



EFFECTIVENESS OF INTERACTIVE STRATEGIES ON ACHIEVEMENT OF TEACHER TRAINEES OF B.ED. IN SCIENCE PEDAGOGY

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Abstract

Science has made a tremendous impact on the cultural life of the present day society which is a product of science. The thinking, feeling and action of modern man are practically guided by the effect of science. An attempt is being made to assess an existing status regarding the use of Interactive Strategies as well as to develop the program of Interactive Strategies and find out the effectiveness on the achievement of Teacher Trainees of B.Ed. of Science. The objective of the research to develop interactive classroom teaching program and find its effectiveness on achievement of Teacher Trainees of B.Ed. of Science. Multi-method research was adopted, by using survey method, researcher assess the existing status regarding the use of Interactive Strategies. Researcher developed interactive classroom teaching program for Science subject of B.Ed. students. Researcher used Experimental method with equivalent group design and conducted pre and posttest. Data analyzed using t test after normality test were conducting using SPSS program.so study concluded that researcher developed program of Interactive Strategies is useful to improve the achievement of Teacher Trainees of B.Ed. of Science.

Keywords: *Interactive strategies, science pedagogy.*



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INTRODUCTION:-

Science has made a tremendous impact on the cultural life of the present day society which is a product of science. The thinking, feeling and action of modern man are practically guided by the effect of science. Science is one of those human activities that man has created to gratify certain human needs and desires. Curiosity has been the greatest motive power of scientific research. Therefore it's necessary to develop the scientific attitude and interest today, hence it is essential to conduct various programs for practical experiences as to investigate the scientific attitude and interest among the students and lead to development of scientific attitude and scientific interest

The main aim of education, as we know is to produce the desired changes in the behavior of the children, and when those changes have taken place, we say that the child has learnt. Woodworth (1954) defined learning as the process of acquiring new knowledge and new

responses. It is, undoubtedly, right to say that learning is wealth to poor, an honor to rich, an aid to the young and a support and comfort to the aged.

REVIEW OF RELATED LITERATURE:-

A study entitled 'Development of a Strategy for Integration of Skills in Teacher Training' by Ekbote (1987) conducted research on 1. To develop a strategy for integrating the teaching skills acquired through micro-teaching practice. 2. To study the effectiveness of the integration strategy in relation to the following variables pertaining to the student-teacher's a) Qualification b) Teaching Experience c) Academic Achievement d) Skill Comprehension e) Availability of Study Timing f) Attitude towards Teaching and g) Attitude towards Micro-teaching. The results of the study were: 1. the integration strategy was found effective in term of the improvement it made in the student-teacher's performance in classroom teaching. 2. All the seven variables pertaining to the student-teachers; viz qualification, teaching experience, availability of study time, academic achievement, skill comprehension, attitude towards teaching, attitude towards micro-teaching influenced improvement in classroom teaching performance through the strategy.

Pathak, S. (1999). Conducted research on study effectiveness of CAM with reference to achievements in concepts of slow learner, and it is found that CAM was effective teaching learning strategy & also MTM teaching – learning strategy found an effective.

Researcher Momin, (2007) studied the 'Effect of Audio-Visual Aids on the Achievement of IX Std Students in History Subject'. The tools were achievement Test, t test, Interview, Questionnaire, Percentage and Pearson's Product Moment Correlation Co-efficiency (R) the major finding was that was found that the achievement of control group is less than experimental group. It is clear that the effect of audio-visual aids is better than traditional method of teaching.

The study entitled 'Development of Activity Based Program on Creativity and testing of its Effectiveness' by Behdarvand, (2010) was focused on to find out the existing level of students in creative thinking, to develop an activity based program on creating for pupils of standard VII and the effectiveness of the program in developing creativity among pupils of standard vii. The outcomes were the program developed by the researcher had a significant effect on creative thinking of the student and the improvement of the imagination and novelty of idea of students.

Paul, N. (2010) conducted research on the effectiveness of concept attainment concept formation model of teaching for science to VII standard of English medium school of Pune
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city. Survey & experimental method of research was used. It was found that concept attainment & concept formation model are more effective than tradition method.

STATEMENT OF THE PROBLEM:

To assess an existing status regarding the use of Interactive Strategies as well as to develop the program of Interactive Strategies and find out the effectiveness on the achievement of Teacher Trainees of B.Ed. in Science Pedagogy.

