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An Effectiveness of Smart Learning Programme in Teaching of Science and Technology in Std. 7

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Abstract We have entered into the fourth revolution means the era of information technology of 21st century. When information technology is being used in almost every field, how can the field of education be untouched from it? The present study has been undertaken to find answers whether effective communication takes place by use of information technology in classroom or effective classroom teaching is being held by using Smart Learning Programme prepared by Ahmedabad Municipal Corporation or not. **Objectives:** 1) To examine effectiveness of the Smart Learning Programme. 2) To examine effectiveness of the Smart Learning Programme in context of gender of students. **Population and Sample:** All students studying in std.7 in Ahmedabad city were population of present study. For selection of the sample, a school was selected by purposive sampling and two classes of std. 7 were selected by lottery method. One class was accepted as experimental group and another, in the control group. Total 120 students of those classes were selected by using cluster sampling technique. **Research Method:** Experiment Method was used. **Data Analysis:** t-test was applied to check the hypotheses. **Findings:** 1) Teaching by traditional teaching method was found more effective than learning by Smart Learning Programme.2)Educational achievement of boys and girls of control group was found higher than those of experimental group, 3) No significant difference was found between educational achievement of boys and girls of experimental group.

Key-Words: Effectiveness, Smart Learning Programme, Learning, Science and Technology

1. Introduction

It is a constant issue of worry how the future education should be. Eric (1967) indicates four revolutions happened in educational process. The first revolution took place when the work of providing education partly went to teachers from parents or went to school from home of child. When a written word was accepted as a mean of education, the second revolution had taken place. When the press was invented and books were written, it was the third revolution. The fourth revolution took place when electronics was invented and radio, TV, tap-recorder and computer came into existence. We have entered into the fourth revolution means the era of information technology of 21st century. When information technology is being used in almost every field, how can the field of education be untouched from it? The present study has been undertaken to find answers whether effective communication takes place by use of information technology in classroom or effective classroom teaching is being held by using Smart Learning Programme prepared by Ahmedabad Municipal Corporation or not.

2. Statement of the problem

The problem of the present study was worded as below.

A Study of Effectiveness of Smart Learning Programme in Teaching of Science and Technology in Std. 7

3. Importance of the study

The following points show the importance of the present study.

1. Difference between teaching by Smart Learning Programme and the traditional teaching method will be discriminated by using them in classroom teaching.
2. The present study will be useful to teachers teaching Science and Technology.
3. Effectiveness of the Smart Learning Programme will be determined.
4. It will be useful to teachers, management and Principals to use Smart Learning Programme.

4. Objectives of the study

There is always an objective behind undertaking any work. Following objectives were determined for the present study.

1. To examine effectiveness of the Smart Learning Programme.
2. To examine effectiveness of the Smart Learning Programme in context of gender of students.

5. Hypotheses of the study

Hypothesis is a temporary answer of problem under the study. Following null hypotheses were formulated for the present study.

- Ho_1 There will be no significant difference between mean scores of students of experimental group and control group on the Post test.
- Ho_2 There will be no significant difference between mean scores of boys of experimental group and control group on the Post test.
- Ho_3 There will be no significant difference between mean scores of girls of experimental group and control group on the Post test.
- Ho_4 There will be no significant difference between mean scores of boys and girls of experimental group on the Post test.

6. Scope and delimitations of the study

❖ Delimitations:

1. The present study is delimited for the academic year 2015-16.
2. The present study is delimited for units 9, 10, 11, 12 and 13 of Science and Technology subject of std. 7.
3. The present study is delimited for students of Gujarati medium only.
4. This study is delimited for Saijpur Gujarati School No. 1 run by Municipal education Committee of Ahmedabad city.

❖ Limitations:

1. All the limitations of Smart Learning Programme and self-constructed Post test had become limitations of the present study.
2. Limitations of sample selection had become limitations of the present study.

7. Operational definitions of terms

The terms in this study are defined as below.

1. Municipal Primary Education Committee

It is a committee run by Ahmedabad Municipal Corporation, which works to provide free and compulsory education to people.

2. Smart Learning Programme

It is such a classroom, where teaching is provided using the modern style. Here, the teaching work is done by broadcasting programmes by BISAG by the medium of L.C.D.the lessons prepared by experts are broadcast in the classroom on the educational channel. Such programme is regarded as Smart Learning Programme.

3. Educational achievement

In the present study, the percentages of marks obtained by students in the terminal exam of school were considered as their educational achievement.

4. Effectiveness

Significance of scores obtained by students taught by using Smart Learning Programme in context to the traditional teaching method was considered as effectiveness of the Smart Learning Programme.

8. Variables under the study

Following variables were decided in the present study.

