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**Dr. Ranjit kaur**  
Assistant Professor,  
Department of Education,  
CDLU, Sirsa, India.

**Kavita Sharma**  
Research Scholar, Department  
of Education, CDLU, Sirsa,  
India.

**Dr. Shamshir Singh**  
Assistant Professor, Centre of  
Education, CUP, Bathinda,  
India.

## Effectiveness of Multimedia Approach on the Academic Achievement of Class 8<sup>th</sup> students in English

**Ranjit kaur, Kavita Sharma, Shamshir Singh**

### Abstract

The aim of this paper was to find out the Effectiveness of Multimedia approach on the academic achievement of class 8<sup>th</sup> students in English. The sample consisted of class 8<sup>th</sup> students in English of Tagore Model School. The data was collected by using an appropriate tool and analyzed by 't' test. Pretest-posttest experimental control group design was followed for this study. Means, S.D.s and t-test were used to analyze the data. The multimedia package prepared by researcher for teaching English was found to be more effective for academic achievement of class 8<sup>th</sup> students in English.

**Keywords:** Multimedia, Effectiveness and Academic achievement.

### Introduction

Man has strived for excellence in all spheres of life. This desire has given birth to new inventions and innovations in all walks of life. The world of education has also been influenced by an increase in the use of technology. Technology can be used to strengthen student learning and can be used effectively as a cognitive tool for teaching and learning in the classrooms. (Bruce & Levin, 2001) [2]. As Anshu (2006) [1] stated, much has been said and reported about the impact of technology, especially computers, in education. Students using a computer to prepare for laboratories make greater conceptual gains, and are more capable of integrating knowledge. The remark made by the Kothari Education Commission (1964-66) "The destiny of nation is being shaped in its classrooms" throws light on the importance of educational technology in modern India. Educational technology should be concerned with increasing the efficiency and effectiveness of teaching and learning. The objectives of professional education are to develop problem solving abilities and skills in our students.

Multimedia is an epitome of inventions. It combines a large number of known technologies including text, audio, music, photography, and video and packages them into something new and wonderful. For example, a presentation involving audio and video clips would be considered a "multimedia presentation." V.V. Malagi (2013) [9] said multimedia combines media elements such as text, graphics, video, animation and audio to represent and convey information. Educational software that involves animations, sound, and text is called "multimedia software." The introduction of multimedia technology into teaching – learning process not only provides an opportunity to reconsider teaching strategies to be adopted but also requires such reconsideration. It means reconsideration should address the opportunity for promoting the efficiency and effectiveness of learning process through the use of multimedia technology.

### Importance of Multimedia in education

The development of multimedia technologies for learning offers new ways in which learning can take place in schools and the home. Enabling teachers to have access to multimedia learning resources, which support constructive concept development, allows the teachers to focus more on being a facilitator of learning while working with individual students. Extending the use of multimedia learning resources to the home represents an educational opportunity with the vast and untapped potential to improve student learning.

**Correspondence**  
**Dr. Ranjit kaur**  
Assistant Professor,  
Department of Education,  
CDLU, Sirsa, India.

### Review of Related Literature

Patel. R. (2001) <sup>[11]</sup> conducted a study of learning through computer assisted learning material in relation to select production variables and contiguity and it was found the status of the CALM in terms of production variable and contiguity vis-à-vis achievement has been quite higher, expect on a few teaching points where there was need to improve upon graphics, mode of presentation, and animation etc.

Dalwadi N. (2001) <sup>[4]</sup> studied the development of computer assisted instruction in science for the students of standard 9<sup>th</sup>. The study found that computer assisted instruction (CAI) to be an effective individualized instructional technique for teaching science and was also found students as well as teachers have a positive opinion towards the computer assisted instruction.

Suwana. R. (2004) conducted a study on effectiveness of computer assisted instruction for primary school students: an experimental study. The study revealed that the computer assisted instruction developed by the researcher were significantly effective in learning five topics of Thai subjects to the students.

Anshu (2006) <sup>[1]</sup> studied comparative effectiveness of single medium and multimedia on learning gains of 9<sup>th</sup> graders in chemistry at different level of academic achievement and intelligence. The result is that the multimedia is as effective as traditional method of teaching in chemistry to develop the knowledge and understanding domain of the students.

