



## **Computer Assisted Multimedia Package and its Impact on Academic Achievement of Students in Relation to Their Gender**

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### **Introduction**

Computers are commonly identified with the areas of science and mathematics, these areas for many years there has been a widespread concern about gender related differences. It is therefore not surprising to find the differences emerging in the area of computers. Much research and discussion is seen into investigating gender differences among students at all levels in achievement in areas like science and mathematics. In the educational research literature, various factors associated with gender differences have been explored in connection to computer technology achievement.

### **Objectives of the Study:**

1. To develop Computer Assisted Instruction Multimedia Package on IX standard physics unit 'Force and Laws of Motion'
2. To find out the impact of Computer Assisted Instruction Multimedia Package on IX standard physics unit 'Force and Laws of Motion' on academic achievement of students studying in kendriya vidyalaya.
3. To find out whether there is difference between pre test and post test achievement scores of students in experimental group and control group studying in kendriya vidyalaya in relation to gender.

### **Population and Sample:**

The investigator has selected Kendriya Vidyalaya School, Dharwad for conducting experiment. Both control group and experimental group students are selected from this school. In experimental group there are 25 boys and 21 girls. In control group there are 26 boys and 20 girls, there were 46 students in each group total number of students were 92 informing equivalent group design. The sample for the study is selected by random sampling.

### **Tools Used for the Study:**

1. Achievement test in physics unit 'Force and Laws of Motion' developed by the investigator.

## 2. Standardise Computer Assisted Multimedia Package on unit ‘ Force and Laws of Motion’

**Hypothesis 1**

There is no significant difference between pretest and posttest achievement scores of boys and girls students studying in Kendriya Vidyalaya in experiment group.

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

Table: Results of t test between pretest and posttest achievement scores of boys and girls students studying in Kendriya Vidyalaya in experiment group

Gender	Time	Mean	SD	Mean Diff.	SD Diff.	% of change	Paired t	p-value
Boys	Pretest	30.04	7.63	-24.36	7.45	-81.09	-16.3386	0.0001
	Posttest	54.40	0.82					<0.05, S
Girls	Pretest	33.95	10.43	-20.95	10.44	-61.71	-9.1946	0.0001
	Posttest	54.90	0.30					<0.05, S

**Hypothesis 2**

There is no significant difference between pretest and posttest achievement scores of boys and girls students studying in Kendriya Vidyalaya in control group.

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

Table: Results of t test between pretest and posttest achievement scores of boys and girls students studying in Kendriya Vidyalaya in control group

Gender	Time	Mean	SD	Mean Diff.	SD Diff.	% of change	Paired t	p-value
Boys	Pretest	34.73	13.23	-12.88	13.07	-37.10	-5.0279	0.0001
	Posttest	47.62	2.14					<0.05, S
Girls	Pretest	29.85	8.87	-16.85	10.28	-56.45	-7.3291	0.0001
	Posttest	46.70	3.53					<0.05, S

**Findings of the Study:**

1. There is a significant difference was observed between pre test and post test achievement scores of boys students studying in Kendriya Vidyalaya in experiment group ( $t=-16.3386$ ,  $p<0.05$ ) at 5% level of significance. Hence, the null hypothesis is rejected. It means that, the post test scores of achievement scores are significantly higher as compared to pre test scores of boy students studying in Kendriya Vidyalaya in experiment group.
2. There is a significant difference was observed between pre test and post test achievement scores of girls students studying in Kendriya Vidyalaya in experiment group ( $t=-9.1946$ ,  $p<0.05$ ) at 5% level of significance. Hence, the null hypothesis is rejected. It means that, the post test scores of achievement scores are significantly higher as compared to pre test scores of girls students studying in Kendriya Vidyalaya in experiment group.
3. There is a significant difference was observed between pre test and post test achievement scores of boys students studying in Kendriya Vidyalaya in control group ( $t=-5.0279$ ,  $p<0.05$ ) at 5% level of significance. Hence, the null hypothesis is rejected. It means that,

the post test scores of achievement scores are significantly higher as compared to pre test scores of boy students studying in Kendriya Vidyalaya in control group.

4. There is a significant difference was observed between pre test and post test achievement scores of girls students studying in Kendriya Vidyalaya in control group ( $t=-7.3291$ ,  $p<0.05$ ) at 5% level of significance. Hence, the null hypothesis is rejected. It means that, the post test scores of achievement are significantly higher as compared to pre test scores of girls students studying in Kendriya Vidyalaya in control group.

**Conclusion:**

In this study the investigator found that there is not much difference in the scores with respect to gender. The scores of students are higher in post test is higher in experimental group. This indicates that the computer assisted multimedia package has made impact on the achievement of the students. This method of teaching is effective and hence its implementation is beneficiary.

**Reference**

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