1. Independent variables

Teaching Method:

(1) Teaching through smart Learning Programme

(2) Traditional teaching method

2. Dependent variables

Educational achievement (Scores on the Post test)

3. Moderator variables

Gender: Boys and Girls

4. Controlled variables

Standard: 8, Subject: Science and Technology, Medium: Gujarati

9. Population

The present study was aimed at examining effectiveness of treatment for the subject of Science and Technology of std. 7, so all students of std. 7 studying in Gujarati medium schools run by Ahmedabad Municipal Corporation in Ahmedabad city during academic year 2015-16 had formed the population of the present study.

10. Sample

In the present study, all students of std. 7 studying in schools of Ahmedabad Municipal Corporation were included in the population. For selection of the sample, a school was selected by purposive sampling and two classes of std. 7 were selected by lottery method. One class was accepted as experimental group and another, in the control group. Total 120 students of those classes were selected by using cluster sampling technique.

11. Research method

Effectiveness of Smart Learning Programme in Science and Technology subject was to be examined in the present study, so experimental research method was adopted.

12. Construction of the Post Test

Following steps were followed while preparing the Post test.

Step: 1 Planning
Step: 2 Structure of the test
Step: 3 Construction of the blue print
Step: 4 Preparing primary form of the Post test
Step: 5 Experts' suggestions on the Post test
Step: 6 Preparing the final form of the Post test

13. Data collection

This was an experiment so investigator had undertaken an educational programme under the study. For this purpose, investigator had visited the Principal of Saijpur Gujarati School No. 5 run by Ahmedabad Municipal corporation and informed her about the experiment and granted her permission.

Then, two classes of std. 7 of that school were selected by lottery method and accepted as experimental group and control group. Teaching was held in both groups. The students of experimental group were taught by Smart Learning Programme, whereas those of control group were taught by using traditional teaching method.

For teaching by 'Smart Learning Programme, investigator had used TV and GTPL set up box of school, where as the control group was taught in traditional classroom. After completing the experiment, the Post test was given to students of both groups.

14. Technique of data analysis

- To test hypotheses, t-value was computed.

Group	N	M	SD^2	SED	t-value	Remarks
Experimental group	60	23.92	93.91	1.78	3.41	Significant at 0.01 levels
Control group	60	29.98	96.08			
Experimental group (Boys)	30	24.07	99.72	2.55	2.21	Significant at 0.05 levels
Control group (Boys)	30	29.70	95.32			
Experimental group (Girls)	30	23.77	91.29	2.53	2.57	Significant at 0.05 levels
Control group (Girls)	30	30.27	100.0			
Experimental group (Boys)	30	24.07	99.72	2.52	0.12	Not significant at 0.05 levels
Experimental group (Girls)	30	23.77	91.29			

15. Findings of the study

Findings of the present study are presented as below.

1. Teaching by traditional teaching method was found more effective than learning by Smart Learning Programme.

2. Educational achievement of boys of control group was found higher than those of experimental group, which has proved that traditional method is more effective than Smart Learning Programme on boys.
3. Educational achievement of girls of control group was found higher than those of experimental group, which has proved that traditional method is more effective than Smart Learning Programme on girls.
4. No significant difference was found between educational achievement of boys and girls of experimental group, which has indicated that gender has no effect on educational achievement of students.

16. Educational implications

Following educational implications are suggested based on findings of the present research works.

a. Traditional teaching method was proved more effective than Smart Learning Programme in the present study. Instead of forgetting the traditional teaching, it should be used with modern technology.
b. No programme will be successful without the teacher as teacher is an important pole in bi-polar educational process.
c. Sex of students should not be taken into consideration while planning such programmes as equal effect of this programme is found on boys and girls.
d. Educational level should be considered while planning such programmes as equal effect of this programme is not found on students having higher educational achievement and lower educational achievement.
e. The present Smart Learning Programme should be evaluated and efforts should be put to remove its weaknesses and increase its complexity.

17. Suggestions of the study

a. Along with the traditional teaching method, teaching of subjects such as Mathematics, Social Science, Gujarati, English etc should be held with the help of the Smart Learning Programme.
b. The teaching method other than Smart Learning Programme such as Drama, story-telling, E-learning, PPT etc. should be used with the traditional teaching method.
c. It should be tried to cultivate interest among students and teachers towards Smart Learning Programme.
d. Efforts should be put to make present Smart Learning Programme more complex.

18. Conclusion

Innovative researches play important role in foundation of progressive countries, the country, which has higher educational system and effective administration, achieves rapid development. It is necessary to bring developmental changes to increase the level of education, so researches are essential in the field of education.

Findings of any research are essence of that work. Findings play vital role to make them useful in practice. Investigator has presented research summary and

findings in the present chapter. Educational implications, general suggestions and suggestions for future researches are also mentioned.

This is the first effort in research field, so enough care was taken by investigator. If any defect is found, it is forgivable.

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