



“EFFECT OF COMPUTER ASSISTED INSTRUCTION (CAI) ON ACADEMIC ACHIEVEMENT OF PUC STUDENTS IN BIOLOGY”

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ABSTRACT:

In the present investigation an attempt has been made to study the effect of computer assisted instruction (CAI) on Academic Achievement of PUC Students in biology of Vijayapur. Sample consisted of 80 PUC students of Vijayapur. The Achievement test in biology was prepared by investigator, syllabus based unit software package was used. Statistical techniques used are differential analysis, t-test, one way and two way ANOVA, Tukey's multiple comparison Test Results shows that the pre and post test scores of achievement in biology of P U College students in Control groups are similar. Research also shows that the post test achievement in Biology of PU college students is significantly higher as compared to pre-test achievement in Biology in experiment group (CAI).

KEYWORDS : *Effect of Computer Assisted Instruction and Academic Achievement test.*

INTRODUCTION

Studies have indicated that an up-to-date method of teaching, computer-aided instruction (CAI) can be a valuable supplementary aid used to improve student achievement. “If we teach today as we taught yesterday we rob our children of tomorrow”. The need for improvement of student achievement has been the centre of attention of many plans in education for many years. “Teachers are challenged daily by students who don't show curiosity in learning”. The more the student is motivated to learn, the more involvement will be in the learning process. Motivating students through the use of computer technology is a useful approach often utilized in education. The use of computer technology to supplement traditional instruction is not a recent development. Computer-based teaching and learning produced positive effects in the classroom. Students seemed to be motivated by learning through this medium. Educational technology had a huge impact on student achievement. If we are serious about educating every child we must venture to absorb every child in meaningful and active learning. If we want to develop the specific skills we value and want students to learn, we must use teaching strategies that more closely match how our students learn. Computer- assisted instruction (CAI) is applications of computers and software to teach concepts, principles or skills in a particular field.

Academic achievement is commonly measured through test and examination or continuous evaluation but there is no general agreement on how it is best evaluated or which aspects are most important

OBJECTIVES OF THE STUDY:

1. To study the significant difference between pre-test and post-test achievement in Biology of PU college students in control group.
2. To study the significant difference between pre-test and post-test achievement in Biology of PU college students in experiment group (CAI).

HYPOTHESES:

1. There is no significance difference between pre-test and post-test achievement in Biology of PU college students in control group.
2. There is no significance difference between pre-test and post-test achievement in Biology of PU college students in experiment group (CAI).

DESIGN OF THE STUDY

Variables: Independent variable is effect of Computer assisted instruction Dependent variable is Achievement in Biology.

Limitations

The present study was confined to PUC students of Bijapur District.

Methodology

The present study is an experimental designed involving control and experimental group. Effects on different treatments is determined by pre and post test.

Sample

The study conducted on sample of 80 PUC students of Bijapur District.

Tools

- 1) Three syllabus based unit software package.
- 2) Achievement test in biology prepared by research investigator.

Collection of data

The researcher collected the data with the help of pre-test and post-test.

Statistical Techniques used: Differential analysis, t-test, one way and two way ANOVA, Tukey’s multiple comparison test, were calculated for analyzing the data.

Analysis of data:

Table-1: There is no significance difference between pre-test and post-test achievement in Biology of PU College students in control group

To achieve this hypothesis, the paired t test was applied and the results are presented in the following table.

Table: Results of t test between pre-test and post-test achievement in Biology of PU College students in control group

Achievement	Mean	SD	Mean Diff.	SD Diff.	Paired t	p-value	Signi.
Pre-test	24.78	2.28	-0.23	1.29	-1.1025	0.2770	>0.05, NS
Post-test	25.00	2.71					

From the results of the above table, it can be seen that, non-significant difference was observed between pre-test and post-test achievement in Biology of PU College students in control group ($t=-1.1025$, $p>0.05$) at 5% level of significance. Hence, the null hypothesis is accepted and alternative hypothesis is rejected. It means that, the pre and post-test scores of achievement in Biology of PU college students in control group are similar. The mean and SD scores pre-test and post-test achievement in Biology of PU College students in control group are also presented in the following figure.

