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## Lack of Understanding of the Inscrutability of the Movement and the Collision of the Earth Plates Leading to the Formation of Himalayas in the Subject Geography among the Pupils of Class 8: An Action Research

**Dr. Amit Kumar**

Assistant Professor  
Department of Education  
Manyawar Kanshiram Government Degree College  
Farrukhabad U.P.  
Email:- [dramit2you@gmail.com](mailto:dramit2you@gmail.com)

### **Abstract:**

*In the teaching of geography subject at secondary level, the teachers mostly feel this problem that students do not easily understand the principle that works in the formation of Himalayas. In the present action research, this problem has been identified through research and prepared a lesson plan through Constructivist approach for its solution. Results and suggestions of the present study will definitely be useful for teachers, parents and students.*

**Key Words:** Lack of Understanding, Inscrutability, Collision of the Earth Plates, Formation of Himalayas.

The teacher gets an opportunity to teach Geography to class 8. In the beginning stage of a classroom teaching when many ideas and concepts of the students related to the theory were unclear and thoughts need to be solidified. Teacher discovered this particular problem by making a set of questions on the topic Formation of Himalayas. The main problem in class 8 was that some students fall more and more being in understanding the concept of the formation of Himalayas. These specific students have been identified some learning difficulties.

During classroom teaching for around 3 to 4 days teacher asked students and taking a classroom teaching session about the formation of Himalayas he found that 15 to 20 students in a class whose strengths of 30 students could not follow or grasp the real sense of the theory of formation of Himalayas. They would either misunderstand the concept or mug up the whole theory and would write in a bookish language rather than explaining it in their own words. Students were uninformed and were blindly and insensibly following the theories written on the books without interpreting and applying the theories. As a teacher of Geography any theory is foremost and paramount, I gave emphasis in clearing and solidifying the concept related to the theory of the formation of Himalayas to the students of class 8.

#### Data of Pre-test:

Sr.No	Scores in C.I	Tally	Frequency
7	30-34	-	0
6	25-29	-	0
5	20-24	-	0
4	15-19	-	0
3	10-14		4
2	5-9		9
1	0-4		17

#### Need and Justification of the study:

Geography has a goal i.e. to understand and explain the real world phenomena. Although geography is 'short on theories and long on facts', yet development of any theory seems to be vital both to satisfactory explanations and to the identification of geography as an independent field of study. The development of any theory in geography is at the heart of all explanations. Theories represent generalizations used for explanations. They can make precise predictions. It presents a systematic way of understanding events, behaviors and situations.

Students should be able to understand and perceive the explicit gist of the theory of teacher then only they would be able to the notion related to the theory.

If students don't understand the real sense of theory they would fall behind and would lack knowledge. Students would not understand the nature and importance of geography. They would lack the understanding of geographical theories. They would lack communication and understanding when talking about the natural phenomena.

**Need of the problem:**

- Enables the pupils to acquire knowledge of formation of Himalayas.
- To help the pupils to acquire knowledge of their physical environment.
- To develop in them an understanding of basic concepts, principles and theories related to geographical phenomena.
- To develop the power of thinking, reasoning, memory and power of imagination of pupils.
- To develop their ability to draw conclusion and to generalize nature and importance of geography.

**Importance of the problem:**

- To understand the basic physical system that affect life.
- To learn the location of places and the physical and cultural characteristics of those places in order to function more effectively.
- To understand the geography of past times and how the theories has played the important role in the evolution of people, places and environment.
- To develop a mental map of our communities provinces or territory or country and the world so that we can understand the where we live.
- To recognize spatial distributions at all scales- local and worldwide in order to understand the complete connectivity of people and places.
- To explain how the processes of human and physical systems have changed the surface of the earth.

**Statement of the problem:**

Lack of comprehending the concept of merging and collision of earth plates leading to the evolution of Himalayas and which will not only enrich the subject Geography but will aid to comprehend the concept of the evolution of Natural features and also induce the spirit of enquiry towards the formation of Natural phenomena among the pupils of class 8.

**Objectives of the study:**

1. To detect the probable causes of the problem.

2. To compose a lesson plan through constructivist approach in order to subside the causes of the problem.
3. To execute a lesson plan through constructivist approach in order to subside the causes of the problem.
4. To make students comprehend the concept of the evolution of the natural features though implementing the pre-defined tools and techniques.
5. To facilitate the subject knowledge of students by illustrating the concept of the formation of Himalayas through different teaching strategies.
6. To include the spirit of enquiry among the pupils by captivating their interest and attention.