OBJECTIVE OF THE STUDY:-

1. To assess the existing status regarding the use of Interactive Strategies by Teacher Educators in B.Ed. of Science Pedagogy.
2. To develop a program based on Interactive Strategies for the Teacher Trainees of B.Ed. in Science pedagogy.
3. To find out the effectiveness of Interactive Strategies for the Teacher Trainees of B.Ed. in Science pedagogy.

HYPOTHESIS:-

1. Research Hypothesis (H_1):

There is a difference between the mean scores of Teacher Trainees of Experimental and Control Group on the post test.

2. Null Hypothesis (H_0):

There is no significant difference between the mean scores of Teacher Trainees of Experimental and Control Group on the post test.

ASSUMPTION:-

1. Individuals can create meaning when they interact with each other and with the environment they live in. (Kim, 2001).
2. The integration strategy is an effective in term of the improvement it made in the student-teacher's performance in classroom teaching. (Ekbote, 1987).

SCOPE, LIMITATION AND DELIMITATION:-

SCOPE: -

1. The research is conducted in Maharashtra State.
2. This study is related to B.Ed. Science subject trainee.

LIMITATION:-

1. The attitude, interest and fatigue of Teacher and students are beyond the control of researcher.

2. The Teacher and students who were present at the time of data collection are included in the study.

DELIMITATIONS:-

1. This survey is delimited to the B.Ed. students of science pedagogy
2. Only two training colleges from Pune district are included in the Experiment.
3. The research study includes only Marathi Medium School.
4. This study is delimited to the use of Interactive classroom teaching program.
5. Only Four units of Science from syllabus are taken into account to frame the program.

PLAN AND PROCEDURE OF STUDY:-

The present study is based on Applied Research and Multi method was used. In survey research 48 Science Teacher Educators selected as a sample, sample selected as purposive sample method, Researcher made Questionnaire used as tool of data collection. Interactive classroom teaching program developed by Researcher. Developed Interactive classroom teaching program implemented on 60 teacher trainee of Science. Researcher used equivalent group design for Experiment.

DATA ANALYSIS:-

In the present study survey study data analyzed using percentage. For the experimental study descriptive and inferential analysis used. Mean, media and mode, Standard deviation calculated. T-test' used to determine the difference between pretest and posttest scores in science pedagogy of experimental group after normality test were conducting using SPSS program.

HYPOTHESIS TESTING:-

Table No: 01 Two sample T test for posttest of Experimental and control group

Group	N	Mean	S.D.	df value	Paired T-value	Decision
Control	30	20.70	4.419	29	62.79	Significant
Experimental	30	31	2.704			

Observations:

The result of the experiment shows the t value of Experimental group is 62.79 and t value of Control Group is 25.65 at 0.5 level. It reflects that there were a significant difference between the achievement of Teacher Trainees of Experimental and Control Group after the implementation of the Program of Interactive Strategies.

Hence the Null Hypothesis is rejected and therefore the Research Hypothesis is accepted i.e. ‘There is a difference between the mean scores of Teacher Trainees of Experimental and Control Group on the post test.