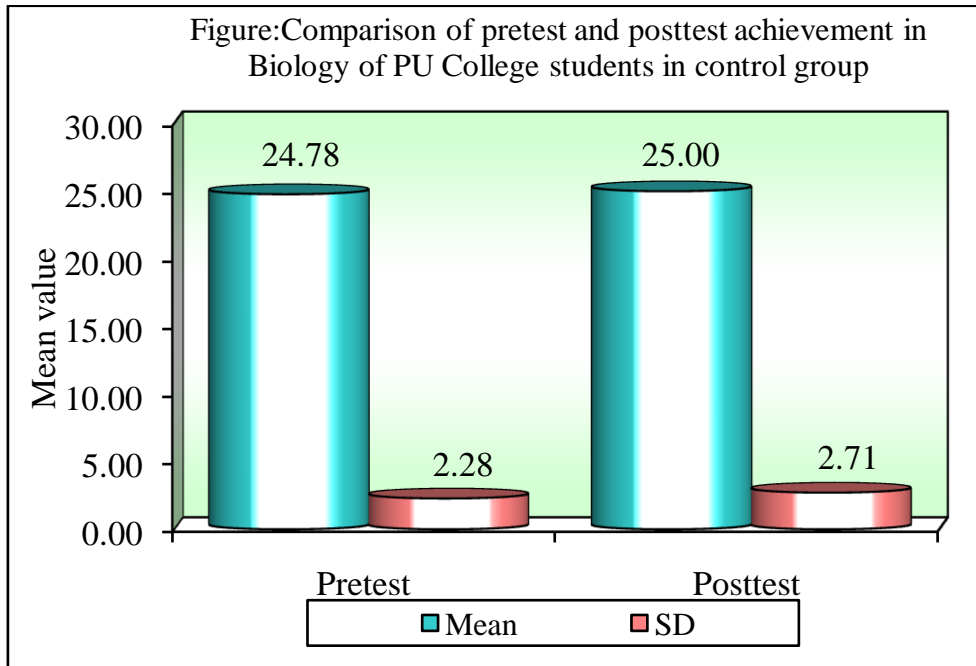


Table-2 There is no significance difference between pre-test and post-test achievement in Biology of PU College students in experiment group (CAI).

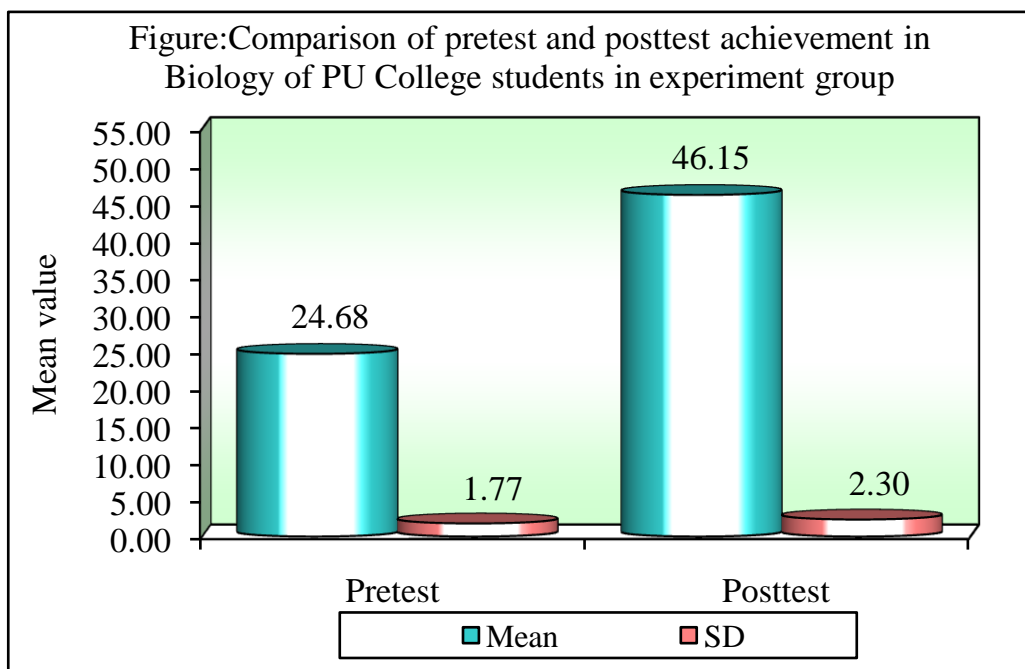
To achieve this hypothesis, the paired t test was applied and the results are presented in the following table.

Table: Results of t test between pre-test and post-test achievement in Biology of PU College students in experiment group

Achievement	Mean	SD	Mean Diff.	SD Diff.	Paired t	p-value	Signi.
Pretest	24.68	1.77					
Posttest	46.15	2.30	-21.48	2.47	-54.9832	0.0001	<0.05, S

* $p<0.05$

From the results of the above table, it can be seen that, a significant difference was observed between pre-test and post-test achievement in Biology of PU College students in experiment group ($t=-54.9832$, $p<0.05$) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the post-test achievement in Biology of PU College students is significantly higher as compared to pre-test achievement in Biology in experiment group (CAI). The mean and SD scores pre-test and post-test achievement in Biology of PU College students in experiment group are also presented in the following figure.



MAJOR FINDINGS

- 1) The pre and post test scores of achievement in biology of P U College students in Control groups are similar.
- 2) The post test achievement in Biology of PU college students is significantly higher as compared to pre-test achievement in Biology in experiment group (CAI).

CONCLUSION

Based on the results obtained in the present study the following conclusions were drawn, Results shows that the pre and post-test scores of achievement in biology of P U College students in Control groups are similar. Research also shows that the post-test achievement in Biology of PU college students is significantly higher as compared to pre-test achievement in Biology in experiment group (CAI).

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