Mehra, Vandana (2007) <sup>[7]</sup> conducted a study on teacher's attitude towards use of computer for emerging technology implementation in educational institutions. The findings of the study revealed that the teachers possessed fairly positive attitude towards computer uses but majority of the teachers needs to be provided training for using computers in instructional settings.

Sangai and garg (2009) <sup>[12]</sup> reported to assess the effectiveness of electronic media for B.Ed. students.

### Rationale of the Study

It is highly disturbing trend that standards of teaching and learning English have fallen in the country. It is therefore, important that the effective methods of teaching of language are tried out to raise the standards of teaching and learning. The use of multimedia like chart, model, LCD. Projector is almost nil in India. In subject like English, multimedia plays a significant role. Multimedia provides standardized approach of presenting information to students. By using multimedia approach a teacher can teach prose, poetry, and grammar quickly and systematically and clarify it in an effective manner. So the present study is an attempt in this direction.

### Statement of the Problem

Effectiveness of Multimedia Approach on the Academic Achievement of Class 8<sup>th</sup> Students in English.

### Operational Definition

**Effectiveness:** The word effective is some time used in a quantitative way, being very effective or not. In this study effectiveness inform about the directions and comparisons to a standard of given effect.

**Academic Achievement:** Academic achievement is the proficiency of students assessed by school authorities on the

basis of their performance in text or exam regularly conducted by school form the content taught in various subjects. But in this study pre-test & posttest experimental control design will be used for English subject. The marks obtained by students in the pre & posttest development by investigator will be treated as academic achievement of students in present study.

**Multimedia:** "Multimedia means the use of more than two media of communication in a learning package or instructional procedure." Multimedia comes in different formats. It can be almost anything you can hear or see like text, picture, music, sound, video, rewards, films, animation etc.

### Objectives

- To study the effectiveness of teaching English for class 8<sup>th</sup> through multimedia over conventional method.
- To study difference in performance of male students taught English through multimedia and conventional method.
- To study the difference in performance of female students taught English through multimedia and conventional method.
- To study the difference in performance of urban students taught English through multimedia and conventional method.
- To study the difference in performance of rural students taught English through multimedia and conventional method.

### Hypotheses

- There exists no significant difference in academic achievement scores of 8<sup>th</sup> class students of English taught through multimedia and conventional method.
- There exists no significant difference in academic achievement scores of 8<sup>th</sup> class boys students of English taught through multimedia and conventional method.
- There exists no significant difference in academic achievement scores of 8<sup>th</sup> class girls students of English taught through multimedia and conventional method.
- There exists no significant difference in academic achievement scores of urban students of English taught through multimedia and conventional method.
- There exists no significant difference in academic achievement scores of rural students of English taught through multimedia and conventional method.

### Methodology

The nature of the study clearly indicates that the present investigation is based on the classroom teaching involving both the teacher and the students. The experimental method was most suitable for the present research and was adopted by the investigator. In the present study the independent variables were methods of teaching, which were manipulated by the investigator. For the experimental group, the independent variable was Multimedia where as for the control group; the independent variable was 'Traditional Method.' Dependent variable was academic achievement. The scores obtained by the pupils in the post test.

### Population and Sample

The population for the present study was all 8<sup>th</sup> class students of Sirsa District. As, it was difficult to collect data from this

population, out of this population 100 students studying in class 8<sup>th</sup> of Tagore Model School were selected randomly. On the basis of scores obtained in pre achievement test, the whole sample was divided into two groups i.e. Experimental & Control group of 50 students each. The experimental group was taught through Multimedia i.e. through computer & the controlled group was taught through traditional method.

**Statistical Techniques**

Descriptive statistics like Mean, Standard deviation, t-test were used to classify data into various groups.

