interpreting data. Comparing the interpretations within and between the groups gives the learner idea the people can have different reactions to the content studied.
7. **Multiple manifestations:** Using the text, background illustrations and their own reflections, the learners see how the same characters and themes can be manifested in several ways.

### 1.1.11 CONSTRUCTIVIST PEDAGOGY

1. Learning should take place in authentic and real-world environments
2. Learning should involve social negotiation and mediation
3. Content and skills should be made relevant to the learner
4. Content and skills should be understood within the framework of the learner's prior knowledge
5. Students should be assessed formatively, serving to inform future learning experiences
6. Students should be encouraged to become self-regulatory, self-mediated and self-aware
7. Teachers serve primarily as guides and facilitators of learning, not instructors
8. Teachers should provide for encourage multiple perspectives and representations of content.

## 1.2 RATIONALE OF THE STUDY

The education secretary, ministry of HRD communicated directed to the NCERT the need to review the national curriculum framework for school education (NCFSE- 2000) in the light of the report learning without burden (1993). And a national steering committee, chaired by Prof. Yash Pal and 21 national focus groups were set up finally, NCF came in the form of the document in 2005. There it is mentioned that learners have to construct their own knowledge as per their previous experiences and the cultures in which they live in. constructivist approach considers the learner as 'the creators of their own knowledge'. Constructivism can be thought of as a 'theory of knowing' where we find two focal points: cognitive constructivism and social constructivism.

Critical pedagogy also facilitates collective decisions teachers making through open discussion and by encouraging and recognizing multiple views (on issues such as political, social, economic, moral, human rights, caste religion, and gender).

Therefore, there is a need to shift from the behavioral approach to constructivist approach of teaching. A study is, of course needed in the area of constructivist approach to find its effectiveness in terms of the variable related to cognitive and affective domain.

Geography teaching should always be made an interesting one. Any learning aims at enabling the child to acquire the concepts. It depends on the context and situation in which the child learns. If the context and conditions are supportive it will create interest in learning. This is what the constructivist approach tries to provide. Activities should be performed by the students themselves, in this will create a lot of confidence. Truth would thus be found out in the classroom.

This will ultimately help in acquisition of knowledge in children. The geography teaching should involve a scientific method that will help the child to think critically and develop scientific skills in them. But in classroom the method does not cater to these objectives. Various studies say that geography

teaching takes place through conventional methods which focus only on the information of facts and preparing students for examination. But developing cognitive abilities help the students to think critically. Hence there is a need to try those methods which help in sharpening the cognitive abilities of students. Studies were conducted on various approaches like, inquiry method, concept attainment method, activity method etc. yet, these approaches have failed to reach the classroom teachers.

We presume that children do not know any thing. Hence the classroom remains dominated by the teacher thus resulting in teacher centeredness. Though we spoke of child centered learning, we have never try to create an environment in the classroom. It is necessary to see that what child already knows links with the present knowledge, how it is related and how s/he learns a particular concept.

In constructivist approach, child constructs his own ideas. From the constructivist perspective, as Piaget stressed, knowledge is an adaptive activity. This means that one should think of knowledge as a kind of compendium on concepts and actions that one has found to be successful given the purpose one has in mind. The importance lies on the fact that mere book reading and rote memorization do not lead to meaningful learning. The idea that we construct in our cognition and its application is the true learning. Thus constructivist approach is said to improve the student's achievement and certain cognitive skills.

The present study gives importance to students' achievement in geography and their reaction. Achievement in geography can measure the understanding of the learner. The study plans to find out whether children taught through constructivist approach has there any difference in their achievement and reaction compare to children taught through conventional method.

The present investigation is undertaken with an objective that the findings will help to stress the importance of constructivist approach in classroom teaching, especially in geography teaching, wherein the attempts for strengthening the constructivist approach can be supported.

### **1.3 STATEMENT OF THE PROBLEM**

The problem for the present study was worded as:

#### **EFFECTIVENESS OF CONSTRUCTIVIST APPROACH FOR LEARNING ACHIEVEMENT IN GEOGRAPHY AMONG VII CLASS STUDENTS**

### **1.4 OPERATIONAL DEFINITION OF THE KEY TERM USED**

1. **Constructivism:** constructivist learning is based on student's active participation where they are constructing their own knowledge by testing ideas and approaches based on their prior knowledge and experience, applying these to new situation and integrating new knowledge gained with pre-existing intellectual constructs.

In Constructivist Approach following strategies will be used for teaching geography to class VII.

- a. Concept Attainment Model (CAM) of Bruner
- b. Advance Organizer Model (AOM) of Ausubel
- c. Concept Mapping
- d. Project Method
- e. Lecture-cum-Discussion Method
- f. Role playing
- g. Dialogue

2. **Geography Achievement:** it refers to a tangible accomplishment of proficiency in geography measured using an achievement test.

3. **Reaction:** it refers to the reaction of students towards constructivist approach in geography measured using a reaction scale.

### **1.5 OBJECTIVS OF THE STUDY**

The objectives of the study are:

1. To study the effectiveness of constructivist approach in terms of
  - a) Students' achievement in Geography.

- b) Reaction of the students
2. To study the treatment, gender and their interaction on students achievement in Geography by taking their pre test scores as covariate.
3. To study the treatment, levels of achievement and their interaction on students' achievement in geography by taking their pre test scores as covariate.

## **1.6 HYPOTHESIS OF THE STUDY**

The hypotheses formulated in the light of the above stated objectives are:

1. There is no significant effect of treatment on student's achievement in Geography when their pre test scores of Geography are taken as covariate.
2. There is no significant effect of gender on student's achievement in Geography when their pre test scores are taken as covariate.
3. There is no significant effect of interaction between treatment and gender on student's achievement in Geography when their pre test scores are taken as covariate.
4. There is no significant effect of levels of achievement on students in geography when their pre test scores are taken as covariate.
5. There is no significant effect of interaction of treatment and level of achievement in geography when the pre test scores are taken as covariate.

## **1.7 DELIMITATIONS OF THE STUDY**

In view of the research constraints under which the study was conducted, it remained confined to the following:

1. The CBSE syllabus of class VII Geography only.
2. Demonstration Multipurpose School, Bhopal.
3. Only ten days treatment was given
4. Only ten lesson plans were taught



## **CHAPTER II**

# **REVIEW OF RELATED LITERATURE**

## CHAPTER II

### REVIEW OF RELATED LITERATURE

#### 2.1 INTRODUCTION

The present investigation aimed at the effectiveness of constructivist approach for teaching Geography to class VII.

Introduction, rationale of the study, objectives, hypotheses, along with the delimitation of the study is presented in the chapter I. The present chapter is devoted to the review of related literature. The studies reviewed related to constructivist approach, and also the studies related to effectiveness of concept attainment model with traditional method. And, also the studies related to Instructional Strategies were reviewed. These studies are presented below.

#### 2.2 REVIEW OF RELATED LITERATURE

##### 2.2.1 STUDIES RELATED TO CONSTRUCTIVIST APPROACH

**Nagarajan (1968)** compared bilingual method and other methods in teaching English on class VI of Hindi medium students of Hyderabad. Other variables were kept constant except the use of mother tongue. The major findings of the study were:-1) Bilingual method is simple from the point of view of both learners as well as teacher. 2) It enables the students to speak fluently and accurately

**Khare (1986)** conducted a study entitled "Traditional and Structural approaches of teaching English with reference to learning outcomes". The objectives of the study were to test the general level of performance of junior high school students in various aspects of English, namely, spelling, comprehension, applied grammar and vocabulary, (ii) to make the comprehensive study of the average performance of the students taught through the structural approach and traditional approach. Sample of the study comprised of 253 boys and 300 girls from four districts in U.P. seven

achievement tests for seven different dimensions of English were constructed. The following conclusions were drawn: (1) the students' achievement under the structural approach was better than those under the traditional method in the areas of spelling, pronunciation and applied grammar

**Kudesia (1987)** conducted a study entitled "an experimental comparison of discussion method and lecture method in teaching technical English to first year students of polytechnic" (bhopal). The objective of the study was to compare the effectiveness of two methods of instruction i.e. the lecture method and discussion methods in learning techniques English. The sample comprised 30 students of Bhopal. An achievement test consisting of 30 questions was prepared on the basis of bloom's taxonomy. The major finding of the study was that the experimental group achieved significantly better results on achievement test.

**Meenu Singh and Nadita Singh (2001)** in their study "English language proficiency of the students in different English language teaching system" made an attempt to find out how English language Proficiency affected when studying in an innovative system of school education. The teaching methods in traditional system are accordingly textbook oriented and focused on reading and writing alone. In contrast, innovative system emphasis was on writing as well as speaking English. A language proficiency test comprising the four skills – listening, reading, speaking, and writing. In all the performance of the innovative system was found to be higher in skills like, speaking reading and writing

**Care Stenger and Benadette Garfinkel(2003)** How the constructivist approach to learn can be used to attain academic standards. The findings of this project showed all the students had responded well to the constructivist approach to learning. The students were able to work through their problem together. An important one being the openness to conversation in the classroom

**Padamnabhan (2005)** studied on effectiveness of constructivist approach 2005 on the achievement and problem solving ability in science of VII

students. Her study shows positive effect on the achievement of students in science.

**Patil (2006):** The study has investigated into in teaching English the achievement in English language of class 6<sup>th</sup> students studying through structural approach and compares its achievement with traditional approach, which is currently used in the classroom. As the study intended to see the relative effectiveness of traditional approach and structural approach on the achievement of 6<sup>th</sup> class students in English language, researchers adopted two group experimental designs. The overall achievement of the students studying through structural approach is significantly higher than traditional approach.

**Makwana. (2007)** conducted a study to find the influence of constructivist approach on achievement of class 5<sup>th</sup> students in Geometry. The main objectives were 1) to study the influence of constructivist approach on achievement of class 5<sup>th</sup> students in geometry. 2) To find out the difference between private schools and government school in achievement of class 5<sup>th</sup> students in geometry. 3) To find out the gender wise difference on achievement of class 5<sup>th</sup> students in geometry.

**The findings were** 1) teaching and learning process through constructivist learning situation could definitely help students.

2) There were significant increase in the post test scores of both boys and girls. 3) The intensity of improvement of government school student due to the intervention of constructivist approach. 4) Constructivist learning situation improved constructivist approach on achievement of class 5<sup>th</sup> student in geometry of private and government school.

**Prasad (2009)** Comparative study of achievement in Biological Science through Traditional method (TLM) and Inquiry Training Model (ITM). Objectives of the study were: 1) to equivalent the effects of teaching through Traditional method and Inquiry Training Model in understanding different concepts of biological science 2) to identify and establish that Inquiry Training

Model can make teaching effective. 3) to establish that Inquiry Training Model is more effective in teaching of Biological Science in comparison to Traditional Method.

**The following Findings were:** much better performances of the experimental group taught through the Inquiry Training Model over the control group indicates that this method of instruction is worth applying in different schools. The ITM increases the quality of teaching on the part of the teacher and the ability to learn and develop concepts on the part of a student.