**Type of the Research:** Action research

**Tools used:**

- Observation
- Pre-test (MCQs & answer in one word ) with 15 questions.
- Post-test (MCQs & answer in one word ) with 15 questions.

**Action Hypothesis**

1. A constructivist lesson plan will help in subsiding the probable causes of the problem.
2. After the execution of a constructivist lesson plan methodically, the pupils will comprehend the theory of the formation of Himalayas analytically.
3. Implementing the pre-defined tools and techniques by the student teacher will have the beneficial effect in comprehending the concept of the theory of evolution of Natural features extensively.
4. After the theory is taught through PPT/video presentation, pupils will conceptualize the theory of evolution of Himalayas evidently.

**Action Program (Design for testing Hypothesis )**

**Objective 1 :** To detect the probable causes of the problem.

**Probable causes of the problem:**

**Causes related to Students:**

- Lack the state of being fully prepared before the classroom teaching.
- Literature and its terminology too complex to comprehend by the pupils.
- Underestimate the utility of the subject Geography by the pupils.

- Engage in loose talk while sitting at the back in the classroom.
- Non-attentiveness, daydreaming, and idleness during the classroom teaching.

#### **Causes related to Teachers:**

- Inadequate motivation provided to the pupils.
- No proper supervision of Home Assignments by the teachers.
- Following monotonous traditional approach of teaching which causes boredom/apathy among the pupils.
- Weightage being given to other subjects such as science and mathematics.
- Restricted use of TLM.
- Poor usage of Analogy / Examples.

#### **Causes related to Parents:**

- Parental expectation of opting science or commerce stream on the behalf of their children.
- Parents try to avoid PTM which would rather help in being familiar with their child's grades, test scores, home assignments and conduct.

#### **Causes related to classroom:**

- Lack of proper seating arrangements leading to the formation of clique inside the classroom.
- Lack of ventilation and frequent power cuts.
- Poor condition of the Blackboard.
- Very limited availability of wall charts, globes, models, maps, and other teaching-learning material which are used while teaching the subject Geography.

### **Analysis of the causes of the problem**

#### **Causes related to Students**

<b>Sr.No.</b>	<b>Causes</b>	<b>Evidences</b>	<b>Nature</b>	<b>Control</b>
1	Lack the state of being fully prepared before the Classroom teaching.	Questionnaire	Fact	Under control
2	Literature and its terminology too complex to comprehend by the pupils.	Observation	Conjecture	Under control

3	Underestimate the utility of the subject Geography by the pupils.	Questionnaire	Fact	Beyond control
4	Engage in loose talk while sitting at the back in the classroom.	Observation	Conjecture	Under control
5	Nonattentiveness, daydreaming, and idleness during the classroom teaching.	Observation	Conjecture	Under control

### Causes related to Teachers

Sr.No.	Causes	Evidences	Nature	Control
1	Inadequate motivation provided to the pupils.	Teacher experience	Conjecture	Beyond control
2	No proper supervision of Home Assignments by the teachers.	Questionnaire	Fact	Beyond control
3	Following monotonous traditional approach of teaching which causes boredom/apathy among the pupils.	Questionnaire	Fact	Under control
4	Weightage being given to other subjects such as science and mathematics	Teacher experience	Conjecture	Beyond control
5	Restricted use of TLM.	Observation	Conjecture	Under control
6	Poor usage of Analogy/Examples.	Observation	Conjecture	Under control

### Causes related to Parents

Sr.No.	Causes	Evidences	Nature	Control
1	Parental expectation of opting science or commerce stream on the behalf of their children.	Teacher experience	Conjecture	Beyond control
2	Parents try to avoid PTM which would rather help in being familiar with their child's grades, test scores, home assignments and conduct.	Teacher experience	Fact	Beyond control

### Causes related to Classroom

Sr.No.	Causes	Evidences	Nature	Control
1	Lack of proper seating arrangements leading to the formation of clique inside the classroom.	Observation	Fact	Under control
2	Lack of ventilation and frequent power cuts.	Observation	Fact	Beyond control
3	Poor condition of the Blackboard.	Observation	Fact	Under control
4	Very limited availability of wall charts, globes, models, maps, and other teaching-learning material which are used while teaching the subject Geography	Observation	Fact	Under control

**Objective 2:** To compose a lesson plan through constructivist approach in order to subside the causes of the problem.

**Hypothesis :** A **constructivist lesson plan** will help in subsiding the probable causes of the problem.

Sr.No.	Proposed Action	Method	Tool	Duration	Proposed Behavioral Change
1	Student teacher composed a constructivist lesson plan	Activity method, question-answer method, lectures cum demonstration method.	Lesson plan through Constructivist approach	1 day	Students were provided learning experiences and opportunities and thus started thinking through problems and find solutions.

