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Enhancing Performance of Higher Secondary Students Through CAI and SIM

Education

KEYWORDS: Computer Assisted Instruction, Self Instruction Module, Students' Performance

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ABSTRACT

The purpose of the study was designed to find out the effectiveness of CAI, SIM for enhancing performance of higher secondary school girl's students of Pudukkottai. For this purpose forty five (N-45) Higher Secondary first year (XI) students studying in the Government higher Secondary School, Thirumayam, Pudukkottai District, Tamilnadu, India during the year 2014-2015 were selected randomly as subjects. The subjects were assigned at random into fifteen each (n=15). Group-I underwent Computer Assisted Instruction group, Group-II underwent Self Instruction Module group, and Group-III acted as Control. The Training period was resisted to three months only on the working days. The dependent variable selected for this study was Economic Achievement Mean Score and it was assessed by Achievement test tool constructed and by the investigator. All the subjects were tested prior to and immediately after the training for all the selected variables. To find out the significant differences't' was used. In all the cases 0.05 level of significance was fixed. The results of the study showed that there was a significant difference among all the groups namely Computer Assisted Instruction group, Self Instruction Module group and Control group. Further the results of the study showed that Computer Assisted Instruction group was found to be better than the Self Instruction Module group and Control group in Economic Achievement Mean Score.

INTRODUCTION

Economics is a discipline which brings a particular mode of thinking to everyday activities and tells the people about how they can use the available scarce resources against their unlimited wants. Such scarcity can be conferred by the efficient utilization of resources. A given objective is efficiently achieved if the lowest possible amount of resources has been used and if resources are saved in achieving an objective, they can be put forward achieving another separate one. Therefore, it is the duty of the economists to compare the actuality of education systems to the potential opportunities with the resources available recognizing that all resources have alternative uses or opportunity costs.

CAI can be defined as an instructional technique in which the instructional content is presented to the learners with the help of a computer which also controls the learning path of learners. In other words, it is a technique best suited for self learning in which there is an interaction between the students and the CAI material (Adeyami, 2012).

Self instructional module is one of the educational materials that help individualized learning. It is important to go through the module in schematic way. Now question arises how to design, write and produce self-instructional print material of appreciable quality. It is a strenuous task and at the same it is different from production of text books.

SIM is prepared in such a way that the learner does not face any hurdles while learning the subject. It is one of such media in distance education which teaches efficiently, effectively and individually. Moreover, it sustains the motivation to learn, makes the learning affair not only easy but stimulating as well (Aggabao, 2002).

METHODOLOGY

The study was conducted forty five (N-45) Higher Secondary first year (XI) students studying in the Government higher Secondary School, Thirumayam, Pudukkottai District, Tamilnadu, India during the year 2014-2015 were selected randomly as subjects. The subjects were assigned at random into fifteen each (n=15). Group-I underwent Computer Assisted Instruction group, Group-II underwent Self Instruction Module group, and Group-III acted as Control. The Training period was resisted to three months only on the working days. The dependent variable selected for this study was Economic Achievement Mean Score and it was assessed by Achievement test tool constructed and by the investigator. All the subjects were tested prior to and immediately after the training for all the selected variables. To find out the significant differences 't' was used. In all the cases 0.05 level of significance was fixed.

The results of the dependent 't'-test on the data obtained for Economics Achievement Mean Scores of the subjects in the pre-test and post-test of the Computer Assisted Instruction group, Self Instructional Modules group and Control group have been analyzed and presented in Table-1.

TABLE – 1

SUMMARY OF MEAN, STANDARD DEVIATION AND DEPENDENT 't' TEST FOR THE PRE AND POST TESTS ON ECONOMICS ACHIEVEMENT MEAN SCORES OF EXPERIMENTAL GROUPS AND CONTROL GROUP TO THEIR TOTAL ACHIEVEMENT

(Economics Achievement Mean Scores are expressed in Marks)

Test	Descriptive Statistics	Computer Assisted Instruction Group	Self Instructional Module Group	Control Group
Pre Test	Mean	66.93	66.80	67.93
	SD (±)	5.71	5.38	3.64
Post Test	Mean	103.40	89.87	68.60
	SD (±)	4.22	3.98	4.67
"t" Test		19.89*	13.35*	0.44

*** Significant at 0.05 level.**

The table value required for 0.05 level of significance with df 14 is 2.15.

Table-1 shows that the pre-test mean and standard deviation of Economics Achievement Mean Scores of Computer Assisted Instruction group, Self Instructional Modules group and Control group are 66.93±5.71, 66.80±5.38 and 67.93±3.64, respectively. The post-test mean and standard deviation are 103.40±4.22, 89.87±3.98 and 68.60±4.67 respectively. The obtained dependent t-ratio values between the pre and post test means on Economics Achievement Mean Scores of Computer Assisted Instruction group, Self Instructional Modules group and Control group are 19.89, 13.35 and 0.44 respectively. The table value required for significant difference with df 14 at 0.05 level is 2.15. It was concluded that Computer Assisted Instruction group and Self Instructional Modules group had

registered significant improvement in Economics Achievement Mean Scores.

The pre test and post test mean values of Computer Assisted Instruction group, Self Instructional Modules group and Control group on Economics Achievement Mean Scores are graphically represented in the Figure -1.

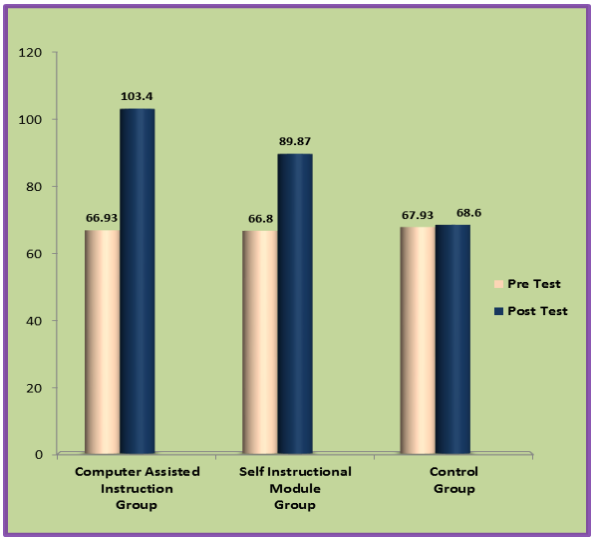


Figure: 1 The Pre test and Post test Mean values of Computer Assisted Instruction group, Self Instructional Modules group and Control group on Economics Achievement Mean Scores (In Marks)

CONCLUSION

From the analysis of the data, the following conclusions were drawn.

1. Significant differences in achievement were found between Computer Assisted Instruction group, Self Instructional Modules group and Control group in the selected criterion variable such as Economics achievement mean scores.

2. The Experimental groups namely, Computer Assisted Instruction group and Self Instructional Modules group had significantly differences in Economics achievement mean scores.

3. The Computer Assisted Instruction group was found to be better than the Self Instructional Modules group and Control group in increasing Economics achievement mean scores.

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