**Cavide :** conducted a study entitled constructivist learning approach in science teaching. Objectives were: 1) Is there any significant difference between the mean of achievement scores of constructivist learning approach and the mean of achievement scores of conventional training approach in the lesson of science?

2) Is there any significant difference between the mean of the retention scores of constructivist learning approach and the mean of retention scores of conventional training approach in the lesson of science?

**Findings were:** There is a significant difference in the mean value of the post-test grades and retention learning test grades in the science lesson between the constructivist learning approach applied group and conventional training approach applied group. The constructivist learning approach is more efficient than the conventional approach. Retention scores of pupils applied to constructivist learning approach in their science class was determined higher than the retention scores of pupils applied to conventional training. As a result, the applications of constructivist learning were affected on the achievement and retention.

**Singh and Sansanwal (2010):** conducted a study entitled comparison of Jerk Technology and Lecture Method on the basis of achievement in English and students liking of teachers. THE objectives of the study were: 1) to study the effect of treatment, sex and their interaction on achievement in English by taking pre achievement in English and intelligence as covariates. 2) to compare mean scores of students liking of teacher of Jerk Technology and lecture method groups.

**Findings:** the findings was that Jerk Technology was found to be superior to lecture method in facilitating achievement in English of students when groups were matched separately with respect to pre achievement in English and intelligence.

**Adlak(2011):** conduct a study to effectiveness of constructivist approach for teaching English class 6<sup>th</sup> in terms of achievement. **Findings were:**1) Constructivist approach was effective in terms of students' achievement in English 2) Gender did not produce any differential effect on the achievement in English 3) There was no significant effect of learning on the students' achievement in English 4) There was no interaction effect of treatment and styles of learning on the students' achievement in English.

**Gaude(2012)** conducted a study entitled comparative study of multimedia approach and traditional approach on the achievement in science of grade 8<sup>th</sup> students with different learning styles. This study has investigated into in teaching science. The achievement in science of class 8<sup>th</sup> students studying through multimedia approach and compare its achievement with traditional approach which is currently used in the classroom as the study intended to see the relative effectiveness of the traditional approach and multimedia approach on the achievement in science. Objectives: 1) to identify the different learning styles of grade 8<sup>th</sup> students 2) to compare the achievement in science of grade 8<sup>th</sup> students taught by multimedia approach and traditional approach 3) to compare the achievement in science of grade 8<sup>th</sup> boys taught by multimedia approach and traditional approach 4) to compare the achievement in science of grade 8<sup>th</sup> girls taught by multimedia approach and traditional approach 5) to compare the achievement in science of grade 8<sup>th</sup> visual learner taught by multimedia approach and traditional approach 6) to compare the achievement in science of grade 8<sup>th</sup> auditory learners taught by multimedia approach and traditional approach 7) to compare the achievement in science of grade 8<sup>th</sup> tactile learners taught by multimedia approach and traditional approach.

## 2.2.2 STUDIES RELATED TO INSTRUCTIONAL MATERIAL

**Shah (1981)** conducted a study to develop and try out programmed material in mathematics for student of class V. the main objectives were: 1) to develop programmed materials on various units of the mathematics syllabus of class V and 2) to try out the same on children of class V from the selected schools. The findings of the study were: 1) programmed material on the selected units was effective and 2) the reaction of the student and the teacher was favorable.

**Bhagwat (1992)** studied related to prepare a package of divergent production type problems in mathematics and to study the effectiveness of the package against level of intelligence and sex difference for standard VII students. **The main objectives were:** 1) to prepare different production type problems on the standard VII mathematics syllabus in Maharashtra State, 2) to test the effectiveness of package against the level of intelligence for standard VII students and 3) to test the effectiveness of package against the sex differences of standard VII students. An incidental sample of 50 students (25 boys and girls) was chosen for the study. A similar procedure was followed for the main study sample was divided into two groups of 50 each on the basis of level at intelligence. The tools used to collect data included, a standardized test measuring creativity in Mathematics, Ravens' Progressive Matrices, a package of divergent production type problem prepared by the researcher. The experiment was conducted using the pre test, post group design. The data were analyzed by using correlated 't' test and analysis of co-variance. **The major findings were:** 1) there was a significant increase in the post test scores in the case of both boys and girls 2) taking into consideration the three levels of intelligence, it was found that there was a significant increase in the post test scores in the case of both boys and girls.

**Bhatia & kusum (1992)** studied on the identification and remedy at difficulties in learning fractional with programmed instructional material. **The objectives of the study were:** 1) to develop programmed instructional material on fractional number for student of class V, 2) to use programmed instructional material as a remedial material. For testing the effectiveness of programmed instructional material in the classroom teaching for students of

class V, 3) to test the significance difference between the traditional method of teaching and teaching through programmed, instructional material. **The major findings were:** 1) teaching and learning through programmed instruction could definitely help both student and teachers, 2) students receiving the programmed instruction material did better in the post test as compared to the other group. 3) the programmed instructional material worked effectively as a remedial tool and 4) programmed instructional material did not only helped the students to learn better but also helped the teacher to know how the students learn better.

### **2.2.3 STUDIES RELATED TO ACHIEVEMENT IN GEOGRAPHY**

**Windschitl (2002)** Classroom teachers are finding the implementation of constructivist instruction far more difficult than the reform community acknowledges. This article presents a theoretical analysis of constructivism in practice by building a framework of dilemmas that explicates the conceptual, pedagogical, cultural, and political planes of the constructivist teaching experience. In this context, “constructivism in practice” is a concept situated in the ambiguities, tensions, and compromises that arise among stakeholders in the educational enterprise as constructivism is used as a basis for teaching. In addition to providing a unique theoretical perspective for researchers, the framework is a heuristic for teachers, providing critical questions that allow them to interrogate their own beliefs, question institutional routines, and understand more deeply the forces that influence their classroom practice

**Elizabeth (May, 2008)** conducted a study entitled “is role-playing an effective teaching method?” So many social studies teachers only teach by lecturing and expect rote memorization from their students. Role-playing activities help introduce student to “real-world” situations

**Aydin(2009)** focused on the effects of cooperative learning method on geography teaching. The researches related to metacognition are looked at generally, it emerged that metacognitive skills develop thinking skills,



increase the speed of learning and learning level, provide active learning, develop general ability and intelligence, develop problem-solving skills, provide self-confidence, improve care, attention, motivation and attitude, develop the strength of prediction, increase the success of reading comprehension, develop effectiveness on retention and recall, gain planning and self-evaluation skills, provide self-monitoring and control by asking questions to oneself and the learning process, provide independent learning, provide strategic planning, development of a variety of ways of thinking, increase academic success, develop the association of information and cooperation and communication skills, develop critical-thinking, creative and reflective skills, and provide high correlation between intelligence

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**Banker (2010)** conducted a study of the effectiveness of multimedia approach on the scholastic achievement of 5<sup>th</sup> standard students. In this study researcher aimed to study about the use of multimedia in teaching learning process, researcher compares the effectiveness of multimedia with traditional approach. **Findings of the study were:** 1) there is no significant difference between the pre test achievement of experimental and control group. 2) There is a significant difference between the post test achievement of experimental and control group. 3) There is a significant difference between the pre test and post test experimental group. 4) There is a significant difference between the pre test and post test control group. 5) There is a significant difference between the achievement of girls in post test experimental and control group. 6) There is a significant difference between the achievement of boys in post test experimental and control group.

**Yasmeen Bano (2010)** conducted a study on comparison of constructive approach with traditional approach of teaching geography to class 9<sup>th</sup> in terms variables related to cognitive and effective domain. Findings of the study were: Effectiveness of the constructive approach was studied in terms of the students' achievement in geography and the students' reaction towards the approach. **The findings are as follows:** a) Constructivist approach was

effective in terms of students' achievement in geography. b) Constructivist approach was effective in terms of students' reaction towards the approach.

**Jadhav(may 2011)** A study of effectiveness of concept attainment model in teaching of geography at secondary level. Objectives of the study were: 1. to select the concepts from the VIII std syllabus of the subject Geography to teach with Research Paper—Education concept attainment model 2 To develop teaching –learning material to teach concepts selected with concept attainment model. 3 To study the effectiveness of concept attainment model in teaching of Geography.

**Findings of the study were:** 1) Concept attainment model is more effective than conventional method to teach Geography to VIII std 2) With regard to, the objective of 'knowledge' in teaching Geography, concept attainment model is more effective than conventional method of teaching. 3) With regard to 'understanding', the objective of teaching Geography, concept attainment model is more effective than conventional method of teaching. 4) With regard to the objective of 'application' teaching Geography, concept attainment model is more effective than conventional method of teaching.

**Terence Day (2011)** focused on Undergraduate teaching and learning in physical geography. Like other disciplines, physical geography has seen substantial recent interest in research on ways to improve undergraduate teaching and learning. Most of this research has taken place in a constructivist framework in which students construct knowledge in ways that are meaningful to them. Constructivist theory forms the basis for a wide range of active learning approaches, such as inquiry-based learning and problem-based learning. These approaches are inductive in that students build theory and generalizations from case studies rather than more traditional approaches in which the students learn the theory and then study some examples. Students are typically more engaged in their active learning than they are in traditional approaches, but the impacts of the newer approaches on student learning are unclear. Experiential and service learning, together with fieldwork, offer considerable organizational challenges, but the learning rewards are clear and

unchallenged. Attempts to replace fieldwork with virtual field trips have met with resistance, but there has been little research on the ways that virtual fieldwork could be improved. Introductory physical geography textbooks have failed to keep up with changes in teaching the subject, although there have been some recent innovations that offer promise. Animations in particular seem to engage students, although there is no evidence that they enhance the learning of physical geography. The nature of the relationship between research and teaching continues to fascinate, yet eludes clarification. The scholarship of teaching and learning physical geography offers challenges and opportunities for new and experienced faculty who have not previously published in this field.

### **2.3 CONCLUSION**

By studying the above researches it gets clear that though studies have been conducted in the field of Constructivist Approach especially. Whatever research has been done is not directly related with the present study. Looking to the review of researches it can be observed that many researchers have studied Constructivist Approach by taking different objectives. Only, few studies have been conducted to teach social science concepts through the Constructivist Approach. Hence, above mentioned researches are the bases for the present study. Therefore, it demands new research in this area.

## **CHAPTER III**

# **METHODOLOGY**

# **CHAPTER-III**

## **METHODOLOGY**

### **3.1 INTRODUCTION**

The rationale of the present study along with its objectives and hypotheses has been stated in chapter I. This chapter concerned with the methodology used to achieve the objectives of the study mentioned in chapter one sampling and tool development has been done according to objectives of the study. The present chapter is devoted to the description of design, sample, tools used, procedure of data collection and statistical technique used for analyzing the data.

### **3.2 RESEARCH DESIGN**

The present study was experimental in nature. Pre test, post test equivalent group design was employed. The treatment in the study had two levels, namely, constructivist approach, and the traditional approach.

The group which received the treatment through constructivist approach named as experimental group, the group which received the treatment of traditional method, designated as control group. Traditional method means reading textbook and communicating information through lecture to students in the classroom in a group. Questions are asked to the students, and sometimes the teacher dictates the notes. Generally, the teacher teaches in the class. After this, experimental group was taught the ten lessons of Geography, through the constructivist approach and the control group was taught the same concepts through traditional approach.

