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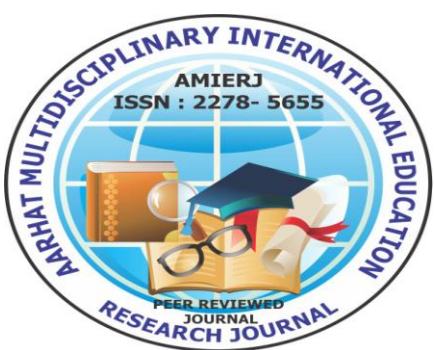
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USE OF CONSTRUCTIVISM IN SCIENCE TEACHING

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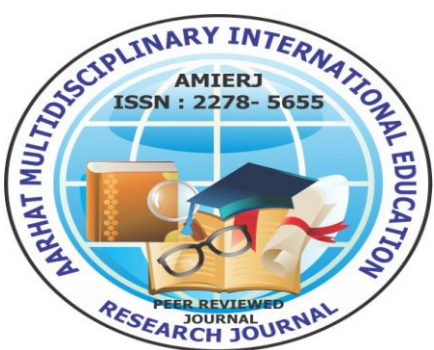
Abstract

Constructivism is newly invented strategy used in learning process. It imparts that no one can teach other, everyone generate its own knowledge depending on his or her previous knowledge and the role of teacher is only as a guide of learning situations. It helps learners to construct his own knowledge by doing some activities with collaboration, making spot decision, using high level thinking skills and own creativity. This research's objective is to study the effectiveness of constructivism by comparing it with traditional method. Experimental method used for comparison. 60 students of div. 'A' and 'B' of Eights standard of S.V.J high school in Mumbai were selected as a sample in academic year 2013-2014. Division 'A' students selected as experimental group and division 'B' students selected as a control group at random. Pre-test and post test design with control group implemented. The data interpreted with the help of statistics.

Key words: *Constructivism, Achievement, Science*

Introduction:

Constructivism is a way to acquire knowledge actively by doing activity. In this process, learning theories like co-operative learning, problem based learning, project based learning are used. Teacher in constructivist classroom is to organize information around big ideas that engage the learners to do activity to construct their own knowledge using various learning theories. Further teacher assists learners in developing new sights by connecting theme with previous



knowledge and the learner do his own activity, own experiments make their own analogies and come their own conclusions. Traditional method is nothing but the lecture method in which teacher explains the content and student listens carefully passively, here in this method teacher is active and there is no scope for student's activity.

Objectives:

1. To study the effect of constructivist approach on the learning achievement of 8th std. students.
2. To study the effect of traditional method on the learning achievement of 8th std. students.

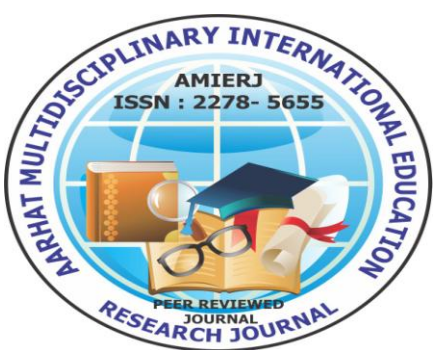
Hypothesis:

There is no significant difference between constructivist approach and traditional method on the learning achievement in 8th std. students achievement concern.

Research method:

Two divisions of 8th std. were selected. Div. 'B' students were selected as experimental group and Div 'A' students were selected as control group. After pre-testing, it was started to teach lessons.

The students in experimental group were encouraged to make them to be active and responsible in learning, they suggested doing learning activities and these activities related to learning approaches like cooperative learning, problem based learning and project based learning. They were encouraged to do research by teacher. These activities aimed to give high level thinking to pupils. During teaching to this group avoided to use black board purposefully. During the learning students were brought power point presentation and videos, students applied and prepared the activities related to the content such as projects, models, do experiments, concept maps and puzzles. They formulated their opinions and created discussion groups. By using such activities with high level thinking skill and creativity students prepared their own knowledge.



The students in controlled group taught by traditional method in which teacher was active. Teacher explained the content with the help of black board. Students were only passive listener in this process. Finally teacher answered the student's questions and the content was finished.

Sample:

80 students in 8th std. students 40 for experimental group and 40 for control group were selected.

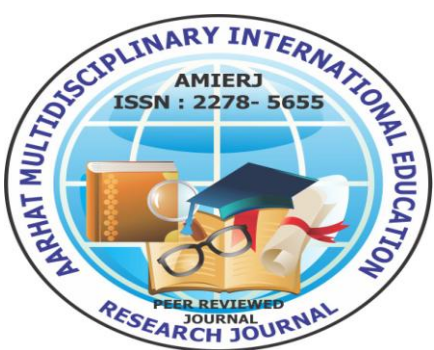
Tool:

Achievement test: the researcher prepared it and it implemented as pretest and post test, 28 items implemented in the research and the items are four choices. Each correct answer was given 1 mark and each wrong answer was given 0 marks in the achievement test.

Result and discussion:

SR. NO.	Groups	Mean	S.D.	't'	Significance level
1	Controlled group	504.37	98.61	5.20	0.01
2	Experimental group	609.72	81.45		

As seen on the above table, the total mean value post- test grades are 609.72 for experimental group; 504.37 is the control group. In order to determine the level of significance of the difference between the mean values of the total post grades for the experimental and control groups was applied by using statistical methods of analysis.



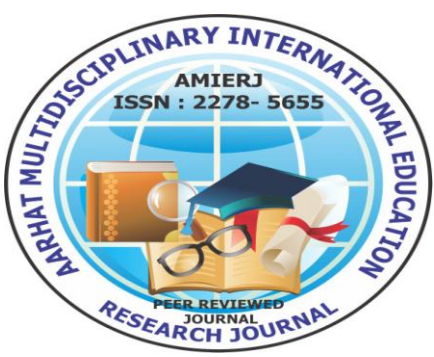
The 't' value was found 5.20 which is significant at 0.05 level with 58 degree of freedom. According to the data, it may be said that there is a significant difference in the mean values of difference between pre-test and post-test grades of the experimental and the control groups and the Constructivist learning approach is more efficient than the conventional approach.

Conclusion:

These results proved that constructivist-learning approach is more effective than traditional approach.

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