

Integration of ICT in Teacher Education

“Computer Assisted Instruction & E-Learning”

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GJCST Classification
K.3.1

I. INTRODUCTION

Education is the life long process of acquiring new knowledge and skill through formal exposure of information, ideas and experiences. These can be done in the schools by way of systematic planning of instruction. In turn it needs proper method or technology to adopt in teaching the concepts of the subjects in the school. Now a day they call it as a educational technology which implies a behavioral science approach to teaching and learning, in trait, it makes use and pertinent, scientific and technological sociology, communicating linguistics and their related fields. Educational technology has grown as a resut of technological devices in the use of practies with the explored psychological of teaching, learning and behavioral modification. There are many means by which effective instruction can be imparted in the classroom. The use of Computer Assisted Instruction (CAI) in schools gaining momentum. Now days, more and more schools are having computers, so use of technology enhances effectiveness of a learning experience.

II. NEED AND SCOPE OF THE STUDY

The investigator was interested in studying the effectiveness of computer-assisted instruction in teaching General Science at secondary level. The subjects on science can develop ability and achievement among the XII students. Hence it is necessary to study the achievement of the students of the students in relation to computer-assisted instruction adopted in classroom teaching.

1) Objectives of the study

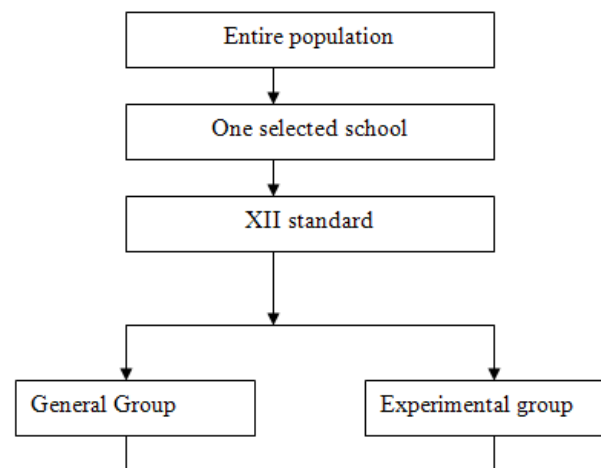
- To find out the effectiveness of teaching **General Science** for XII through conventional method.
- To find out the effectiveness of teaching **General Science** for XII through computer assisted instruction.
- To find out the effectiveness of teaching **General Science** for XII through computer assisted instruction over conventional method.
- To prepare a computer assisted instructional package on “universe”.

2) Hypotheses

- There is no significant difference between mean gain scores of experimental and control group on pre – test.
- There is no significant difference between the mean gain scores of pre and post – test of control group.
- There is no significant difference between the mean gain score of pre and post – test of experimental group.
- There is no significant difference between the mean gain scores of post – test in general and experimental group.

III. SAMPLING

The present experimental study involved a parallel or equated group experimentation, which is more complete and accurate than the one group experimentation. The independent variable in the present study was CAI and the dependent variable was student achievement in terms of gain scores



In this study 32 students studying in XII of D.A.V Sen.Sec.School, Malout were taken as the sample. Experimental group consisted of 16 students who were taught “The Universe” by the CAI. The control group of another 16 students who were taught the same content by conventional method.

1) Procedure in framing equated groups

The sample of 32 students was divided into two equated groups of 16 students each. Two groups were equated as

nearly as possible in terms of their achievement scores of sciences in second semester examination. Students having similar range of marks in the second semester examination were allotted equally and randomly for experimental and general groups. To find out that there was no significance difference between the two groups, 't' test was applied to the scores of second semester examination.

2) Construction of tools (Ready-made)

Standardized Tool were use in this study prepared by JAGANATH.K. DANGE and SHAIK ABDUL WAHAB. (Research scholar), Lecturer in P.G. Studies in Education, Kuvempu University, Shankarghatta (Karnataka)

3) Development of CAI

The content is divided into different tasks and the tasks are presented in the form of Slides in Micro-Soft Power Point. After completion of every task a question will be there to test students learning. In the presentation needed pictures, background music and animations are added as special effects in the CAI.

IV. DATA ANALYSIS

The data collected by the investigator are analyzed and interpreted as given below.

TABLE 1

Test of significance of the scores obtained by experimental and controls group in pre – test.

Groups	N	M	S.D	't' value	Significant level at 0.05
Experimental group	16	13.56	528	071	NOT SIGNIFICANT
Control group	16	13.31	524		

According to the above table the obtained 't' value 071 is statistically no significant, because it is lesser than the critical value 2.13 for 30 df. At 0.05 level of significant

from this, it can be concluded that there is no significant difference between two groups and a null hypothesis is accepted.

TABLE 2

Test of significance of the scores obtained by control group student in their pre and post – test.

Test	N	M	S.D	't' value	Significant level at 0.05
Pre-test	16	13.31	5.24	1	NOT SIGNIFICANT
Post-test	16	13.56	5.28		

The above table shows that the obtained, 't' valued 1 statistically not significant because it is lesser than the critical value 2.13 for 30 df. at 0.05 level of significant.

From this it can be concluded that there is no significance difference between the mean gain scores of pre and post – test of control group.

TABLE 3

Test of significance of the scores obtained by experimental group students in their pre and post – test.

Test	N	M	S.D	't' value	Significant level at 0.05
Pre-test	16	13.56	5.28	8.47	SIGNIFICANT
Post-test	16	13.43	5.48		

According to the above table the obtained, 't' value 8.47 is statistically significant, because it is greater than the critical 't' value 2.13 for 30 df. at 0.05 level of significant. From

this it can be concluded that there is significance difference between the mean gain scores of pre and post – test of experimental group.

TABLE 4

Test of significance of the scores obtained by experimental group students in there post – test.

Groups	N	M	S.D	't' value	Significant level at 0.05
Experimental group	16	15.43	5.48	5.77	SIGNIFICANT
Control group	16	13.25	5.53		

The above table shows that the obtained, 't' value 5.77 is statistically significant, because it is greater than the critical 't' value 2.13 for 30 df. At 0.05 level of significant.

From this, it can be concluded that the students taught by computer assisted instruction method performed well, than

the students taught by conventional method in learning the concepts of universe.

Findings

- There is no significant differences between mean gain scores of experimental and general group of pre –test.
- There is no significance difference between mean gain scores of pre test and post – test of general group.
- There is significance difference between mean gain scores of pre test and post – test of experimental group.
- There is significance difference between mean gain scores of post – test of general group and experimental group.

V. EDUCATION IMPLICATIONS

CAI may be introduced in all the standards in the schools, as the study found favorable result and the students found to be interested to learn through CAI. Hence all the teachers may be given orientation about CAI and its effect on the achievement of among the students. The teacher must be given sufficient training and encouragement in preparing the CAI module. Govt. May distribute CAI packages of all subjects to all the schools that hey can use it in their daily teaching learning process.

VI. REFERENCE

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