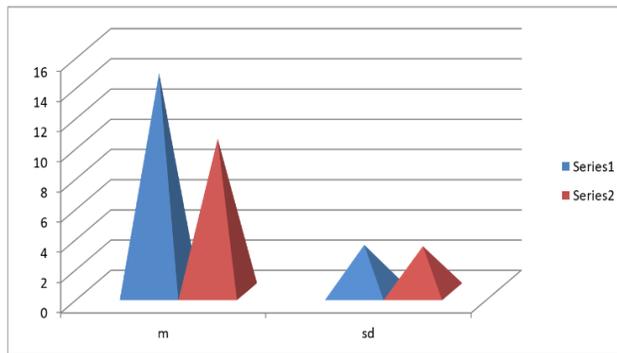
**Data Analysis and Interpretation**

**Hypothesis 1**

There exists no significant difference in academic achievement scores of 8<sup>th</sup> class students of English taught through multimedia and conventional method.

**Table 4.1:** Showing t-test of pre-test scores of experimental & controlled group of 50 students.

Group	N	Mean	Standard deviation	't' value	Level of significance
Experimental group	50	9.92	3.6	1.99	Not significant
Controlled group	50	8.38	4.12		



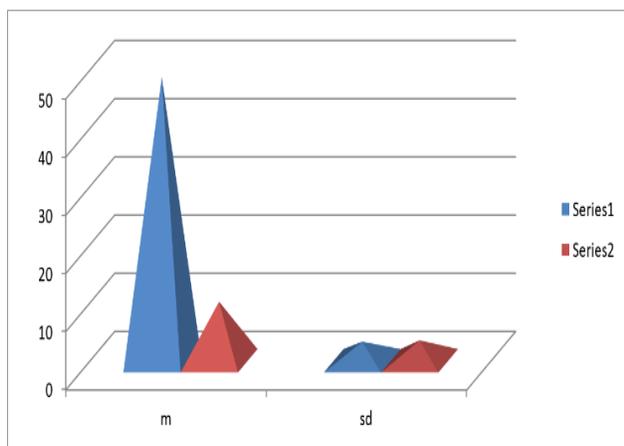
**Table 4.1** revealed that the calculated value of 't' for both groups is 1.99. Tabulated value at 0.05 level is 2.01. Our obtained 't' value is less than tabulated value. Hence it is insignificant. So it is concluded that there exists no significant difference in academic achievement scores of 8<sup>th</sup> class students of English taught through multimedia and conventional method. Thus our hypothesis is accepted. This implies that the initial behavior of the two groups was same before the intervention.

**Hypothesis 2**

There exists no significant difference in academic achievement scores of 8<sup>th</sup> class boys students of English taught through multimedia and conventional method.

**Table 4.2:** Showing 't' test of post scores of 25 boys' students of experimental (multimedia) & control group (conventional method).

Group	Method	N	Mean	Standard deviation	't' value	Level of significance
Experimental group	Multimedia	25	14.48	3.10	5.04	significant
Controlled group	conventional	25	10.12	3.01		



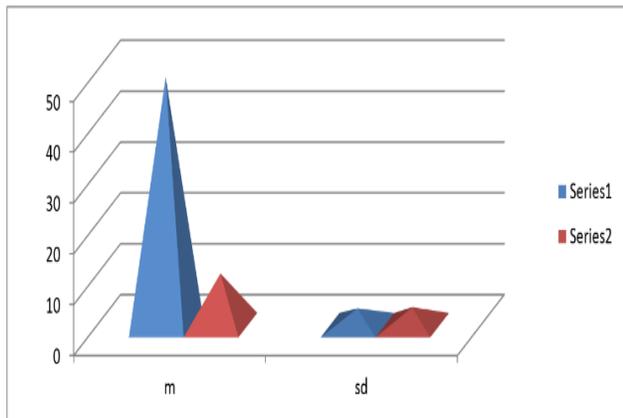
**Table 4.2** revealed that the calculated value of 't' for both groups is 5.04. Tabulated value at 0.05 level is 2.01. Our obtained 't' value is greater than tabulated value. Hence it is significant. So it is concluded that there exists significant difference in academic achievement scores of 8<sup>th</sup> class boys students of English taught through multimedia and conventional method. Thus, it is concluded that teaching English through multimedia is better than teaching English through conventional method.

**Hypothesis 3**

There exists no significant difference in academic achievement scores of 8<sup>th</sup> class girls students of English taught through multimedia and conventional method.

**Table 4.3:** Showing 't' test of post scores of 25 girls students of experimental (multimedia) & control group (conventional method).