The whole procedure of the research design is shown in the table:

**TABLE- 3.2 DESIGN OF THE STUDY**

<b>Characteristics</b>	<b>Control Group</b>	<b>Experimental Group</b>
<b>Early status</b>	<b>Class VII achievement in Geography</b>	<b>Class VII achievement in Geography</b>
<b>Treatment</b>	<b>Traditional Approach of Teaching</b>	<b>Constructivist Approach of Teaching</b>
<b>Terminal status</b>	<b>Post Test</b>	<b>Post Test</b>

### 3.3 SAMPLE

The representative proportion of the population is called a sample. In present study the sampling is done randomly. The sample of the study is drawn from one school that is Demonstration Multipurpose School, Bhopal. Size of the sample was 60 students. There was two sections of the class one group was designed as Experimental group and another group was designed as Control group. The description of the study is given in the table:

**TABLE: 3.3 Group wise and Gender wise Distribution of the Sample**

<b>Group</b>	<b>Boys</b>	<b>Girls</b>	<b>Total</b>
<b>Experimental Group</b>	<b>20</b>	<b>10</b>	<b>30</b>
<b>Control Group</b>	<b>18</b>	<b>12</b>	<b>30</b>
<b>Total</b>	<b>38</b>	<b>22</b>	<b>60</b>

### 3.4 VARIABLES

There are following two types of variables.

1. Independent Variable
2. Dependent Variable



#### **Independent variables**

The independent variables in the present study are the two different teaching approaches i.e. **Traditional Approach and Constructivist Approach**. The **Experimental group** was taught by **Constructivist Approach** and the **Control group** was taught by the **Traditional Approach**.

#### **Dependent variables**

The dependent variable in the present study is Achievement in Geography.

### **3.5 TOOLS USED**

The variables measured in this study were, Achievement in Geography and Reaction of the students towards Constructivist Approach. For measuring, achievements in Geography were assessed with the tools developed by the investigator. Reactions of the students of Experimental Group towards the Constructivist Approach were measured with the help of a Reaction Scale developed by the investigator.

### **3.6 TOOL CONSTRUCTION**

In the present study, the variables related to which data collected were: Achievement in Geography, and Reaction scale towards Constructivist Approach. To select proper tool for research is the main mechanism of educational research. Tool should be standardized from subject experts. Test standardized from subject teacher, researcher and expert faculty

#### **3.6.1 Geography Achievement Test:**

Achievement test in Geography constructed keeping in view the objective of teaching Geography and competencies of student. Achievement test were constructed keeping in view the understanding, knowledge and skill based questions.

**Step I:** The Achievement test consist of following components.

1. Our changing earth
2. Earthquake
3. Volcano
4. Globe: latitude
5. Globe: longitude
6. Desert: cold
7. Desert: hot
8. Water
9. Human environment: settlement

## 10. Human environment: transport and communication

**Step II:** standardization before use test standardize from subject teacher and supervisor-

**3.6.2 Reaction Scale:** the reaction scale was developed by the investigator for assessing the reactions of the students exposed to the constructivist approach at the time of teaching. The students of the experimental group were taught through the Constructivist Approach. Constructivist Approach requires specially designed lessons for its implementation in the classroom. So, the lessons were developed taking into consideration the syntax of the model. Lessons were the integral part of the model. Therefore, the reaction scale was constructed to assess the reactions of the students. The reaction scale consisted of 15 statements. Each statement have five point scale was given. The five points were, SA (Strongly agree), A (Agree), U (Undecided), D (Disagree), SD (Strongly disagree) .Students were asked to read each statement carefully and put a tick mark on appropriate alternative amongst the given three alternatives which best described by their reaction. There was no time limit for its completion but students took approximately 35 minutes.

### 3.6.3 Tests Try Out:

Before using test on actual research place test should be standardized and used on small sample as try out. If try out gains suggestion for first attempt, correction mistakes of test, again it should use reconstruction of small sample as a second try out.





**TABLE 3.6 TOOL DESCRIPTIONS**

<b>S.NO</b>	<b>SECTIONS</b>	<b>NO. OF QUESTIONS</b>	<b>MARKS</b>
<b>1</b>	<b>Tick the correct answer</b>	<b>8</b>	<b>4</b>
<b>2</b>	<b>Match the following</b>	<b>4</b>	<b>4</b>
<b>3</b>	<b>Fill in the blanks</b>	<b>8</b>	<b>4</b>
<b>4</b>	<b>Short answer questions</b>	<b>5</b>	<b>5</b>
<b>5</b>	<b>Long answer questions</b>	<b>1</b>	<b>3</b>

### **3.7 PROCEDURE OF DATA COLLECTION**

Data were collected with the help of tools described in the preceding captions. The treatment i.e., teaching through constructivist approach and the teaching through traditional approach was given to both the groups, respectively. The experimental group was taught through the constructivist approach and the control group was taught through the traditional approach.

In total, 10 lessons were taught to both the groups following the different approach as mentioned. An achievement test was developed by the investigation and was administered to the students of both the groups after teaching of 10 lessons. Reaction scale developed by the investigator was administered only to the experimental group, after the completion of 10 lessons.

### **3.8 STATISTICAL TECHNIQUES USED**

The statistical techniques used in the present study for analyzing the data are given objectives as under.

- 1) For studying the effectiveness of the constructivist approach in terms of :-
  - a) achievement in geography, percentiles, mean, and standard deviation were used.

- b) Reaction of the students towards the constructivist approach percentage was used.
- 2) For studying the effect of treatment and gender and their interaction on achievement in geography 2x2 factorial design ANCOVA of unequal cell size was used.
- 3) For studying the effect of treatment and gender and level of achievement in geography 2x2 factorial design, ANCOVA of unequal cell size was used.

## **CHAPTER IV**

# **DATA ANALYSIS AND INTERPRETATION**

## CHAPTER – IV

### DATA ANALYSIS AND INTERPRETATION

#### 4.1 INTRODUCTION

This chapter deals with the presentation of data and their analysis to draw the result. It also deals with the testing of hypothesis. The objective – wise result also form the part of this chapter which are presented under different headings.

#### 4.2 ACHIEVEMENT ANALYSIS

##### 4.2.1 EFFECTIVENESS OF THE CONSTRUCTIVIST APPROACH IN TERMS OF LEARNING ACHIEVEMENT IN GEOGRAPHY AND REACTION OF THE STUDENTS TOWARDS THE APPROACH.

The first objective of the study was to study the effectiveness of the constructivist approach in terms of achievement in Geography of students of class vii. The results of both, the achievement in Geography and the reaction of the students towards the approach were presented separately in the following captions.

##### 4.2.2 EFFECTIVENESS OF THE CONSTRUCTIVIST APPROACH IN TERMS OF LEARNING ACHIEVEMENT OF STUDENTS IN GEOGRAPHY.

The effectiveness of the constructivist approach was studied in terms of Achievement of students in Geography on pre test and post test. An achievement test was developed by the investigator to measure the achievement in geography of students. The test consisted of 5 items. The total marks of the achievement test in Geography were 25. The test was administered to both the group i.e. experimental and control group. The scores were analyzed with the help of the percentiles, mean and standard deviation. The results are presented in the table 4.1



**Table 4.1: Percentiles, Mean and Standard Deviation for Achievement in Geography.**

<b>Percentiles</b>	<b>P95</b>	<b>89.90</b>
	<b>P90</b>	<b>88</b>
	<b>P80</b>	<b>80</b>
	<b>P70</b>	<b>84</b>
	<b>P60</b>	<b>80</b>
	<b>P50</b>	<b>80</b>
	<b>P40</b>	<b>77.60</b>
	<b>P30</b>	<b>72</b>
	<b>P20</b>	<b>64.80</b>
	<b>P10</b>	<b>56.00</b>
<b>Mean</b>		<b>75.73</b>
<b>Std. Deviation</b>		<b>11.69</b>

Table 4.1 reveals that the mean of scores of achievement in Geography on pre test and post test, is above 75 percent. It may be observed that 50 percent students scored more than 80 percent marks, 90 percent students scored 89.90 percent marks, only 10 percent students scored below 60 percent marks. The differential demonstrated by the percentage of scores, here, substantiates the fact that the treatment given in terms of the developed text material was more effective in enhancing the students Achievement than the traditional one.

**Findings:** constructivist approach was effective in terms of students' achievement in Geography.

#### **4.2.3 EFFECTIVENESS IN TERMS OF REACTION OF STUDENTS TOWARDS CONSTRUCTIVIST APPROACH.**

The effectiveness of constructivist approach was studied in terms of students' reaction towards the constructivist approach. As indicated in the chapter III, the investigator taught the students of the experimental group by using that approach. The scale was administered to the experimental group after the

completion of teaching of all the ten lessons. The obtained data were analyzed by computing percentage.

There were 15 statements in the Reaction Scale. The statements were related to various aspects of the approach.

#### **4.2.4 EFFECT OF TREATMENT, GENDER AND INTERACTION ON ACHIEVEMENT IN GEOGRAPHY**

The second objective of this study was to study the effect of treatment, gender and their interaction on achievement in geography of students by taking their pre test scores as covariate. There were two levels of treatment, namely constructivist approach and traditional approach. The students were categorized into two levels on the basis of their gender namely male and female. Thus, there were two levels of treatment and two levels of gender. Therefore the data were analyzed with the help of 2x2 Factorial design ANCOVA. The results are presented in table 4.2 and 4.3 and interpretation are given in captions 4.2.5 and 4.2.6

#### **4.2.5 EFFECT OF TREATMENT ON ACHIEVEMENT IN GEOGRAPHY**

**Table 4.2 F-Values for Effect and Interaction of Treatment and Gender on Achievement in Geography.**

Sources of variance	df	SS	MSS	F-VALUE
Treatment	1	1936.74	1936.74	26.55
Gender	1	28.09	28.09	.385
Treatment x gender	1	305.29	305.29	4.18
Error	55			
Total	60			

**\*\* Significant at 0.01 level**

**Table 4.3: Mean, and SD of the Boys and Girls of Experimental and Control Groups for Achievement in Geography**

Treatment		Constructivist Approach		Traditional approach		
Gender	N	Mean	S.D	N	Mean	SD
Boys	22	73.20	11.46	18	69.56	14.26
Girls	10	80.80	10.96	12	62.00	15.95
Total	30	75.73	11.69	30	66.53	15.16

From table 4.2 it can be seen that the adjusted F-value is 26.55 which is significant at 0.01 levels with df 1/55. It indicates that the adjusted mean scores of achievement in geography of constructivist approach and traditional approach groups differ significantly when pre test scores in Geography were considered as covariate.

So, there was a significant effect of treatment on achievement in geography. In the light of this, the null hypothesis that “there is no significant effect of treatment on achievement in geography when their pre test scores are taken as covariate” is rejected.

