



## EFFECTIVENESS OF SMART BOARD INSTRUCTIONAL METHODOLOGY ON ACHIEVEMENT OF SECONDARY SCHOOL STUDENTS IN ENGLISH

Dr. Namesh Kumar & Ms. Anju Sharma

Principal/Professor in Education, CT College of Education, Jalandhar

Assistant Professor in Education, CT College of Education, Jalandhar

### Abstract

*In the twenty first century, modern technological tools and devices play an important part in our life and these tools are used for many purposes like education, entertainment, trading, communication and many more daily life activities. The wide use of these tools has certainly made a huge impact on the way how we learn and interact with each other. Thus, these technological tools and devices have revolutionized our world. Technology has changed radically and its advancement has affected almost every aspect of our lives. Technology has levied many benefits but on the other hand it imposes some challenges too. Learners of present time are more conversant with information technology than their earlier counter parts due to information technology and technical proliferation. They are more comfortable with technology than their teachers. Devices such as computers, laptops, mobile- phones, i-pads, tablets, i-pods, video and play-station games etc. became the source of entertainment, are the creation of technology. There has been a considerable increase in the number of smart boards installed in schools all over the world. Both students and teachers have positive attitudes toward the use of smart board in classroom teaching. Smart board being the need of hour is highly efficient in maintaining student interest in classroom as it involves both the audio-visual senses of learners. This study aims to study the effectiveness of smart board instructional methodology on achievement of secondary school students in English.*

**Keywords:** Smart Board, Instructional strategy, Learning technologies, achievement in English.



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### Introduction:

Education is a process that plays a vital role in each and every aspect of human personality during the entire life. Education helps in shaping the quality of life that also helps in cherishing the quality of the society and the nation as a whole. A school is an institute that aimed to teach the students under the directions of teachers. In ancient times, students used to visit gurukuls where the teacher had the full responsibility to mould the life of the students for their advancement and for the progress of the society. But as the time changed, the system of education has also changed with the passage of time. Students get education in schools where they used to stay for specific hours and teacher used to teach the students. For teaching or imparting knowledge of the subject matter to the students, teachers used traditional method i.e. chalkboard or blackboard method. With this traditional method, teachers used lecture

method by using chalkboard or blackboard for teaching in the classroom to make sure that everything was made clear to the students in the limited period of time. Blackboard revolutionized that system of education and had become a means of visual aid for big classrooms and to have one-to-one interaction with all. Verbal and written communication was more possible with blackboard that resulted into very little space for flexibility inside and outside the classroom.

Nowadays, classrooms have modern digital or interactive whiteboard or smart board for classroom teaching. Smart boards or digital whiteboards are techno savvy devices which make classroom teaching attractive, novel, and effective and user friendly. One of the latest technologies in the field of education is the use of smart classroom but the importance and part being played by blackboard in our educational system cannot be denied. Both blackboard and smart board have altered the level of interaction in the classroom.

#### **Smart board or Interactive White board:**

Smart board is one of those technological devices which help in transforming classroom activities and teachers' role. Blackboard has been developed into interactive electronic board. This smart board technology was introduced by SMART Technologies Company. The founder of this technology was David Martin and Nancy Knowlton who introduced smart board for the first time in 1991 at some government places and social media. Smart board is popularly known as interactive whiteboard (IWB). In India, smart classroom was introduced by Educomp in 2003. Educomp has revolutionized the entire education system with the help of digitalization. Educomp is one of the largest global education solution providers and was founded in 1994 by Shantanu Prakash. The company targeted to work with over 65000 schools and over 30 million learners and educators across the world in two decades. In India, Educomp is content provider of 3D multimedia educational content modules.

#### **SMARTBOARD AS AN INSTRUCTIONAL METHODOLOGY:**

Smart board was developed in 1990s to use in corporate sector. Although there are many claimed benefits of interactive whiteboard technology and now it depends upon the teacher to explore the positive features of interactive whiteboard and integrate those with their current teaching methodologies. Due to the technological advancement, our educational system has also experienced many changes like teachers had started doing experiments with their teaching with the usage of instructional methodology. The traditional blackboard methodology being two dimensional approach is gradually giving way to new innovative three or multi-dimensional approaches in field of education between the teacher and student

### **OBJECTIVES OF THE STUDY:**

1. To study the effect of smart board instructional strategy on the achievement in English (Grammar) of secondary school students.
2. To compare the achievement in English (Grammar) based on smart board instructional strategy and conventional method.
3. To study the gender difference with respect to achievement in English (Grammar) based on web based instructions.

### **HYPOTHESES OF THE STUDY:**

1. There exists no significant difference in achievement in English (Grammar) based on smart board instructional strategy and conventional method.
2. There exists no significant gender difference in achievement in English (Grammar) when taught through smart board instructional strategy and control group through conventional teaching.

### **METHOD**

#### Design

The present study was experimental in nature. The experimental group was taught using smart board instructional strategy and control group through conventional teaching.

### **SAMPLE**

The sample of the present study consisted of 200 students of class IX from representative secondary schools. The students were divided randomly in two groups. The experimental and control group consisted of 100 students each. Further the students were divided in two groups on the basis of gender.

### **TOOLS USED**

1. Achievement Test in English (Grammar) (self-Prepared)
2. Modules based on smart board instructional strategy as per syllabus for class IX English (Grammar) (Self-prepared)

### **DELIMITATIONS**

1. The study was delimited to the secondary school students of CBSE affiliated schools in Jalandhar City.
2. The study was delimited to the selected topics of English (grammar).

### **PROCEDURE**

The students were divided in two groups: control group (treated conventional teaching) and experimental group (subjected to smart board instructional strategy).