Group	Method	N	Mean	Standard deviation	't' value	Level of significance
Experimental group	Multimedia	25	14.04	3.28	4.50	significant
Controlled group	conventional	25	9.68	3.66		



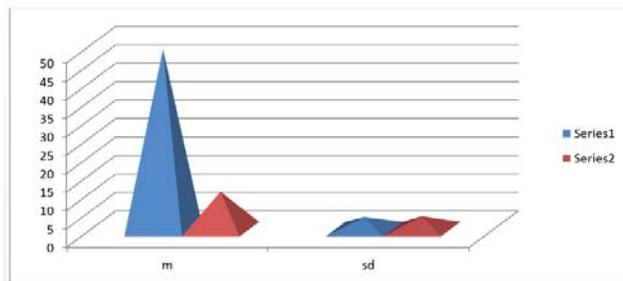
**Table 4.3** revealed that the calculated value of 't' for both groups is 4.50. Tabulated value at 0.05 level is 2.01. Our obtained 't' value is greater than tabulated value. Hence it is significant. So it is concluded that there exists significant difference in academic achievement scores of 8<sup>th</sup> class girls students of English taught through multimedia and conventional method. Thus, it is concluded that teaching English through multimedia is better than teaching English through conventional method.

**Hypothesis 4**

There exists no significant difference in academic achievement scores of 8<sup>th</sup> class girls students of English taught through multimedia and conventional method.

**Table 4.4:** Showing 't' test of post scores of 25 urban students of experimental (multimedia) & control group (conventional method).

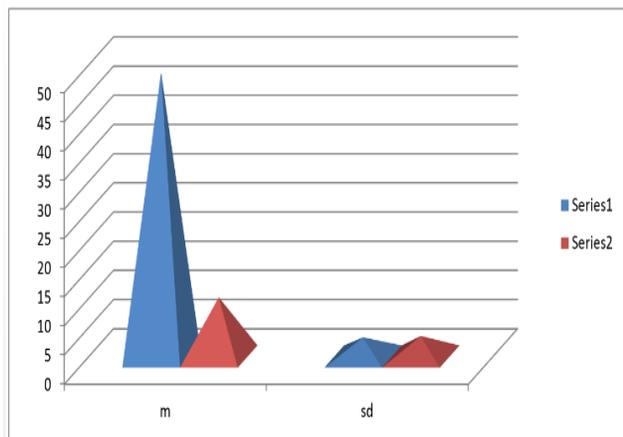
Group	Method	N	Mean	Standard deviation	't' value	Level of significance
Experimental group	Multimedia	25	13.48	2.63	5.38	significant
Controlled group	conventional	25	6.64	4.98		



**Table 4.4** revealed that the calculated value of 't' for both groups is 5.38. Tabulated value at 0.05 level is 2.01. The obtained 't' value is greater than tabulated value. Hence it is significant. So it is concluded that there exists significant difference in academic achievement scores of 8<sup>th</sup> class urban students of English taught through multimedia and conventional method. Thus, it is concluded that teaching English through multimedia is better than teaching English through conventional method.

**Table 4.5:** Showing 't' test of post scores of 25 rural students of experimental (multimedia) & control group (conventional method).

Group	Method	N	Mean	Standard deviation	't' value	Level of significance
Experimental group	Multimedia	25	48.80	3.30	4.95	significant
Controlled group	conventional	25	10.16	3.53		



**Table 4.5** revealed that the calculated value of 't' for both groups is 4.95. Tabulated value at 0.05 level is 2.01. The obtained 't' value is greater than tabulated value. Hence it is significant. So it is concluded that there exists significant difference in academic achievement of 8<sup>th</sup> class rural students of English taught through multimedia and conventional method. Thus, it is concluded that teaching English through

multimedia is better than teaching English through conventional method.

**Findings of the Study**

- Teaching of English through Multimedia is better than teaching English through Conventional Method.
- The academic achievement scores of boys' students taught English through Multimedia is better than the boys students taught English through Conventional Method.
- The academic achievement scores of girls' students taught English through Multimedia is better than the girls students taught English through conventional Method.
- The academic achievement scores of urban students taught English through Multimedia is better than the urban students taught English through Conventional Method.
- The academic achievement scores of rural students taught English through Multimedia is better than the rural students taught English through Conventional Method.

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