Further, table 4.3 shows that the mean achievement score in geography of the students taught through constructivist approach (75.73) is higher than the students taught through traditional approach of teaching (66.53). It reflects that the constructivist approach was found to be effective in terms of students’ achievement in geography than the traditional approach of teaching.

Findings: it may, therefore be concluded that constructivist approach is effective in terms of students achievement in geography.

#### **4.2.6 EFFECT OF GENDER ON ACHIEVEMENT IN GEOGRAPHY**

Table 4.2 reveals that the F-value for gender is 0.38 which is not significant at 0.05 levels with df equal to 1/55. It indicates that the gender did not produce any significant differential significant effect on students’ achievement in Geography. It shows that the students’ achievement in geography is independent of gender. Therefore, the null hypothesis namely, “there is no significant effect of gender on students achievement in geography when their

pre test scores are taken as covariate”, is not rejected. It signifies that the achievement in geography is independent of the gender.

**Findings:** gender did not produce any differential effect on the achievement in geography.

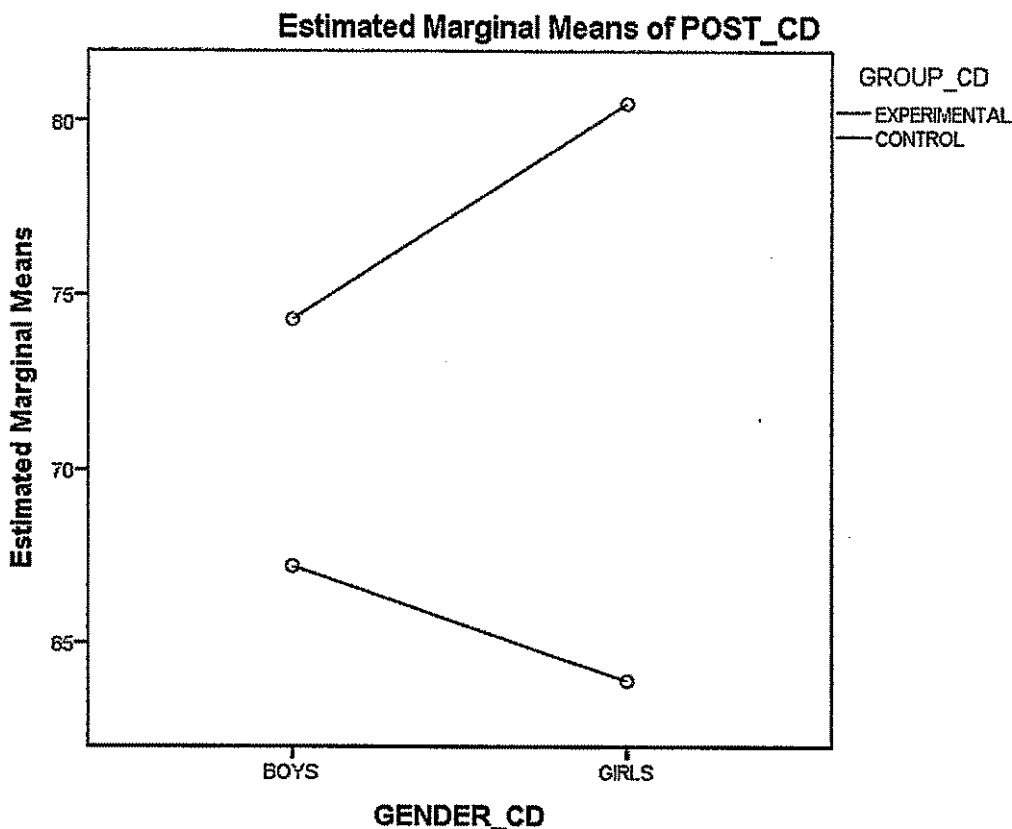
#### **4.2.7 INTERACTION OF TREATMENT AND GENDER ON ACHIEVEMENT IN GEOGRAPHY**

Table 4.2 reveals that the F-value for interaction between treatment and gender is 4.18, which is not significant at 0.05 levels with df equal to 1/55. It indicates that there was no significant influence of resultant of interaction of treatment and gender on achievement in geography when pre test scores in geography were taken as covariate. In this context, the null hypothesis that, “there is no significant interaction of treatment and gender on achievement in geography of students when pre test scores are taken as covariate” is not rejected. It may, therefore, be said that achievement in geography was found to be independent of the interaction of treatment and gender when pre test scores in geography were taken as covariates.

**Findings:** there was no significant interaction of treatment and gender on achievement in geography.







Covariates appearing in the model are evaluated at the following values: PRE\_CD = 49.87

#### **4.2.8 EFFECT OF TREATMENT, LEVEL OF ACHIEVEMENT AND INTERACTION ON ACHIEVEMENT IN GEOGRAPHY**

The third objective of the investigation was to study the effect of treatment, level of achievement and their interaction on achievement in geography by taking the class vii geography scores as covariate. The achievement test was developed by the investigator. The test was administered to both the experimental and control group after the end of the teaching of ten lessons through different approaches. The data were analyzed with the help of the 2x2 factorial designs ANCOVA of unequal cell size. The results are presented in table 4.4 and 4.5 and interpretations are given in captions 4.1.9, 4.1.10 and 4.1.11

**Table 4.4: F-values for effect and interaction of treatment level of achievement and gender on achievement in geography**

Sources	Df	SS	MSS	F-VALUE
Treatment	1	1137.95	1137.95	21.35
Level of achievement	2	1195.03	597.51	11.21
Treatment x level of achievement	2	169.23	84.61	1.58
Error	53	2823.75	53.27	
Total	60	315504.0		

\*\* Significant at 0.01 level

**Table 4.5: F-values for effect and interaction of treatment level of achievement and gender on achievement in geography**

Treatment	Constructivist Approach			Traditional approach		
Levels of achievement	N	Mean	S.D	N	Mean	SD
Low	7	24.57	22.84	8	29.50	5.63
Average	18	51.11	8.51	13	51.08	6.95
High	5	74.40	3.59	9	69.78	4.94
Total	30	150.08	34.94	30	150.36	17.52

#### **4.2.9 EFFECT OF TRETMENT ON ACHIEVEMENT IN GEOGRAPHY**

The result and the interpretations are presented in the caption 4.2.5

#### **4.2.10 EFFECT OF LEVEL OF ACHIEVEMENT IN GEOGRAPHY**

Table 4.4 indicates that F-value for the level of achievement is 11.21 which are significant at 0.01 levels with df equal to 1/53. It indicates that the treatment produced significant differential effect on the level of achievement in geography. In other words it can be said that there was a significant effect of treatment on level of achievement in geography. Therefore, the null hypothesis, namely, "there is no significant effect of level of achievement on

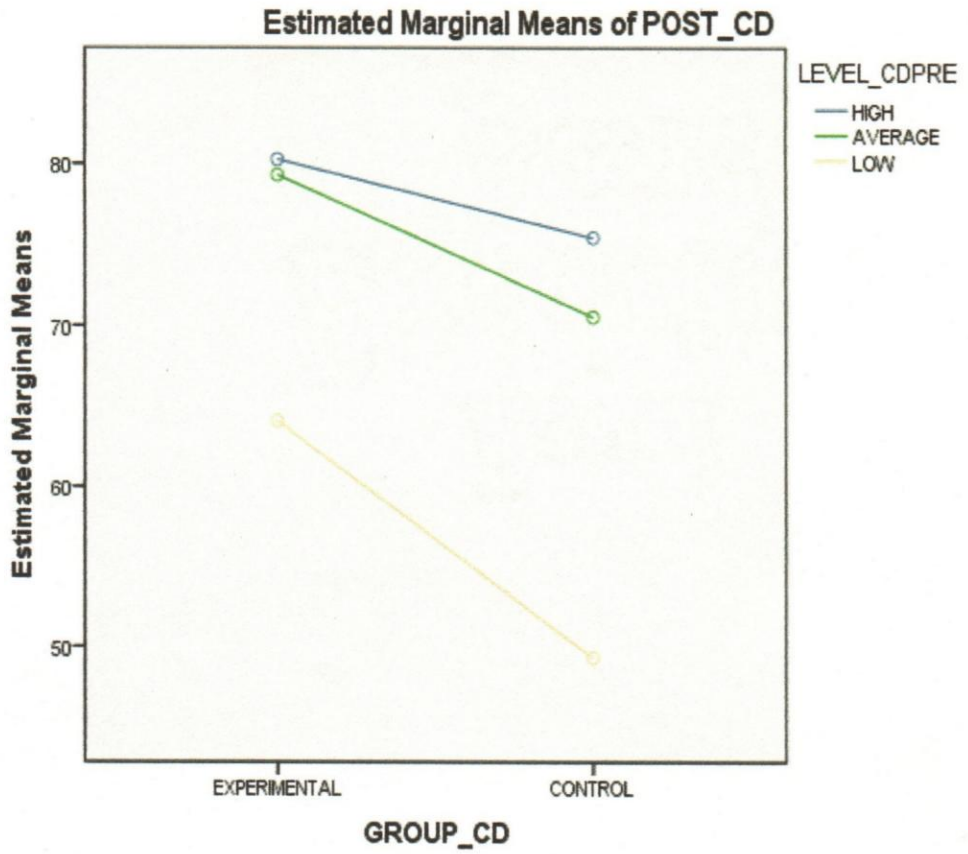
students in geography when there pre test scores are taken as covariate” is rejected.

Further, table 4.5 shows that the mean achievement score in geography of the students taught through constructivist approach (75.73) is higher than the students taught through traditional approach of teaching (66.53). It can be therefore, said that the constructivist approach was found to be effective in terms of students achievement in geography than the traditional approach of teaching.

**Findings:** constructivist approach is effective in terms of levels of achievement in geography.

#### **4.2.11 INTERACTION OF TREATMENT AND LEVEL OF ACHIEVEMENT**

Table 4.5 reveals that the F-value for the interaction of treatment and level of achievement is 1.58 with df equal to 1/53 is not significant at 0.05 levels. It can therefore, be said that there was no significant interaction of treatment and level of achievement in geography. Therefore, the null hypothesis, namely “there is no significant interaction of treatment and level of achievement in geography of students when their pre test scores are taken as covariate,” is not rejected.



Covariates appearing in the model are evaluated at the following values: PRE\_CD = 49.87



## **CHAPTER V**

# **SUMMARY AND CONCLUSION**

# CHAPTER V

## SUMMARY AND CONCLUSION

### 5.1 INTRODUCTION

The present study was planned to investigate the effectiveness of Constructivist Approach in terms of Achievement in Geography and their reaction towards Constructivist Approach. In this chapter, discussion on the findings is presented on the basis of the interpretation of the data given in the chapter IV.

### 5.2 RATIONALE OF THE STUDY

The education secretary, ministry of HRD communicated directed to the NCERT the need to review the national curriculum framework for school education (NCFSE- 2000) in the light of the report learning without burden (1993). And a national steering committee, chaired by Prof. Yash Pal and 21 national focus groups were set up finally, NCF came in the form of the document in 2005. There it is mentioned that learners have to construct their own knowledge as per their previous experiences and the cultures in which they live in. constructivist approach considers the learner as 'the creators of their own knowledge'. Constructivism can be thought of as a 'theory of knowing' where we find two focal points: cognitive constructivism and social constructivism.

