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A Study of Effectiveness of Computer Assisted Instruction Method For Some Units Of Science Subject of Standard 9th

Guide

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Introduction:

"Nothing is constant in the world but change" Rapid scientific and technological developments along with changes in the Structure of the society influence the educational system in general and instructional

method in particular. Such a trend brings about new attempts and needs in terms of the teaching learning processes. Among these new attempts is the use of computers in instructional endeavor as they are considered as effective communication and individual learning tools. The integration of technology in education is a growing phenomenon. A tremendous amount of time and money has been devoted to making technology accessible to students with the promise of increased student achievement. Computers

are used as teaching tools and a means for creating work product. A closer look at the connection between student's use of technology and the resultant learning is needed. When the Indian education system is examined, it is observed that face-to-face instruction is the most commonly used instruction practice. This system is mostly based on a teacher centered learning atmosphere where the focus of the instructional

activities is learning .we can't deny from the importance of teacher's instruction in student's life but it becomes boring if it lasts with one sided for long time which in turn can create problems for students in assigning meaning to information,understanding the content as a whole, locating new information in their schema and transforming this information to knowledge.

The main purpose of Computer Assisted Instruction (C.A.I) is to deliver the content of the course through computer and relative instruction endeavor through the help of computer applications. In this respect several software program with different specification might be used to deliver the subject matter. The Computer Assisted Instruction (C.A.I) package used in a four mode namely tutorial, drill and practice, simulation and gaming. It can deal the problem of quality in education more effectively. Possibly the greatest strength of the Computer Assisted Instruction is that enables high degree of learner participation to be built

in to the instructional process. Due to advancement of the Science & Technology and application of it in to the practice, the learner can use the high control multimedia presentation nowadays.

Computer Assisted Instruction (C.A.I.) is immensely useful in providing individualized, repetitive or analogous practice to learner in problem solving exercise as well as activities for developing a variety of skill. This approach is of uttermost importance because it's a time of the century in which the learner come to class with that information which might not handy to teacher. Present education system is rejuvenating and change is of the caterpillar fashion. Computer technology is also transforming, within the duration of three days new invention surge the market and hit the mind of the people to walk with it. Now, it's a huge responsibility of the teacher to allow the student not only to sit into the classroom but also to make learning

participative interesting, joyful and everlasting. This approach of Computer Assisted Instruction (C.A.I.) and computer might fetch the learner for better tomorrow.

2. Statement of problem:

The statement of the problem could be stated as A Study of Effectiveness of Computer Assisted Instruction Method For Some Units Of Science Subject of Standard 9th The statement of the Research problem chosen by the researcher indicates the clear concept of the Research problem. This experimental Research was designed to check effectiveness of traditional method with learning through.

3. Objective of Study:

Computer Assisted Instruction (C.A.I.) package in Science. Development of Computer Assisted Instruction program was also a prerequisite part of the Research.

1. To develop a program on Computer assisted instruction (C.A.I) for selected topics of Science subject

2. To check the appropriateness of computer assisted instruction (C.A.I) method according to gender

3. To compare the achievements of traditional method learning group and computer assisted instruction method learning group by the post test

4. Variables of the Research:

Dependent Variable: Achievements: 1. Higher achievements 2. Lower achievements

Independent Variable: Gender: 1. Girls 2. Boys

5. Hypothesis of study:

In this experimental type of Research, the researcher has formulated following null hypothesis,

Ho1 There will be no significant difference between mean score of experimental and control group.

Ho2 There will be no significant difference between mean score of experimental boy's group and control boy's group.

Ho3 There will be no significant difference between means core of experimental girl's group and control group girl's group.

Ho4 There will be no significant difference between mean score of students of higher achievement of control group and experimental group.

Ho5 There will be no significant difference between mean score of students of lower achievement of control group and experimental group.

6 Limitations of the Research :

Limitations of the present Research can be stated as follows:

• The present Research is limited in some area of Ahmedabad city only.

• The present Research is limited in two classes of standard 9 of one school only.

• In the present research Computer assisted instruction (C.A.I) program is made by researcher is the limitation of this research.

• The present Research is limited for selected lessons of standard 9 only.

7. Population and Sampling :

All the students studying standard 9th of Gujarati medium schools of Gujarat Secondary Education Board, Gujarat constitute the population of the present research. As per purposive sampling technique one school, Sarkhej Sarvajanik High School School was selected for sampling.

8. Method of research :

In present research, researcher wants to check effectiveness of Computer Assisted Instruction (C.A.I) method with traditional method that is why the method for research is Experimental method.

9. Construction of tool of research:

Steps of Computer Assisted Instruction (C.A.I) structure:

1. Selection of subject matter (content) :

First of all for structuration of Computer Assisted Instruction (C.A.I) from any standard and any subject the content for Computer Assisted Instruction (C.A.I) was choose and after Researching that subject matter deeply construction of Computer Assisted Instruction (C.A.I) was made.

2. Content Analysis :

In the second step of Computer Assisted Instruction (C.A.I) after choosing the subject matter of Computer Assisted Instruction (C.A.I) and that subject matter were divided in three, four or five parts.

3. Provide parts of the subject :

In the third step of Computer Assisted Instruction (C.A.I) construction the researcher had divided the subject matter in three or five parts according to time and on the bases of that Computer Assisted Instruction (C.A.I) was constructed.

4. Final design of Computer assisted instruction (C.A.I) :

In this step of Computer assisted instruction (C.A.I) construction the final construction of Computer assisted instruction (C.A.I).

10. Data analysis technique:

As the groups were dependent on intellectual capacity, Paired t-test was applied to compare the overall, by cognitive levels and by content area achievements of the experimental and the control groups.

11. Interpretation related to hypothesis:

• **Ho1** is rejected because value is 7.28 which is higher than its table value 2.58 at 0.1 level. So, Null hypothesis is rejected. It means there is significant difference between mean score of both groups.

• **Ho2** is rejected because value is 6.89 which is higher than its table value 2.58 at 0.1 level. So, null hypothesis is rejected. It means there is significant difference between mean score of boys of both group.

• **Ho3** is rejected because value is 1.09 which is higher than its table value at 0.1 level. So, null hypothesis is rejected. It means there is significant difference between mean score of girls of both group.

• **Ho4** is rejected because value is 4.07 which is higher than its table value 2.58 at 0.1 level. So, null hypothesis is rejected. It means there is significant difference between mean score of students of higher achievement of control group and experimental group.

• **Ho5** is rejected because value is 2.90 which is higher than its table value2.58 at 0.1 level. So, null hypothesis is rejected. It means there is significant difference between mean score of students of lower achievement of both group.

12 Findings of the Research:

Findings of the Research were as under

• Experimental Group is more affected by C.A.I method.

• Boys of Experimental Group achieve more score then boys of Control Group.

• Girls of Experimental Group achieve more score then Girl's of Control Group.

• Students of Experimental Group of higher achievement score more marks then students of Control Group of higher achievement.

• Students of Experimental Group of lower achievement score more marks then students of Control Group of lower achievement.

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