**Objective 3:** To execute a lesson plan through constructivist approach in order to subside the causes of the problem.

**Hypothesis:** After the execution of a **constructivist lesson plan** methodically, the pupils will comprehend the theory of the formation of Himalayas analytically.

Sr.No.	Proposed Action	Method	Tool	Duration	Proposed Behavioral Change
1	A lesson plan through constructivist approach was executed or performed which was developed before an affective teaching-learning started.	Activity method, question-answer method, lectures cum demonstration method	Lesson plan through Constructivist approach	4 days	Students started performing the activities, started connecting with prior learning, and started participating in the discussion which was controlled by the student teacher.



**Objective 4:** To make students comprehend the concept of the evolution of the natural features through implementing the pre-defined tools and techniques.

**Hypothesis:** Implementing the **pre-defined tools and techniques** by the student teacher will have the beneficial effect in comprehending the concept of the theory of evolution of Natural features extensively.

Sr.No.	Proposed Action	Method	Tool	Duration	Proposed Behavioral Change
1	Implementation of the pre-defined tools and techniques by the student teacher during an effective teaching-learning process.	Activity method, question-answer method, lectures cum demonstration method	Teaching Learning Material (TLM) i.e. study material, power point presentation.	4 days	Tools and techniques enhanced the learning by providing better understanding of the topic. Slides with pictures, flow charts and video clips made the topic more attractive. It improved the spontaneity and interactivity among students. Study material provided by the student teacher was understandable thus students could read and comprehend the given literature more effortlessly.

**Objective 5:** To facilitate the subject knowledge of students by illustrating the concept of the formation of Himalayas through different teaching aids (charts, power point presentation.)

**Hypothesis:** After the theory is taught through **PPT/video presentation**, pupils will conceptualize (visualize) the theory of evolution of Himalayas evidently.

Sr.No.	Proposed Action	Method	Tool	Duration	Proposed Behavioral Change
1	An effective power point presentation was developed by the student-teacher before the teaching-learning process started.	Lecture cum demonstration method	Power point presentation	1 day	<p>After watching the PPT on the evolution of Himalayas, pupils were able to visualize the concept minutely and were able to provide answers in their own words.</p> <p>There was an upgradation in their knowledge related to the theory of formation of Himalayas. Now they knew the real causes and factors which lead to the formation of Himalayas. Ambiguity which prevailed in the beginning had been lessening down to an extent.</p>

**Objective 6:** To induce the spirit of enquiry among the pupils by captivating their interest and attention.

**Hypothesis:** As the teaching-learning approach alters from traditional to innovative, pupils will be more attentive and curious during the teaching-learning activity.

Sr.no	Proposed Action	Method	Tool	Duration	Proposed Behavioral Change
1	<p>An effective power point presentation was developed by the student-teacher before the teaching-learning process started.</p> <p>A lesson plan through constructivist approach was executed or performed which was developed before an affective teaching-learning started</p>	<p>Lecture cum demonstration method.</p> <p>Activity method, question-answer method, lectures cum demonstration method</p>	<p>Power point presentation(PPT)</p>	<p>4 days</p>	<p>There was a feeling of wanting to know or learn about the formation of Himalayas.</p> <p>Students' behavior revealed an inquisitive mind towards the concept of the formation of Himalayas.</p> <p>Students were keenly observing the slides as they became very interested which lead them to follow the content matter very attentively. They became very focus and thus, avoided loose talk at the back.</p>

## Evaluation of Research Design and Data representation.

### Pre-test Table:

Sr.No	Scores in C.I	Tally	Frequency
7	30-34	-	0
6	25-29	-	0
5	20-24	-	0
4	15-19	-	0
3	10-14		4
2	5-9		9
1	0-4		17

### Post-test table:

Sr.no.	Scores in C.I	Tally	Frequency
7	30-34	1	I
6	25-29	2	II
5	20-24	3	III
4	15-19	10	IIII IIII
3	10-14	5	IIII
2	5-9	3	III
1	0-4	2	II

### Result:

Pre -condition	Post- condition	Remaining
26/30*100	24/26*100	
= 87%	= 92%	= 8%

### Interpretation of the Result

#### Pre-test condition:

*“A preliminary test administered to determine a students’ baseline knowledge or preparedness for an educational experiences or course of study”*

The test was conducted over 30 students of **class 8** . The total marks of the test were 30, out of which 12 was the highest. Out of 30 students, 17 have got 0-4 marks, 9 students have got marks between 5-9 and only 4 students have got marks from 10-12.

