

**EFFECT OF MULTIMEDIA ON ACHIEVEMENT IN ENHANCING PROBLEM SOLVING ABILITY OF TAMIL GRAMMAR AMONG HIGH SCHOOL STUDENTS**

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**Abstract**

*The main objectives of the study is to find out whether the package use to enhancing Problem Solving Ability of Tamil grammar among high school students is effective. The researcher adopted the Quasi-Experiment method has gathered information from effect of multimedia on achievement in Enhancing Problem Solving Ability of Tamil grammar among high school students. The investigator used simple random sampling technique for selecting the sample from the population. The sample consists of 44 high school students studying in Salem District, Tamil Nadu. The researcher has constructed and standardized the following research tool (Achievement in Tamil Grammar questionnaire) to collect data from the sample. The statistical used descriptive analysis, differential analysis. This researcher concluded that of the study there is a significant difference in the retention test scores of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through administration of multimedia package between control group and experimental group. The research outcomes highlighted Multimedia Package definitely enhanced Problem Solving Ability of Tamil grammar among high school students for experimental group it effectiveness on the development of the Learning Tamil grammar.*

*Keywords: Multimedia, Problem Solving Ability, Tamil Grammar, High School Students and Achievement*

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## **INTRODUCTION**

“Education is the heart of human life,” so students aim from walks life for quality education. Once provide to him, or her with the right skills to face any problem of life. Language is one of the significant elements that affect international communication activities. Students utilize different parts of English language skills such as listening, speaking, reading, and writing for their proficiency and communication. Multimedia provides students with opportunities to represent and express their prior knowledge among high school students. Multimedia is explaining the grammar in an easy understanding with the graphical representations that induce the students to learn eagerness on Tamil grammar content. From the definitions, it could be deduced that multimedia involves communication or presentation of information through multiple channels. Some or all of these elements (i.e. sound, animation, text, audio, image, graphic, video, etc.) could be combined and used in Tamil grammar classroom for the teaching process.

## **STATEMENT OF THE PROBLEM**

Multimedia teaching is flexible context can be created not only used in the classroom but also used after anytime and anywhere. Language teaching can also create a peaceful learning environment for motivating and interesting in teaching Tamil grammar. Multimedia teaching focuses on the direction of teachers and it also student centered method used different models at the same time and reaches a large group of students learning. The researchers to investigate the positive gains in their Achievement in Enhancing Problem Solving Ability of high school students who use multimedia to learning Tamil grammar.

## **REVIEW OF RELATED STUDIES**

Revathi Subashini and Singaravelu (2016) study enlightens the impact of Multimedia Package in Learning Pagupada Urruppukal of Tamil Grammar at standard IX. The results show that Multimedia Package is more effective than conventional method. Hence it will be more supportive to enrich grammar in Tamil.

Geetha, and Navaneetha Krishnan (2012). Investigators tried to improve the written ability of the students, particularly the slow learners, who find it difficult when it comes to writing any text. The achievement scores of the post-test was greater than the pre-test scores as well as the post attitude score was also considerably greater than the scores in the pre attitude, confirming the effectiveness of multimedia self-learning package. The gap closure in the achievement was 41.69 percentages and in the attitude was 17.7 percentages, proving that the teaching via multimedia self-learning package was more effective in developing written English.

Cheng, Y. H., Cheng, J. T., & Chen, D. J. (2012) investigate the effect of multimedia computer assisted instruction on student learning achievement using the high school curriculum entitled “molecules that dominate secret of life” from high school biology. The results show that when compared to traditional models of instruction, students using the multimedia computer assisted instruction model scored significantly better in learning achievement assessments. Secondly, the study also discussed the combined effect of instruction model and learning style on student learning achievement. The results show that students exposed to a converging learning style with traditional instruction perform significantly better than those exposed to three other learning styles. Nonetheless, students exposed to these same three other learning styles performed better when exposed to the multimedia computer assisted instruction model. As a result, under the influence of multimedia instruction, students exposed to the four learning styles (Diverger, Assimilator, Converger, and Accommodator) do not shown any significant difference.