Critical pedagogy also facilitates collective decisions teachers making through open discussion and by encouraging and recognizing multiple views (on issues such as political, social, economic, moral, human rights, caste religion, and gender). Therefore, there is a need to shift from the behavioral approach to constructivist approach of teaching. A study is, of course needed in the area of constructivist approach to find its effectiveness in terms of the variable related to cognitive and affective domain.

Geography teaching should always be made an interesting one. Any learning aims at enabling the child to acquire the concepts. It depends on the context

and situation in which the child learns. If the context and conditions are supportive it will create interest in learning. This is what the constructivist approach tries to provide. Activities should be performed by the students themselves, in this will create a lot of confidence. Truth would thus be found out in the classroom.

This will ultimately help in acquisition of knowledge in children. The geography teaching should involve a scientific method that will help the child to think critically and develop scientific skills in them. But in classroom the method does not cater to these objectives. Various studies say that geography teaching takes place through conventional methods which focus only on the information of facts and preparing students for examination. But developing cognitive abilities help the students to think critically. Hence there is a need to try those methods which help in sharpening the cognitive abilities of students. Studies were conducted on various approaches like, inquiry method, concept attainment method, activity method etc. yet, these approaches have failed to reach the classroom teachers.

### **5.3 STATEMENT OF THE PROBLEM**

The problem for the present study was worded as:

#### **EFFECTIVENESS OF CONSTRUCTIVIST APPROACH FOR LEARNING ACHIEVEMENT IN GEOGRAPHY AMONG VII CLASS STUDENTS**

### **5.4 OBJECTIVES OF THE STUDY**

The objectives of the study are:

1. To study the effectiveness of constructivist approach in terms of:
  - a) Students' achievement in Geography.
  - b) Reaction of the students
2. To study the treatment, gender and their interaction on students achievement in Geography by taking their pre test scores as covariate.
3. To study the treatment, levels of achievement and their interaction on students' achievement in geography by taking their pre test scores as covariate.

## **5.5 HYPOTHESIS OF THE STUDY**

The hypotheses formulated in the light of the above stated objectives are:

1. There is no significant effect of treatment on student's achievement in Geography when their pre test scores of Geography are taken as covariate.
2. There is no significant effect of gender on student's achievement in Geography when their pre test scores are taken as covariate.
3. There is no significant effect of interaction between treatment and gender on student's achievement in Geography when their pre test scores are taken as covariate.
4. There is no significant effect of levels of achievement on students in geography when their pre test scores are taken as covariate.
5. There is no significant effect of interaction of treatment and level of achievement in geography when the pre test scores are taken as covariate.

## **5.6 METHODOLOGY**

For the present study, experimental method was employed.

## **5.7 SAMPLE**

Random sampling technique was used for the selection of the school for the study. 60 students of class VII of Demonstration Multipurpose School, Bhopal were selected for the study.

## **5.8 DESIGN OF THE STUDY**

The present was Experimental in nature. Pre test, post test control group design was employed

## **5.9 TOOLS USED**

The following tools were used for the collection of data. An achievement test in Geography was developed by the investigator and Reaction of the students of experimental group towards the constructivist approach was measured with the help of a Reaction Scale developed by the investigator.



## **5.10 PROCEDURE OF DATA COLLECTION**

Data were collected with the help of tools described in the preceding captions. The treatment i.e., teaching through constructivist approach and the teaching through traditional approach was given to both the groups, respectively. The experimental group was taught through the constructivist approach and the control group was taught through the traditional approach.

In total, 10 lessons were taught to both the groups following the different approach as mentioned. An achievement test was developed by the investigation and was administered to the students of both the groups after teaching of 10 lessons. Reaction scale developed by the investigator was administered only to the experimental group, after the completion of 10 lessons.

## **5.11 STATISTICAL TECHNIQUE USED FOR THE ANALYSIS OF DATA**

The statistical techniques used in the present study for analyzing the data are given objectives as under.

- 1) For studying the effectiveness of the constructivist approach in terms of :-
  - a) achievement in geography, percentiles, mean, and standard deviation were used.
  - b) Reaction of the students towards the constructivist approach percentage was used.
- 2) For studying the effect of treatment and gender and their interaction on achievement in geography 2x2 factorial design ANCOVA of unequal cell size was used.
- 3) For studying the effect of treatment and gender and level of achievement in geography 2x2 factorial design, ANCOVA of unequal cell size was used.

## **5.12 MAJOR FINDINGS OF THE STUDY**

The following findings flow from the interpretation of data presented in the previous chapter.

1. Constructivist Approach was found to be effective in terms of students Achievement in Geography and reaction of the students towards constructivist approach.
2. The mean scores of achievement of students in Geography taught through Constructivist Approach were found to be significantly higher than those of their counterparts taught through the Traditional Method.
3. Gender did not influence significantly the students Achievement in Geography.
4. The interaction between treatment and gender did not influence significantly the students' achievement in Geography.
5. Constructivist Approach was found to be effective in terms of students levels of Achievement in Geography
6. The interaction between treatment and levels of achievement in Geography

### **Effectiveness of the Constructivist Approach**

The first objective of the present study was to investigate the effectiveness of the constructivist approach in terms of:

- a) Achievement of students in Geography and
- b) Reaction of the students towards the constructivist approach.

The discussions pertaining to each one of them are given, here, in separate captions.

### **Effectiveness of Constructivist Approach in Terms of Students Achievement in Geography.**

Constructivist Approach was found to be effective in terms of students Achievement in Geography. This finding was supported by Adlak (2011) in her study she found that the Constructivist Approach for teaching English to VI class was effective. In all these teaching strategies, the climate of the

classroom was open, co-operative and encouraging with a scope for good deal of students' activity. The approach thus, provided wide opportunity to students for acquiring concepts, interpreting the data and applies the principles in new and differential situation. All the students were found active in the class. The results of the present investigation are an outcome of this student-centered approach. The nature of the approach demands greater involvement of pupils in the teaching learning situation. So, the students were motivated and stimulated to retain and improvement in their achievement. The elements of novelty (new a different approach) or 'orienting effect' might have also contributed towards the present result. Due to multiple choice objective type test items, pupils achievement might have been higher. Generally, that kind of achievement of the students, is not achieved either through conventional mode of teaching, or through the instructional material that are used by the teachers in the classroom. Thus, the teaching through this approach was found to be very effective in terms of students' achievement in Geography.

### **Effectiveness of the Constructivist Approach in Terms of Students Reaction.**

The teaching through Constructivist Approach was found to be effective in terms of Reaction of the students to it. The various aspects of the Constructivist Approach towards which reactions of students taken were: instruction through the approach, Constructivism based material, examples presented in the material, presentation of the content. Majority of students had expressed favorable reactions towards these above said aspects. Thus, it can be concluded that the favorable reactions of majority of students towards the above mentioned aspects indicated that they found these aspects to be of important.

Teaching was done through constructivist approach. Therefore, constructivist approach was found to be effective in terms of students' reaction. Therefore, it may be concluded that the instructional material was found to be effective in terms students' reaction.

## **Effectiveness of Treatment on Achievement in Geography**

The mean scores of Achievement of students in Geography, taught through Constructivist Approach, were found to be significantly higher than that of their counterparts taught through traditional method. This finding is supported by a large number of earlier studies Nagarajan (1968), Khare (1986), Kudesia (1987), Singh and Nadita Singh (2001), Care Stenger and Benadette Garfinkel(2003), Padamnabham (2005), Patil (2006), Makwana. (2007), Prasad (2009), Cavide (2010), Singh and Sansanwal (2010), Adlak(2011), Gaude(2012).

In this study, the reason for Constructivist Approach superiority to Traditional Method might be due to the teachers' domination in the traditional mode of teaching. In this approach, students get an opportunity to identify common properties of the examples presented and to differentiate them to finally determine the hierarchical order of information. Probably, these above stated ingredients of Constructivist Approach were responsible for the improvement of achievement of students taught through Constructivist Approach.

## **Effect of Gender on Achievement in Geography**

The present study also reveals that gender did not influence the Achievement of students in Geography, significantly. Therefore, it may be said that there is no significant difference in the performance of boys and girls on the measure of Achievement in Geography. Makwana (2007), Singh and Sansanwal (2010) Adlak(2011), Gaude (2012), Bhagwat (1992), Banker (2010) support this finding.

## **Effect of Interaction between Treatment and Gender on Achievement in Geography.**

The effect of interaction between Treatment and Gender on the measure of Achievement in Geography was not found significant. The results indicates that the male and female students were benefited to the same extent in the both the modes of teaching. Thus, Gender differential was not noticed in the said interaction on Achievement. But the mean Achievement scores of male and

female students of experimental group were higher than that of the male and female students of control group. It may, therefore, be said that gender of the pupils affected their achievement in Geography in both experimental and control group to the same degree. This result shows that the effect of treatment on achievement in Geography is independent of the gender of the students. Achievement, generally, depend on the cognitive development of the students. It is not dependent on gender. Perhaps, therefore, no significant interactional effect was found in this study.

### **Effect of Level of Achievement in Geography**

The effect of the mean scores of Achievement of students in Geography, taught through Constructivist Approach, were found to be significantly higher than that of their counterparts taught through traditional method. It can be therefore, said that the constructivist approach was found to be effective in terms of levels of students achievement in Geography than the Traditional Approach of teaching.

### **Effect of Interaction between Treatment and levels of Achievement in Geography**

The effect of Interaction between Treatment and Levels of Achievement on the measure of Achievement in Geography was not found significant. It may, therefore, be said that there was no significant interaction of treatment and level of achievement in Geography of students.

## **5.13 CONCLUSION**

Constructivist approach is effective in raising the achievement of the subject concerned. It also experienced during the present study that this approach is not only effective in cognitive development but also effective in interpersonal development. The skills those are practiced by the students can be further mastered by them. As constructivist approach advocates for the contextually, therefore, the content should be meaningful to the learner. Steps should be taken to help the students to make sense of learning content

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# APPENDICES

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## APPENDICES

### ACHIEVEMENT TEST

Name:

STD VII

Sub: Geography

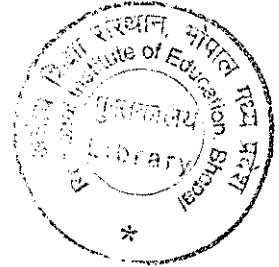
Time: 35 min

Marks: 25

I choose the correct answers. Each question carries  $\frac{1}{2}$  marks.

$$(\frac{1}{2} \times 8 = 4)$$

- 1) A scale is necessary
  - a) For a sketch
  - b) for a map
  - c) for symbols
- 2) The blue color is used for showing
  - a) Plains
  - b) mountains
  - c) water bodies
- 3) The place in the crust where the movement starts is
  - a) Focus
  - b) earth surface
  - c) epicenter.
- 4) Sahara is what type of desert
  - a) Cold
  - b) hot
  - c) mild
- 5) Which vehicle does not pollute the environment?
  - a) Cycle
  - b) bus
  - c) airplane
- 6) Which mode of transport is most suitable to reach an
  - a) Train
  - b) ship
  - c) car.
- 7) Which of the following gases protects us from harmful sunrays?
  - a) Carbon dioxide
  - b) nitrogen
  - c) ozone
- 8) Which is caused by the sudden movements of the earth?
  - a) Earthquake
  - b) folding plain
  - c) folding



**II** Fill in the blanks. Each question carries ½ marks. (½ x 8= 4)

- 1) Another word for lines of latitude is .....
- 2) .....desert is located in northern part of Africa
- 3) Lines that runs across the globe east to west are called lines of .....
- 4) On a map the direction arrow always points .....
- 5) Sahara is ..... type of desert.
- 6) Lines of latitude runs from east to .....
- 7) A map that shows the natural features of the earth is a .....
- 8) .....is the means by which people and goods move

**III** Match the following

- |                     |   |
|---------------------|---|
| 1) Tropic of cancer | means of communication                  |
| 2) Earthquake       | 23 <sup>1/2</sup> N Northern hemisphere |
| 3) Internet         | desert                                  |
| 4) Sahara           | sudden forces                           |

**IV** Short answer questions. Each question carries 1 mark. (2x5 =10)

1) What is a globe?  
.....  
.....  
.....  
.....