This was the **pretest condition** in which the pupil teacher had given the test sheets to 30 students and asked questions over the **Formation of Himalayas**. 12 out of 30 marks were the highest in the class of 30 students. Scores were divided according a Class Interval of 5. Tally and Frequency were written down. Students have got marks between 10-14 of C.I which was the highest out of 30. This might be due to their previous knowledge on the topic Formation of Himalayas which had given to them from their respective Geography teacher or this might be due to their inclined interest for the subject Geography or they might have been the intelligent students of the class or they might have practiced this topic earlier due to their keen interest in the subject Geography.

#### **Post-test condition:**

*“Post-test is a test given to students after completion of an instructional procedure and often used in conjunction with a pre-test to measure their achievement and the effectiveness of the Teaching – Learning session.”*

This was the **Post-test condition**. A test was given to students of **class 8** after completion of an effective classroom teaching. This test was conducted after an effective classroom teaching happened on the topic **Formation of Himalayas**. This test was also conducted on the same number of students. The total marks of the test were 30, out of which only 1 student was able to score the highest marks i.e. 30 out of 30. 2 students had obtained a score between 25-29, 3 students had obtained a score between 20-24, 10 students had obtained a score between 15-19, 5 students had got a score between 10-14, 3 students had obtained a core between 5-9 and in the end only 2 students had underperformed i.e. they obtained a score between 0-4. *This low score might have been due to their lack of enthusiasm for studying the subject Geography or there might be due to lack of focus during the effective classroom teaching or these children might not have been very intellectual in studies.*

#### **Conclusion:**

Action Research uses data collection based on either quantitative or qualitative methods or both. However, it differs in that action research addresses a specific, practical issue and seeks

to obtain solutions to a problem. This, action research designs are systematic procedures done by teachers or other individuals in an educational setting) to gather information about, and subsequently improve, the ways their particular educational setting operates, their teaching, and their student learning. Educators aim to improve the practice of education by studying issues for problems they face. Educators reflect about their problems, collect and analyze data, and implement changes based on their findings. In some cases, researchers address a local, practical problem, such as a classroom issue for a teacher. In other situations, researchers seek to empower, transform, and emancipate individuals from situations that constrain their self-development and self-determination.

### Suggestions:

#### Suggestions for students:

- Create a **study plan** for all the theories in the subject Geography.
- **Prior revision** is required of the theory before the next class starts.
- Learn to write the main points of the theory in your **own simple language**.
- **Clear all the doubts** which come across while understanding the theory.
- Get a proper **on-time feedback** from your respective Geography teacher related to the concept of the theory.
- **Test yourself** in order to know how much you understood the theory.
- Read and re-read the theory and make important **keywords**.
- **Participate in class discussion** while the teacher asks some questions related to the theories which are there in the subject Geography.
- Try to form an **intrinsic motivation** in order to build interest in the theory.
- **Focus and don't indulge yourself in loose talk** while the teacher teaches the theory of Formation of Himalayas in the classroom.

#### Suggestions for teachers:

- **Proper lesson plan** is needed before any Geography theory to start.
- Clear the **goals and purpose** explicitly before any Geography theory to start.
- Bring **novelty** in your teaching especially while teaching significant theories of Geography.
- Use positive competition inside the classroom for an effective teaching-learning session.

- Taking **revision** of theory which was taught in the previous classroom teaching is important in order to make them comprehend the theory more effectively.
- Promote working with their peer by giving them **group assignment** before and after any theory to start in the subject Geography.
- Usage of **technology** must be included. Digital tools aid students to comprehend the topic better and also have a fun element to learning.
- **Class discussion** is paramount for an effective classroom teaching especially while teaching students the theory in the subject Geography.
- Solicit **feedback** is important after the completion of any topic in the subject Geography from students in order to improve teaching.
- Give **praise** when earned. It energizes, directs and sustains the classroom teaching.
- Harness student's **interest** before and after any topic is dealt in the subject Geography.
- **Track progress** of all the students for an effective classroom teaching.
- Usage of **analogy** is significant so that students can comprehend and effectively communicate difficult concepts.

#### Suggestions for parents:

- Send your child to school in the state of **ready to learn**.
- Children whose parents help them at home and stay in touch with the school **score higher** than children of similar aptitude and family background whose parents are not involved. Students' score improved dramatically when parents are called in to help.
- Make **time - table** to talk about the subject Geography and its important topics.
- Decorate your child's room with a large **map of the Mountain Ranges of the Himalayas**.
- **Parent's – teacher conference** is another way to stay informed.
- Support your child's **homework** in the subject Geography.

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