COMPARISION OF MEAN VALUES:-

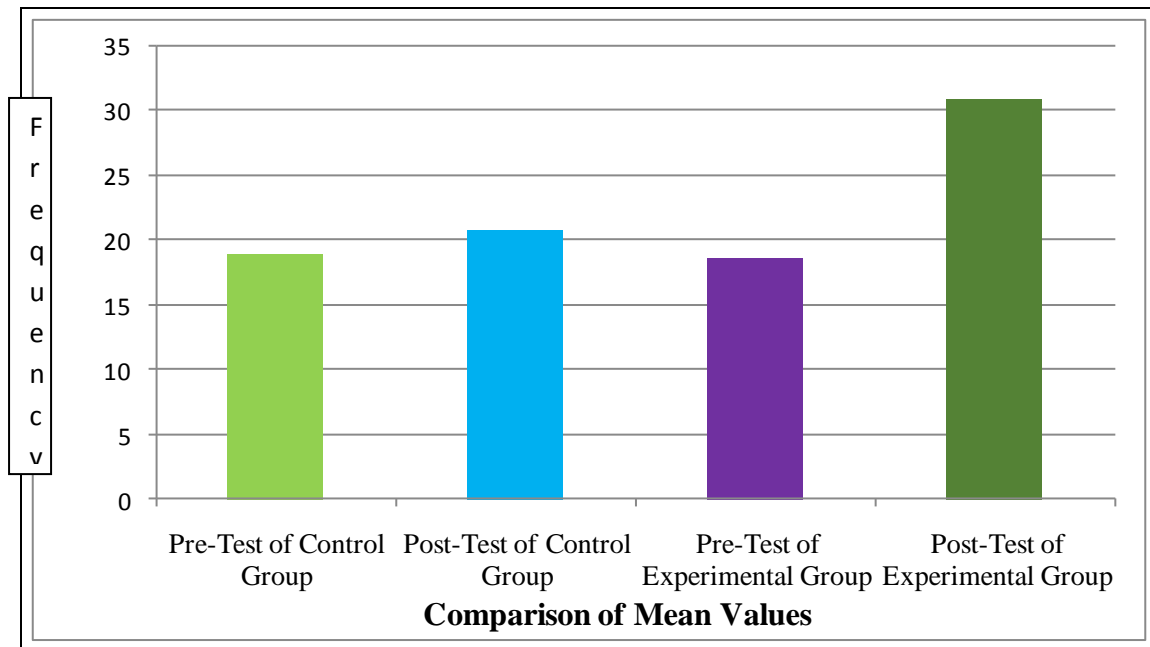


Fig: 1. Comparisons of Mean Values.

The above figure shows that the achievement of Teacher Trainees of Experimental Group was increased than the achievement of Teacher Trainees of Control Group because of the implemented Program of Interactive Strategies in Science pedagogy. The developed Program of Interactive Strategies was effective.

MAJOR FINDINGS:-

From objective: 1

1. For Science pedagogy most of the Teacher Educators were aware about Teacher Oriented Strategies and not aware about Content Oriented Strategies and Learner Oriented Strategies.
2. Maximum Science Teacher Educators have arranged Two Way method of instructions sometimes, half of the total samples have always arranged One Way method of instruction and Group Way method of instructions is not used by more than half of the Teacher Educators.

From objective: 3

The achievement of Science Teacher Trainees of Experimental Group was increased than the achievement of Science Teacher Trainees of Control Group because of the implemented

Program of Interactive Strategies in Science pedagogy. The developed Program of Interactive Strategies was effective.

DISCUSSION ON FINDINGS:-

The present research study was conducted by using the Multi Research Methods such as; Survey Method, Product Development Method and Experimental Method. The survey Method was conducted to assess the existing condition regarding the use of Interactive Strategies by the Teacher Educators of Science pedagogy of B.Ed. The findings regarding the Survey reflected that Teacher Educators are aware about general theoretical aspects of Interactive Strategies of science but they don't know the appropriate meaning of strategies however they were agreeing that Interactive Strategies are useful to the teachers and learners. By considering this result one of the previously done researches by Ekbote (1987) was reported that the integration strategy was found effective in term of the improvement it made in the student-teacher's performance in classroom teaching. This finding became the base for presents Survey.

The objective number two of the present research study was to find out the effectiveness of the program on the achievement of the Teacher Trainees. For fulfill this objective Experimental Method was followed. This objective was assessed by conducting Achievement Test on the Teacher Trainees of B.Ed. in science pedagogy. The test was administered on Experimental and Control Group. The finding indicates that the achievement of Teacher Trainees of Experimental Group was increased than the achievement of Teacher Trainees of Control Group because of the implemented Program of Interactive Strategies in Science pedagogy. The developed Program of Interactive Strategies was effective. Similar finding regarding the effect of strategies were found in the research of Vartak, L. R. (2001) and the study by Sheth, D. H. (1984) also displayed results i.e. the attitude of teachers towards different aspects of teaching was favorable. **CONCLUSION:-**

Interactive Strategies were increased the achievement of the B.Ed. Teacher Trainees of the Experimental Group in Science pedagogy subject.

CONTRIBUTION OF THE STUDY TO THE FIELD OF EDUCATION:

The present study is helpful to the Teacher -

1. To understand the theoretical and practical aspects of the Interactive classroom teaching and learning.
2. To acquaint with various interactive classroom teaching strategies.
3. To plan their teaching by including interactive classroom teaching.

The present study is helpful to the students -

1. To get an idea about students interest of science.
2. To learn the things with group or peers with motive.
3. To do self study by using various Interactive learning strategies.

The present study is helpful to the Researchers -

1. To acquaint with research methodological aspects of the present study.
2. To studying similar problem but in other subject.
3. To get the base for their research problem.
4. To select research design, development of tools, development of product, data analysis etc.

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