Liu, Q. X., & Shi, J. F. (2007). Examined Language teaching approaches and methods have cast light on the language teaching theory and practice. There are still many controversies about their usefulness and appropriateness. This paper tries to analyze their effectiveness and weakness of several most influential teaching approaches and methods: Grammar-translation Method, Direct Method, Audio-lingual Method, Communicative Teaching Method, in order to have a better understanding and application in the future teaching practice.

### **OBJECTIVES OF THE STUDY**

- To find out the significant differences between the pre and post test scores of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through Traditional method for control group.

- To find out the significant differences between the pre and post test scores of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through administration of multimedia package for experimental group.
- To find out the significant differences in the post test scores of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through Traditional method and multimedia package between control and experimental group.
- To find out the significant differences between the retention and post test scores of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through Traditional method for control group.
- To find out the significant differences between the retention and post test scores of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through administration of multimedia package for experimental group.
- To find out the significant differences in the retention test scores of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through Traditional method and multimedia package between control and experimental group.
- To find whether the package use to enhancing Problem Solving Ability of Tamil grammar among high school students is effective.

### **Hypotheses of the study**

- There may be significant differences between the pre and post test scores of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through Traditional method for control group.
- There may be significant differences between the pre and post test scores of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through administration of multimedia package for experimental group.
- There may be significant differences in the post test scores of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through Traditional method and multimedia package between control and experimental group.

- There may be significant differences between the retention and post test scores of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through Traditional method for control group.
- There may be significant differences between the retention and post test scores of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through administration of multimedia package for experimental group.
- There may be significant differences in the retention test scores of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through Traditional method and multimedia package between control and experimental group.
- The package use to enhancing Problem Solving Ability of Tamil grammar among high school students is effective.

## **METHODOLOGY OF THE STUDY**

The advantage of Quasi-Experiment method is that it becomes possible to study on the problem thoroughly and deeply in all aspects. Therefore the investigator adopted the Quasi-Experiment method has gathered information from effect of multimedia on achievement in Enhancing Problem Solving Ability of Tamil grammar among high school students. The investigator used simple random sampling technique for selecting the sample from the population. The sample consists of 44 high school students studying in secondary level in Salem District, Tamil Nadu. The researcher has constructed and standardized the following research tool to collect data from the sample. The data was tabulated then the way analyzed statistically using descriptive analysis, differential analysis.

## **TESTING OF HYPOTHESES**

### **Hypothesis: 1**

There may be significant differences between in the pre and post test scores of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through Traditional method for control groups.

### **Table No: 1**

**Significance of Difference between in the pre and post-test of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through Traditional method for control groups**

Control Group	N	Mean	Std. Deviation	r value	t value	P value
Pre test	22	7.14	1.81	0.84	37.51	0.01 (S)
Post test	22	21.82	3.08			

S – Significant at 5% level

Inference:

From the above table 5, since p values are 0.01 is lesser than the table value at 0.05 so the null hypothesis rejected at 5% level of significance. Hence, there is significant difference between in the pre and post test scores of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through Traditional method for control groups.

**Hypothesis: 2**

There may be significant differences between in the pre and post test scores of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through administration of multimedia package for experimental groups.

**Table No: 2**

**Significance of Difference between in the pre and post-test of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through administration of multimedia package for experimental group**

Experimental Group	N	Mean	Std. Deviation	r value	t value	P value
Pre test	22	7.82	1.65	0.76	79.01	0.01 (S)
Post test	22	26.36	1.50			

S – Significant at 5% level

Inference:

From the above table 5, since p values are 0.01 is lesser than the table value at 0.05 so the null hypothesis rejected at 5% level of significance. Hence, there is significant difference between in the pre and post test scores of Achievement in Enhancing Problem Solving Ability of

Tamil Grammar among high school students through administration of multimedia package for experimental group.

### Hypothesis: 3

There may be significant differences in the post test scores of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through Traditional method and multimedia package between control group and experimental group.

**Table: 3**  
**Significance of Difference in the post-test of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through Traditional method and multimedia package between control group and experimental group**

Post Test	N	Mean	Std. Deviation	r value	t value	P value
Control	22	21.82	3.08	0.31	7.17	0.01 (S)
Experiment	22	26.36	1.50			

S – Significant at 5% level

Inference:

From the above table 5, since p values are 0.01 is lesser than the table value at 0.05 so the null hypothesis rejected at 5% level of significance. Hence, there is significant difference in the post test scores of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through Traditional method and multimedia package between control group and experimental group.

