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Structure and Testing of Branch Orbital Study Materials on Standard XI 'Earthquake and Volcano' Unit.

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A B S T R A C T

The present research was conducted on the subject of the 'Earthquake and Volcano' unit of Standard 11. The whole work was carried out on three objectives and two hypotheses. In which pre-test, post-test, experimental group controlled group schemes were used as research methods. As a sample, a total of 10 students of Std. 11 of Shri KC Kothari Higher Secondary School, Surat were selected for study by purposeful sampling method. Instruments such as target testing and branching orbital studies were used. Thus, it was found that the education imparted by the departmental orbital study is more effective than the education imparted by the conventional method of classroom.

Introduction

There are two main types of orbital study: (1) linear orbital study (2) branched orbital study. In linear orbital study, Professor B. F. Skinner has been an important contributor. Its main feature is to solve the confusing situation in stages by small steps. The pioneer of disciplinary orbital study is Kauder, hence it is also called the Kaunderian program. Its main feature is that every student can get instructive content and move forward by making the least

mistake. The main peculiarity of the branched orbital study is that it has a therapeutic structure.

For the present research study, the researcher has selected a branch orbital study and structured and tested it.

Problem statement

"Structure and testing of branch orbital Study Materials on Std-11 'Earthquake and Volcano' Unit"

Objectives of research

1. To structure the branch orbital study on the 'Earthquake and Volcano' unit of Std-11.

2. Evaluate the effectiveness of the prepared branch rotation study.

3. To make a comparative study of the education given by the prepared methodological orbital study and the conventional method.

Hypothesis

1. There is a significant difference in the average scores obtained by the students before and after the classical orbital study.

2. There is a significant difference between the average scores obtained on the basis of a higher test for the systematic study and the conventional method.

Research Methods

Pre-test, post-test, experimental group controlled group scheme was used as a research method.

Sample

A total of 10 students of Std. 11 of Shri KC Kothari Higher Secondary School, Surat were selected for study by purposeful sampling method.

Tools

Tools such as target tests and branch rotation studies based on the 'Earthquake and Volcanoes' unit of the Std-11 history subject were used.

Analyzing and interpreting information

The two groups were first equated on the basis of average pre-test scores.

Table-1

Average difference between pre-test and post-test scores

in the experimental group

	Pre-test	**Post Test**	**'t' value**
Number	**45**	**45**	**28.66 ***
Mean	**36**	**62**	
Standard Deviation	**2.24**	**14.7**	
Correlation Number	**0.521**		

0.01* Significance level

From the table above, it can be seen that the value of 't' is significant at the level of 0.01. Hence Hypothesis-1 is accepted.

Table-2

Comparison of average scores of experimental and controlled group Post test

	Experimental Group	**Controlled Group**	**'t' value**
Number	**45**	**45**	**3.52 ***

Average	**62**	**49.8**	
Standard Deviation	**14.7**	**18.42**	

***Significance at 0.01 level**

From the table above, it can be seen that the value of 't' is significant at the level of 0.01. Hence Hypothesis - 2 is accepted.

The main findings

1. Students have been able to study effectively on the 'Earthquake and Volcanoes' unit through the orbital Study. For the experimental group, the average scores on the Post Test and post Test were 4.50 and 9, respectively. The difference between the two averages is 6.50 which is indicative at the level of 0.01 and 0.05. Thus Hypothesis-1 is accepted and the effectiveness of the branched study is proved.

2. The average scores of the experimental group and the control group on the Posttest were 9 and 8.30, respectively. Their average difference was 19.50. Which is indicative at the level of 0.01 and 0.05. Thus the education imparted by the branch-oriented study can be said to be more effective than the education imparted by the conventional method of classroom.

Educational Implications

The approaches on various topics have proved their effectiveness by climbing / checking the ladder of research. The research presented in that research standard adds a small but important bead. This result gives new impetus to the recommendation to teach and test a branch-oriented study to teach an abstract and complex unit such as Earthquake and Volcano. For a large, developing country like India, in a situation where good teachers cannot reach deeper areas, a self-interested approach like branch-oriented study can cater to the teacher. And so the NCERT. Such initiatives should be developed by the State Shikshan Bhavan and propagated and disseminated on a large scale in past.

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