**Phase I-** (Pre-test) –In this phase the achievement test in English (Grammar) was administered as pre-test on both the groups.

**Phase II-**In this phase, the students of control group were taught by using the conventional method of teaching whereas the experimental group was taught by smart board instructional strategy

**Phase III-** In this phase, both control and experimental groups were administered the same achievement test in English (Grammar) as post-test.

### DATA ANALYSIS

The pre-test and post-test scores of both the groups were listed. Then the mean, standard deviation and difference of the mean scores were computed. Significance of difference between the mean scores on post-test and pre-test of the experimental and control groups were tested both at 0.05 and 0.01 level by applying t-test.

### PERFORMANCE OF STUDENTS IN ENGLISH (GRAMMAR) AFTER PRE-TEST AND POST-TEST-

Achievement test in English (Grammar) was administered to all the students in the form of Pre-test and Post-test. Pre-test was administered in the form of entry behaviour test to all the students and then the group was divided into two groups: experimental and control group. Experimental group was taught by smart board instructional strategy and control group by conventional method of teaching. Then the achievement test in English (Grammar) was administered to see the difference in achievement. The results are represented in the following table:

**TABLE: I Difference in Mean scores of Students in English (Grammar) after Pre-test and Post-test**

Category	N	Mean	S.D	't'-value	Inference
Pre-Test	100	8.37	5.91	3.53	Significant at 0.05 and 0.01 levels.
Post-Test	100	11.96	6.02		

It is revealed from the result given in the Table-I that mean scores of Pre-test is 8.37 and S.D is 5.91 and mean score of post-test is 11.96 and S.D is 6.02 and the calculated 't' value is 3.53. Since the obtained value of 't' is more than the table value, it is significant at both the 0.05 and 0.01 levels. It is indicated that there is significant difference in achievement in pre-test and post-test.

**PERFORMANCE OF STUDENTS IN ENGLISH (GRAMMAR) OF CONTROL GROUP AND EFFECT OF SMART BOARD INSTRUCTIONAL STRATEGY ON THE PERFORMANCE OF STUDENTS OF EXPERIMENTAL GROUP:**

**H0 1** “There exists no significant difference in achievement in English (Grammar) based on smart board instructional strategy and conventional method.”

The students of control group and experimental group were administered achievement test in English (Grammar). By applying appropriate statistics, the raw scores obtained of students of both the groups were compared. The results are given in table 2 given below-

**TABLE 2 Difference in the Mean Score of Achievement in English (Grammar) of Control and Experimental group**

Category	N	Mean	S.D	‘t’ value	Inference
Control Group	100	8.29	4.91		Significant at both 0.05 and 0.01 level
Experimental Group	100	10.58	5.47	4.78	

It is revealed from the result given in Table 2 that mean score of control group is 8.29 and S.D is 4.91 and mean score of experimental group is 10.58 and S.D is 5.47 and the obtained ‘t’ value is 4.78 which is more than the table value i.e. 1.96 at 0.05 level and 2.58 at 0.01 level, is significant at both the levels. It indicates that there is significant difference in achievement in English (Grammar) based on Web based Instructions and conventional method of teaching. Hence, hypothesis I which states that, “There exists no significant difference in achievement in English (Grammar) based on smart board instructional strategy and conventional method” is rejected.

**PERFORMANCE OF THE STUDENTS SHOWING GENDER DIFFERENCE IN ACHIEVEMENT IN ENGLISH (GRAMMAR) WITH SMART BOARD INSTRUCTIONAL STRATEGY**

**H0 2** “There exists no significant gender difference in achievement in English (Grammar) when taught through smart board instructional strategy and control group through conventional teaching”.

By applying appropriate statistics, the raw scores obtained by both the genders are compared. The results are shown in the table 3 given below-

**TABLE 3 Difference in the Mean Score of Achievement in English (Grammar) among Boys and Girls with smart board instructional strategy**

Category	N	Mean	S.D	't' value	Inference
Boys	50	12.03	4.43	4.21	Significant at both 0.05 and 0.01 levels
Girls	50	11.21	4.51		

It is shown in table 3 that the mean score of boys for achievement in English (Grammar) is 12.03 and S.D is 4.43 whereas the mean scores of girls for achievement in English (Grammar) is 11.21 and S.D is 4.51 which is more than the table value i.e. 2.01 at 0.05 level and 2.68 at 0.01 level which is significant at both the levels. It indicated that there is significant difference in achievement in English (Grammar) with web based Instructions.

Hence hypothesis 2 which states "There exists no significant gender difference in achievement in English (Grammar) when taught through smart board instructional strategy and control group through conventional teaching" stands rejected.

## CONCLUSIONS

On the basis of analysis and interpretation of results following conclusions can be drawn-

1. There is significant difference between smart board instructional strategy and conventional method group on achievement in English (Grammar). Students who were taught by using smart board instructional strategy scores better in comparison to the students taught by conventional method of teaching. So, smart board instructional strategy provided the students a variety of teaching learning experience. Thus, smart board instructional strategy found to be more innovative, interactive and promotes active engagement of students. It provides more effective interaction between the teacher and the students and also enables the learners to participate actively in the teaching learning process.
2. There was a significant gender difference found in the achievement, when smart board instructional strategy was used. As compared to girls, boys showed better scores in terms of achievement. This could be further inferred from the fact that boys are more interested in computers. Anything taught using smart board is able to attract their attraction for a longer period of time.

## EDUCATIONAL IMPLICATIONS

- Smart board instructional strategy can enhance the learning environment in terms of place, pace and time.

- The students become aware of the different learning websites and take benefit from them.
- It provides learning activities engaging the online communication tools to make them more attractive.
- Possibility of developing positive ideas and attitude about computer mediated communication.
- Improvement of teaching learning environment and process.

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