2) Name the different types of map  
.....  
.....  
.....  
.....

3) Why ocean water is salty?

.....  
.....  
.....  
.....  
.....  
.....

4) What do you understand by the term settlement?

.....  
.....  
.....  
.....  
.....  
.....

5) What are the two types of deserts found in the world?

.....  
.....  
.....  
.....

V Long answers questions. Question carries 3 marks. (1x3 = 3)

1) Suppose you have faced an earthquake in your town, how would you protect yourself and your family members during that situation?

.....  
.....  
.....  
.....  
.....

## REACTION SCALE

NAME-

TIME- 35 min

CLASS-

SUBJECT-

1. Learning through this type of approach is time consuming
2. Sometimes it is boring to learn through this material
3. Learning through this material is an interesting experience.
4. I feel motivated while learning through the material constructivist approach.
5. Study through this material develops a competitive attitude.
6. I feel active and happy in the class when the teacher taught through constructivist approach.
7. Material based on constructivism give chance to think independently.
8. I was encouraged to learn when other students attained the concepts in the subject.
9. Studying through this approach motivate the students to explore examples other than those given in the text book.
10. Presentation of the positive examples helped me to acquire concept.
11. Presentation of the negative examples helped me to acquire concept.
12. Unlabelled examples prompted understanding of the concepts
13. Examples presented through explained paragraph helped me to acquire the concept
14. Examples containing the essential attribute of a concept helped me to attain concept
15. Linkage of different concept in the content was well organised

# PLANNING OF LESSON I

## PART I

**Subject:** Geography

**Class:** VII

**Topic:** Earthquake.

**Chapter:** Our Changing Earth.

**Teaching learning methods and techniques:** Discussion, Explaining, Question Answer, Drawing.



## PART II

**Objectives:** to enable the child to understand the basic concept of our changing earth.

**Learning Resources:** Video clipping, Images, textbook.

**Teaching Learning Process:**

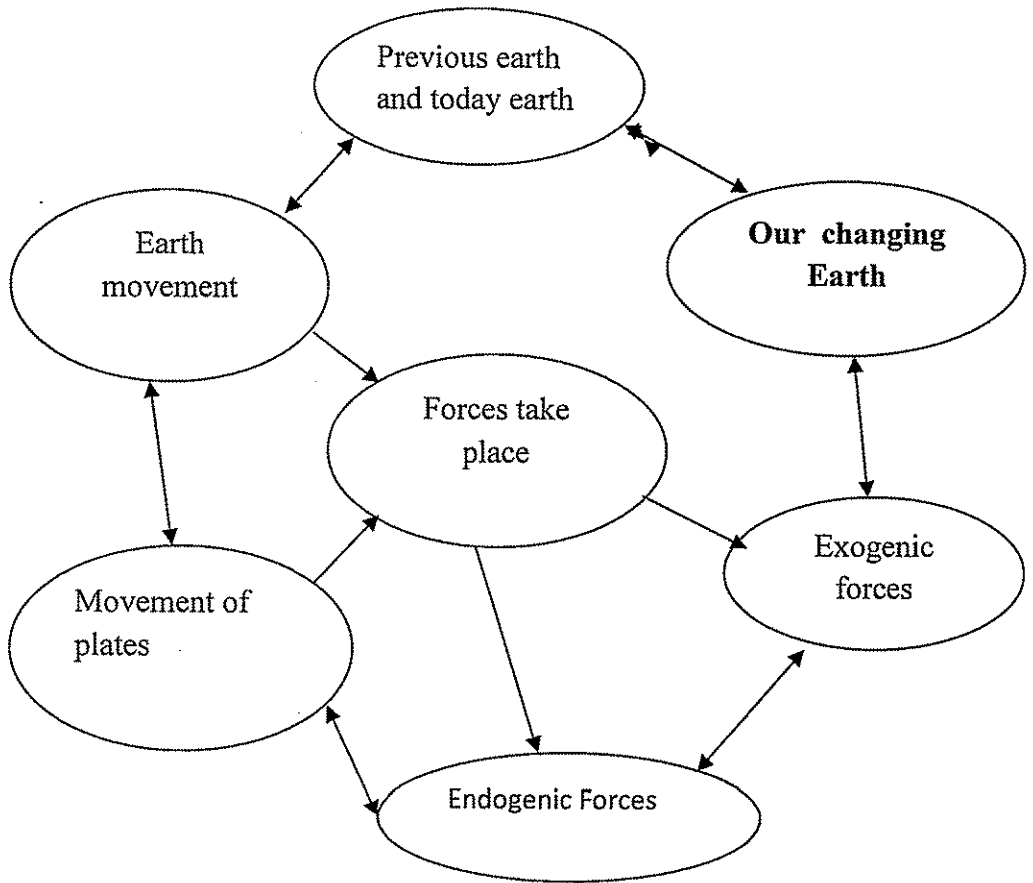
1. Teacher asks the students to observe the video clipping carefully.
2. After this teacher has divided the class into 6 groups.
3. Teacher asks them to discuss what they have observed in the video clipping and list out them.
4. In between teacher asked questions like, is there a difference in prior millions of year's earth and today earth? What changes going on? Have you any idea?
5. Teacher asks students to write the points on blackboard.
6. Then teacher asks try to categorise those points in different groups.

## PART III Lesson Report

1. **OBSERVATION:** Students had observed the video clipping based on topic carefully.
2. **CONTEXTUALIZATION:** Depending on the observation student discussed with in the groups and list out the points accordingly like, movement of the earth, changes of the earth, movement of the plates,

different continents, movement of continents, changes on the surface of the earth.

3. **COGNITIVE APPRENTICESHIP:** One student has asked questions in the class why do the plates move? If there is no movement of plates than there will no changes takes place on the surface of the earth.
4. **COLLABORATION:** All points were discussed in intergroup and then written by the students on blackboard.
5. **INTERPRETATION CONSTRUCTION:** Teacher asked them try to categorise or make a concept map on our changing earth. The students develop ownership of their work by developing their own interpretation.





## **PLANNING OF LESSON II**

### **PART I**

**Subject: Geography**

**Class: VII**

**Topic: Earthquake.**

**Chapter: Our Changing Earth.**

**Teaching learning methods and techniques: Discussion, Explaining, Question Answer, Drawing.**

### **PART II**

**Objectives: to enable the child to understand the basic concept of our changing earth.**

**Learning Resources: Video clipping, Images, textbook.**

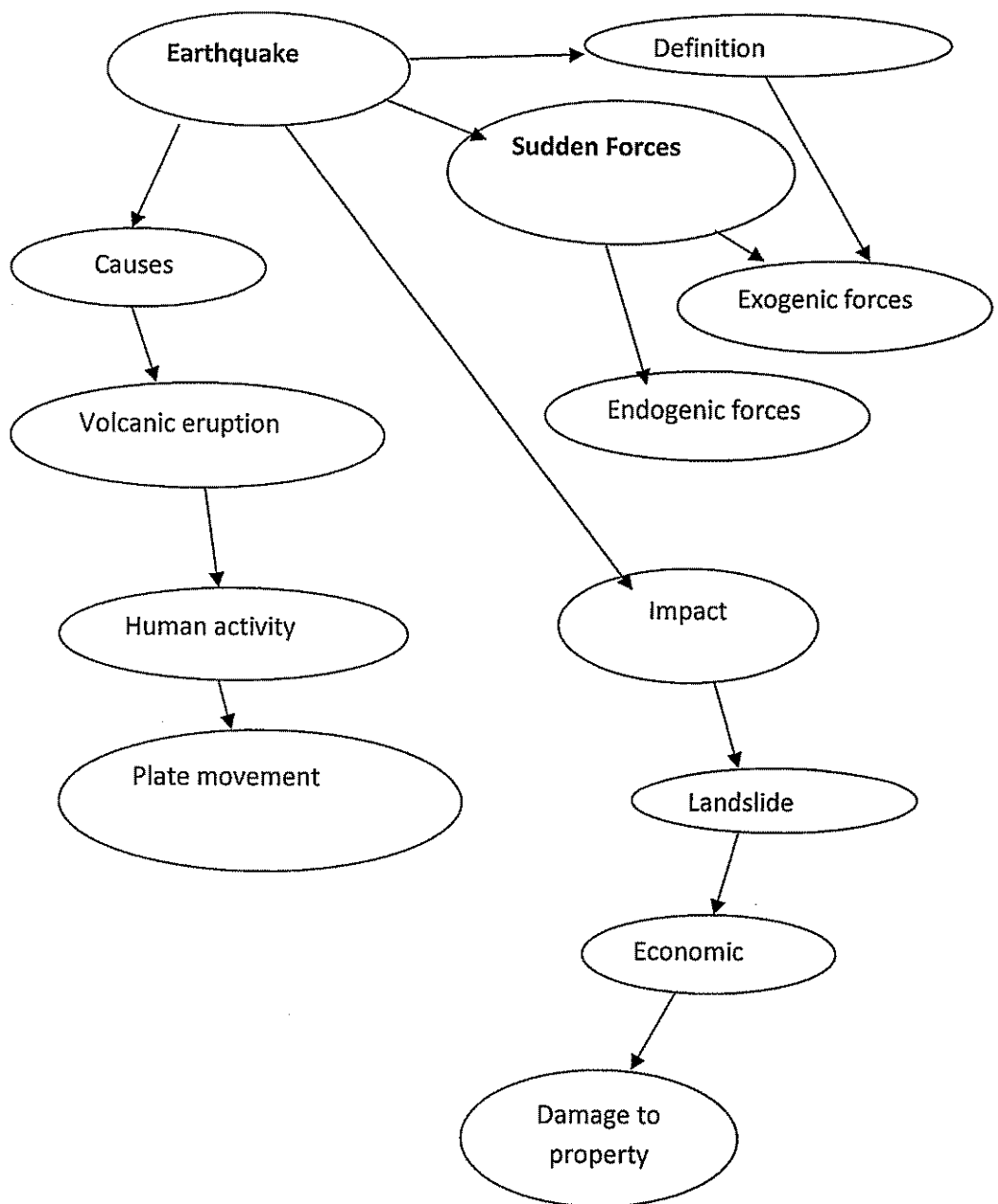
**Teaching Learning Process:**

1. Teacher asks the students to observe the video clipping carefully.
2. After this teacher has divided the class into 6 groups.
3. Teacher asks them to discuss what they have observed in the video clipping and list out them.
4. In between teacher asked questions like, what you have understood by the term "Earthquake".
5. Teacher asks students to write the points on their notebook.

