



A Study of the Effect of CAI and Traditional Method on the Educational Achievement of Students' in Reference to Some Concepts of Social Science

PROF. AMIT PARMAR

Assistant Professor,

The New Progressive Education College, Mehsana
Gujarat (India)

Abstract:

PURPOSE: This study aimed to compare the effects of computer-assisted, text-based and computer-and-text learning conditions on the performances of 2 groups of 8th standard students, taking into account their academic achievement to date. A second group of students served as a control (no-study) group. **METHOD:** CAI programme was developed by the researcher to compare the effect on Achievement. Thus, by Simple equivalent group pre test-post test design experimental method was applied on the experimental group. **EDUCATIONAL IMPLICATION:** Teacher teaches the concepts through traditional method but they do not understand the problem of the student. We have number of techniques and method, teacher should use like CAI method for better teaching. Present study evident that the CAI method is better than traditional method so far social science is concern. **RESULT:** CAI is better method for teaching concepts of social science.

Keywords: CAI, Educational achievement, Traditional method

1. Introduction

Education cannot be separated from the changes and innovation taking place around world. Today the field of education has entered such a complex phase where it has to be ready to accept new ideas and innovation. In 21st century at school level different method use for teaching but which method is best for teaching. For answer this question Investigator think to compare CAI method and traditional method.

2. Objective of the Study

1. To Prepare Computer aided instruction programme on some concepts of social science.
2. To tryout the computer aided instruction programme on the experimental group and traditional method on the control group.
3. To find out effect on achievement of the CAI method and traditional method of the boys and girls.

3. Hypotheses

1. There is no significant difference between the mean gain scores of experimental group and control group in the achievement test.
2. There is no significant difference between the mean gain scores of experimental group and control group's girls in the achievement test.
3. There is no significant difference between the mean gain scores of experimental group and control group's boys in the achievement test.

4. There is no significant difference between the mean gain scores of experimental group and control group's girls and boys in the achievement test.

4. Methodology

4.1 Design of the Study

The design of the study is experimental in nature. 140 students of 8th standard were selected from two high school of Mehsana city and sample was divided into two groups namely experimental group and control group. The experimental group consisted of 35 boys and 35 girls who were taught by CAI method by investigator and the control group comprising 35 boys and 35 girls were taught by the traditional method of teaching.

4.2 Procedure in Forming the Groups

The sample of 140 students was divided into two equal groups of 70 students each. Both the groups were equaled by giving simple test of some concepts of social science. Students having similar range of marks in test were divided equally and randomly in both experimental and control groups. To find out whether there was any significant difference between the two groups; t-test was applied to analyze the collected data. The value of t was calculated as 1.1 which was insignificant, hence an attempt was made to increase the internal validity of the results and it was assured that the groups were equivalent to each other before beginning of the experiment.

4.3 Construction of Tools

The investigator constructed the achievement tests in social science on the basic concepts of social science. The achievement test containing 30 items for pre-test was administered to 20 students of 8th standard students who were not included in the sample of the study. Expert of the field were consulted and as per the opinion of the experts some of the items were deleted and modified. The agreement of views expressed by the expert after the logical evaluation of the test items was taken as the index of the validity of the tool. The final form of the scale containing 25 items was used as an achievement test in 30 minutes.

4.4 Development of Computer Aided Instruction Programme

26 concepts were taken from the social science of standard 8th. Investigator used MS word and MS power point for making programme. 3 Eminent experts opinion were taken for content validity, and to administer the task. Investigator made 66 slides in Ms Power point and gave different effect to each slide.

5. Analysis and Interpretation of the Data

The results obtained in the experiment were tabulated and have been presented in the form of tables and discussed below.

Table 1 Scores obtained by Experimental and control group in the achievement test

Group	N	Mean	SD	t-value	Significance
Experimental Group (Boys & Girls)	70	15.38	4.34	4.50	Significant at 0.01 level
Control group (Boys & Girls)	70	12.27	3.82		

Table 1 reveals that the mean achievement scores in the achievement test are 15.38 and 12.27 for the experimental group and control group. The t value is 4.50, which is higher than the theoretical value of 2.58 so, gained t value is significant at 0.01 level of confidence. Hence it can be concluded that there is significant difference between experimental and control group in the achievement test. Hence the first hypothesis has been not accepted. This is evidently the positive impact of CAI method on achievement.

Table 2 Scores obtained by girls of Experimental and control group in the achievement test

Group	N	Mean	SD	t-value	Significance
Experimental Group (Girls)	35	15.61	3.82	3.45	Significant at 0.01 level
Control group (Girls)	35	12.47	3.852		

The table 2 reveals that the mean achievement score in the achievement test are 15.61 and 12.47 for the experimental group and control group. The t value is 3.45, which is higher then the theoretical value of 2.58 so gained t value is significant at 0.01 level of confidence. Hence it can be concluded that there is significant difference between experimental and control group of girls in the achievement test. Hence the second hypothesis has been not accepted. So girls of experimental group got higher achievement than control group.

Table 3 Scores obtained by boys of Experimental and control group in the achievement test

Group	N	Mean	SD	t-value	Significance
Experimental Group (Boys)	35	15.15	4.8	2.77	Significant at 0.01 level
Control group (Boys)	35	12.35	3.62		

Table 3 reveals that the mean achievement score in the achievement test are 15.15 and 12.35 for the experimental group and control group. The t value is 2.77, which is higher then the theoretical value of 2.58 so gained t value is significant at 0.01 level of confidence. Hence it can be concluded that there is significant difference between experimental and control group of boys in the achievement test. Hence the third hypothesis has been not accepted. It can be said that the boys of experimental group got higher achievement than control group.

Table 4 Scores obtained by boys and girls in the achievement test

Group	N	Mean	SD	t-value	Significance
Boys	70	13.75	4.45	0.20	Not Significant at 0.05 & 0.01 level
Girls	70	13.9	4.49		

The table IV reveals that the mean achievement score in the achievement test are 13.75 and 13.9 for the boys and girls. The t value is 0.20, which is lesser then the theoretical value of 2.58 so

gained t value is insignificant at 0.01 level of confidence. Hence it can be concluded that there is no significant difference between boys and girls in the achievement test. Hence the fourth hypothesis has been accepted. Hence boys and girls of experimental group get equal achievement; there is not effect of gender in achievement.

6. Conclusion

This study clearly point out that significant increase in the mean gain scores has been found in the achievement test score of experimental group. Significant differences have been found between the control group and experimental group on achievement test gain scores. So this study evident that the CAI is better method for teaching concepts of social science.

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