### Hypothesis: 4

There may be significant differences between in the post and retention test scores of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through Traditional method for control group.

**Table No: 4**  
**Significance of Difference between in the post and retention test scores of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through Traditional method for control group**

Control group	N	Mean	Std. Deviation	r value	t value	P value
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Retention test	22	13.50	5.22	0.89	13.76	0.01 (S)
Post test	22	21.82	3.08			

S – Significant at 5% level

Inference:

From the above table 5, since p values are 0.01 is lesser than the table value at 0.05 so the null hypothesis rejected at 5% level of significance. Hence, there is significant difference between in the post and retention test scores of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through administration Traditional method for control group.

#### **Hypothesis: 5**

There may be significant differences between in the post and retention test scores of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through administration of multimedia package for experimental group.

**Table No: 5**

**Significance of Difference between in the post and retention test scores of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through administration of multimedia package for experimental group**

Experimental Group	N	Mean	Std. Deviation	r value	t value	P value
Retention test	22	25.05	1.76	0.95	10.89	0.01 (S)
Post test	22	26.36	1.50			

S – Significant at 5% level

Inference:

From the above table 5, since p values are 0.01 is lesser than the table value at 0.05 so the null hypothesis rejected at 5% level of significance. Hence, there is significant difference between in the post and retention test scores of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through administration of multimedia package for experimental group.

#### **Hypothesis: 6**



There may be significant differences in the retention test scores of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through Traditional method and multimedia package between control group and experimental group.

**Table: 6**  
**Significance of Difference in the retention test scores of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through Traditional method and multimedia package between control group and experimental group.**

Retention Test	N	Mean	Std. Deviation	r value	t value	P value
Control	22	13.50	5.22	0.21	10.51	0.01 (S)
Experiment	22	25.05	1.76			

S – Significant at 5% level

Inference:

From the above table 5, since p values are 0.01 is lesser than the table value at 0.05 so the null hypothesis rejected at 5% level of significance. Hence, there is significant difference in the retention test scores of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through Traditional method and multimedia package between control group and experimental group.

## RESULTS AND DISCUSSION

The data analysis result reveals that the Multimedia on Achievement in Enhancing Problem Solving Ability has significant effect in learning selected Tamil Grammar concepts among High School Students.

The researcher believe that the mean and standard Deviation values of pre test scores in the control group 25.05 and 1.76 have better than post test scores in the control group 13.50 and 5.22 respectively.

The researcher believe that the mean and standard Deviation values of pre test scores in the experimental group 25.05 and 1.76 have improved than post test scores in the experimental group 13.50 and 5.22 respectively.

The researcher believe that the mean and standard Deviation values of post test scores in the experimental group 25.05 and 1.76 have enriched than post test scores in the control group 13.50 and 5.22 respectively.

The researcher believe that the mean and standard Deviation values of post test scores in the control group 25.05 and 1.76 have enhanced than retention test scores in the control group 13.50 and 5.22 respectively.

The researcher believe that the mean and standard Deviation values of post test scores in the experimental group 25.05 and 1.76 have improved than retention test scores in the experimental group 13.50 and 5.22 respectively.

The researcher believe that the mean and standard Deviation values of retention test scores in the experimental group 25.05 and 1.76 have enriched than control group 13.50 and 5.22 respectively. Hence concluded used a Multimedia on Achievement in Enhanced Problem Solving Ability of Tamil Grammar for experimental method among High School Students.

## **CONCLUSION**

This researcher concluded that of the study there is a significant difference in the retention test scores of Achievement in Enhancing Problem Solving Ability of Tamil Grammar among high school students through administration of multimedia package between control group and experimental group. The research outcomes highlighted Multimedia Package definitely enhanced Problem Solving Ability of Tamil grammar among high school students for experimental group it effectiveness on the development of the Learning Tamil grammar. The teacher can also create shared experiences for the entire class through other cooperative activities through a digital learning multimedia. Teacher show this respect, students are more likely to have positive attitude towards their language creating a supportive environment that can benefit to the learning of all students.

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