### **PART III Lesson Report**

1. **OBSERVATION:** Students had observed the video clipping based on topic carefully.
2. **CONTEXTUALIZATION:** Depending on the observation student discussed with in the groups and list out the points accordingly like, movement of plates, forces which act in the interior of the Earth, forces which act on the surface of the Earth.

3. **COGNITIVE APPRENTICESHIP:** One student has asked questions in the class why do the plates move? If there is no movement of plates than there will no changes takes place on the surface of the earth.
4. **COLLABORATION:** All points were discussed in intergroup and then written by the students on blackboard.
5. **INTERPRETATION CONSTRUCTION:** Teacher asked them try to categorise or make a concept map on our changing earth. The students develop ownership of their work by developing their own interpretation.



## **PLANNING OF LESSON III**

### **PART I**

**Subject: Geography**

**Class: VII**

**Topic: Volcano**

**Chapter: Our Changing Earth.**

**Teaching learning methods and techniques: Discussion, Explaining, Question Answer, Drawing.**

### **PART II**

**Objectives: to enable the child to understand the basic concept of our changing earth.**

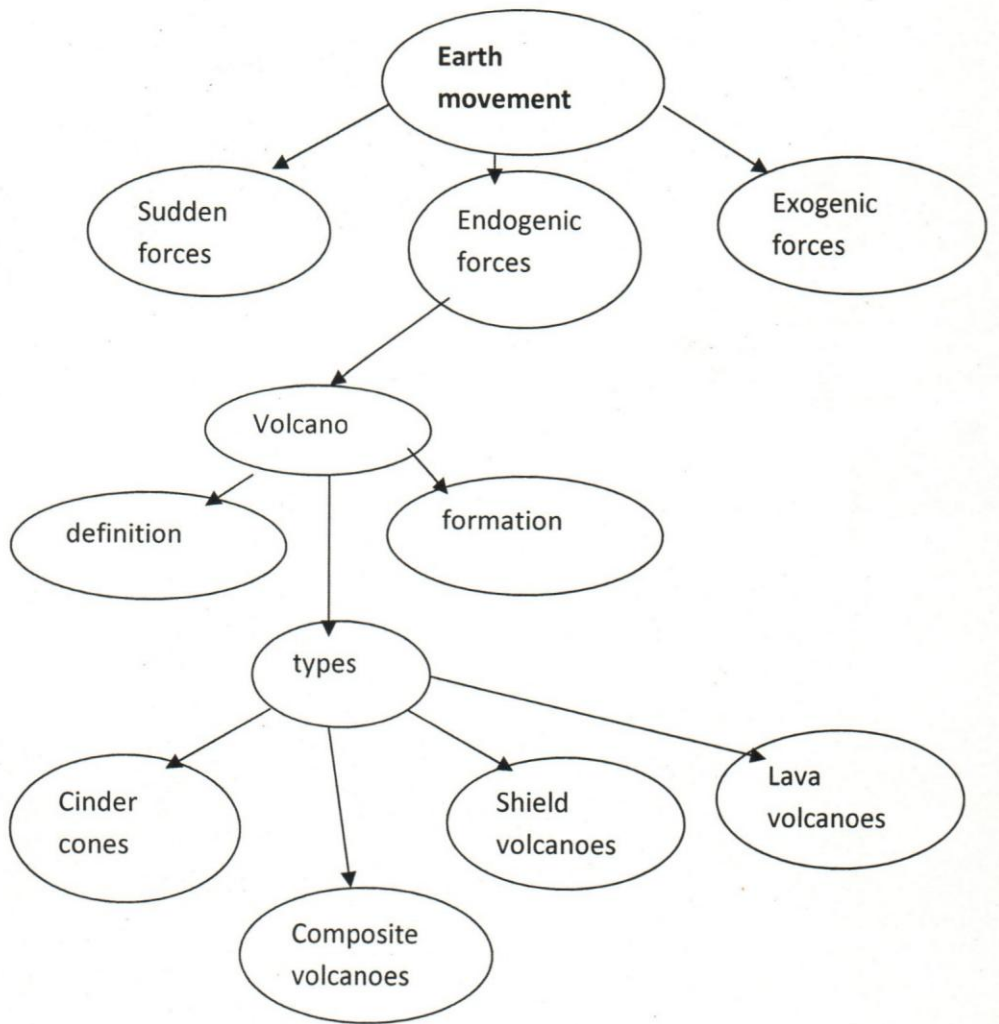
**Learning Resources: Video clipping , Images, textbook.**

**Teaching Learning Process:**

1. Teacher asks the students to observe the video clipping carefully.
2. After this teacher has divided the class into 6 groups.
3. Teacher asks them to discuss what they have observed in the video clipping and list out them.
4. In between teacher asked questions like, what you have understood by the term what is a volcano. How do they form?
5. Teacher asks students to write the points on their notebook.

### **PART III Lesson Report**

Students had observed the video clipping based on topic carefully. Depending on the observation student discussed with in the groups and list out the points accordingly like, movement of plates, forces which act in the interior of the Earth. One student has asked questions in the class how are volcanoes formed? What are the different stages of volcanoes? All points were discussed in intergroup and then written by the students on blackboard. Teacher asked them try to categorise or make a concept map on our changing earth. The students develop ownership of their work by developing their own interpretation



## **PLANNING OF LESSON IV**

### **PART I**

**Subject: Geography**

**Class: VII**

**Topic: Life in the deserts – Hot desert**

**Chapter: Life in the Deserts.**

**Teaching learning methods and techniques: Discussion, Explaining, Question Answer, Drawing.**

### **PART II**

**Objectives: to enable the child to understand the basic concept of hot desert.**

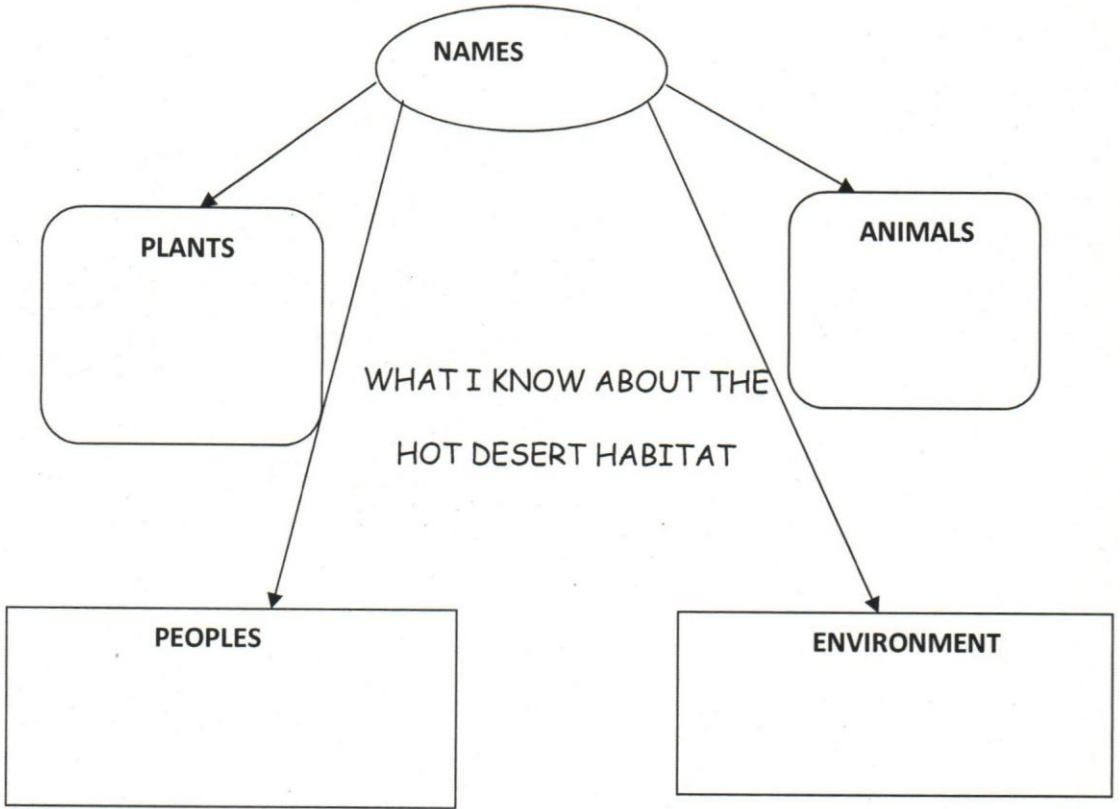
**Learning Resources: physical map of world, Images, textbook.**

**Teaching Learning Process:**

1. Teacher asks some questions which is related to their real life experiences.
2. After this teacher has divided the class into 6 groups.
3. Teacher asks them why is the desert hot all day and then cold all night?
4. Teacher asks students to write the points on their notebook.

### **PART III Lesson Report**

Students had thought over the question and list out the points on their notebook. Depending on the questions and with the help of map student discussed with in the groups and list out the points accordingly. One student has asked questions in the class like, how many hot deserts are there around the world. All points were discussed in intergroup and then written by the students on blackboard. Teacher asked them try to categorise or make a concept map on hot desert. The students develop ownership of their work by developing their own interpretation.



## PLANNING OF LESSON V

### PART I

**Subject:** Geography

**Class:** VII

**Topic:** Life in the deserts – Cold desert

**Chapter:** Life in the Deserts.

**Teaching learning methods and techniques:** Discussion, Explaining, Question Answer, Drawing.

### PART II

**Objectives:** to enable the child to understand the basic concept of hot desert.

**Learning Resources:** physical map of world, Images, textbook.

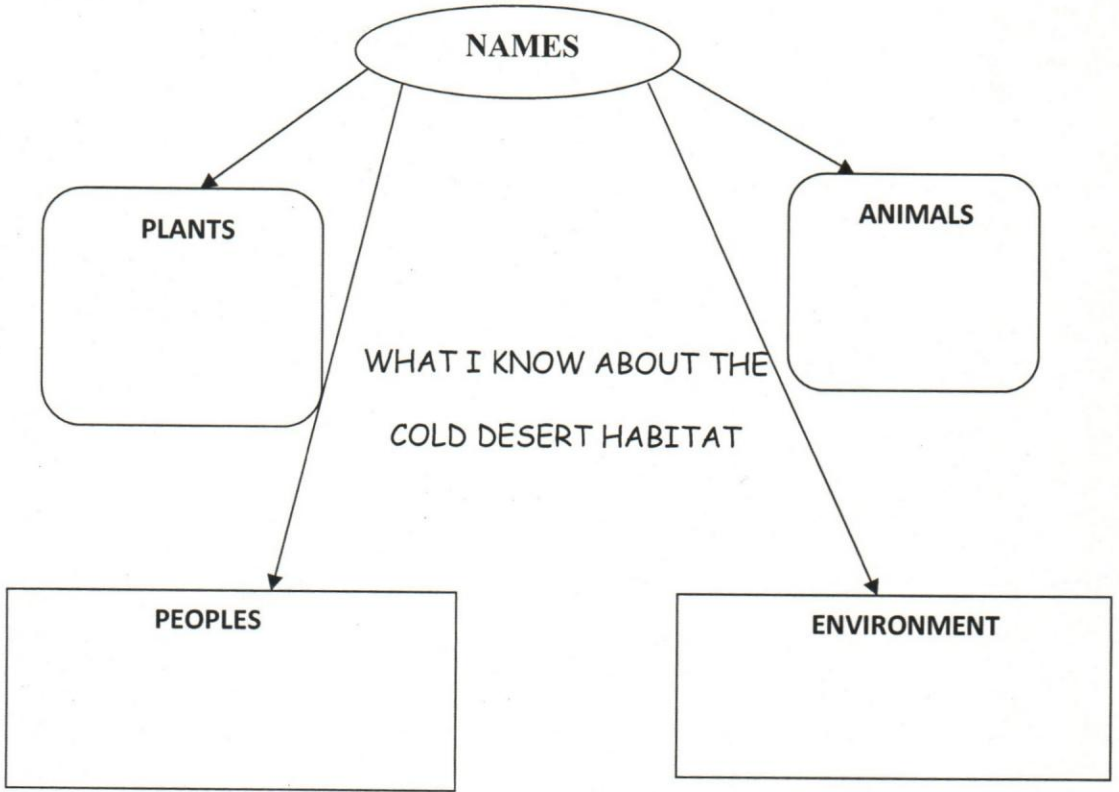
**Teaching Learning Process:**

1. Teacher asks some questions which is related to their real life experiences.
2. After this teacher has divided the class into 6 groups.
3. Teacher asks them how do desert form?
4. Teacher asks students to write the points on their notebook.

### PART III Lesson Report

Students had thought over the question and list out the points on their notebook. Depending on the questions, student discussed with in the groups and list out the points accordingly. All points were discussed in intergroup and then written by the students on blackboard. Teacher asked them try to categorise or make a concept map on hot desert. The students develop ownership of their work by developing their own interpretation.







## **PLANNING OF LESSON VI**

### **PART I**

**Subject: Geography**

**Class: VII**

**Topic: Water**

**Chapter: Water**

**Teaching learning methods and techniques: Discussion, Explaining, Question Answer, Drawing.**

### **PART II**

**Objectives: to enable the child to understand the basic concept of water.**

**Learning Resources: physical map of world, Images, textbook.**

**Teaching Learning Process:**

1. Teacher asks some questions which is related to their real life experiences.
2. After this teacher has divided the class into 6 groups.
3. Teacher asks them when you think of water, what images come to your mind.
4. Teacher asks students to write the points on their notebook.

### **PART III Lesson Report**

Students had thought over the question and list out the points on their notebook. Depending on the questions, student discussed with in the groups and list out the points accordingly like, rivers, waterfalls, rain drops, oceans, drinking water etc. All points were discussed in intergroup and then written by the students on blackboard. Teacher asked them try to categorise. The students develop ownership of their work by developing their own interpretation.

# **PLANNING OF LESSON VII**

## **PART I**

**Subject: Geography**

**Class: VII**

**Topic: human Environment: settlement**

**Chapter: Human Environment- Settlement, Transport, and Communication**

**Teaching learning methods and techniques: Discussion, Explaining, Question Answer, Drawing.**

## **PART II**

**Objectives: to enable the child to understand the basic concept of settlement.**

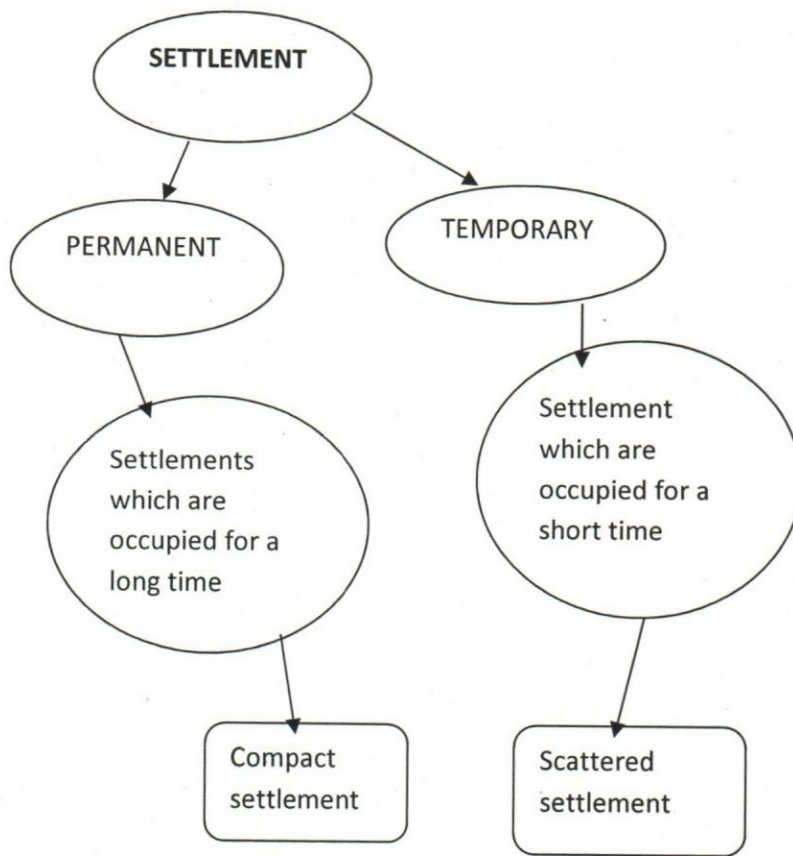
**Learning Resources: physical map of world, Images, textbook.**

**Teaching Learning Process:**

1. Teacher asks some questions which is related to their real life experiences.
2. After this teacher has divided the class into 6 groups.
3. Teacher asks them what you understand by the term settlement.
4. Teacher asks students to write the points on their notebook.

## **PART III Lesson Report**

Teacher told, those earlier human beings depended entirely on nature for food, clothing and shelter; but with the time they learnt new skills to grow food, build homes Students had thought over the question and list out the points on their notebook. Depending on the questions, student discussed with in the groups and list out the points accordingly. All points were discussed in intergroup and then written by the students on blackboard. Teacher asked them try to categorise. The students develop ownership of their work by developing their own interpretation.



## **PLANNING OF LESSON VIII**

### **PART I**

**Subject: Geography**

**Class: VII**

**Topic: human Environment: Transport and Communication.**

**Chapter: Human Environment- Settlement, Transport, and Communication**

**Teaching learning methods and techniques: Discussion, Explaining, Question Answer, Drawing.**

### **PART II**

**Objectives: to enable the child to understand the basic concept of transport and communication.**

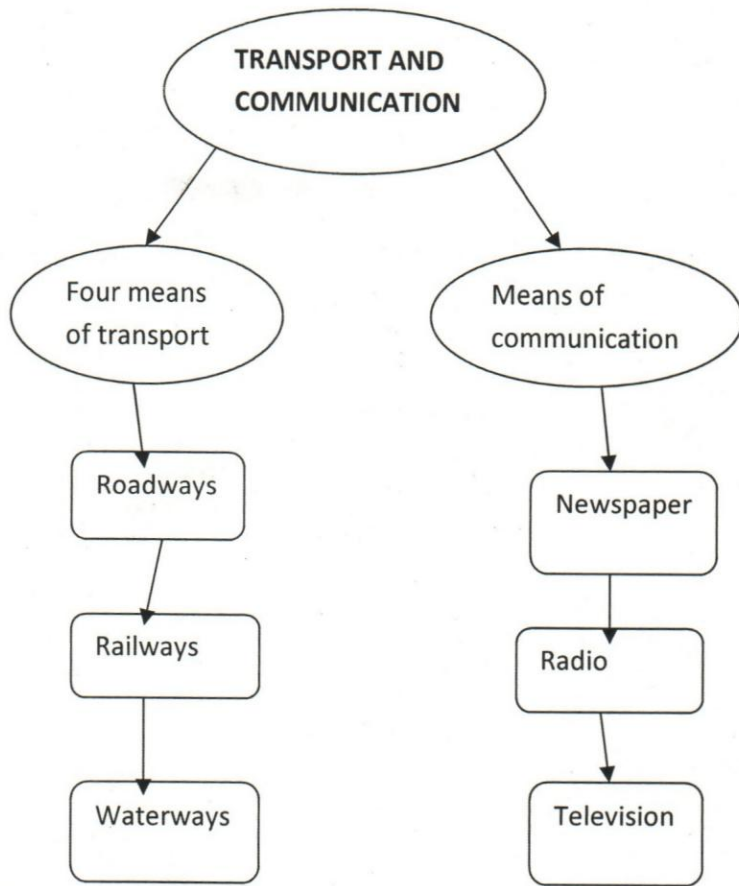
**Learning Resources: physical map of world, Images, textbook.**

**Teaching Learning Process:**

1. Teacher asks some questions which is related to their real life experiences.
2. After this teacher has divided the class into 6 groups.
3. Teacher asks them what you understand by the term settlement.
4. Teacher asks students to write the points on their notebook.

### **PART III Lesson Report**

Teacher told, those earlier human beings depended entirely on nature for food, clothing and shelter; but with the time they learnt new skills to grow food, build homes Students had thought over the question and list out the points on their notebook. Depending on the questions, student discussed with in the groups and list out the points accordingly. All points were discussed in intergroup and then written by the students on blackboard. Teacher asked them try to categorise. The students develop ownership of their work by developing their own interpretation.



## PLANNING OF LESSON X

### PART I

**Subject: Geography**

**Class: VII**

**Topic: Globe: Latitude**

**Chapter: Globe: Latitude and Longitude**



**Teaching learning methods and techniques: Discussion, Explaining, Question Answer, Drawing.**

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### PART II

**Objectives: to enable the child to understand the basic concept of settlement.**

**Learning Resources: video clipping, world physical map, textbook.**

#### Teaching Learning Process

1. Teacher asks the students to observe the video clipping carefully.
2. After this teacher has divided the class into 6 groups.
3. Teacher asks them to discuss what they have observed in the video clipping and list out them.
4. In between teacher asked some questions to test their previous knowledge.
5. Teacher asks students to write the points on their notebook.

### PART III Lesson Report

Students had observed the video clipping based on topic carefully. Depending on the observation student discussed with in the groups and list out the points accordingly. Teacher asks questions what you understand the term latitude and longitude? What is the latitude of equator? All questions were discussed in intergroup and then written by the students on blackboard. Teacher asked them try to categorise or make a concept map on our changing earth. The students develop ownership of their work by developing their own interpretation