



## EFFECT OF VOICE CHATTING TECHNIQUE OVER THE WEBSITE LEARNING AND E-MAIL LEARNING FOR TEACHING BIOLOGY AT HIGHER SECONDARY LEVEL

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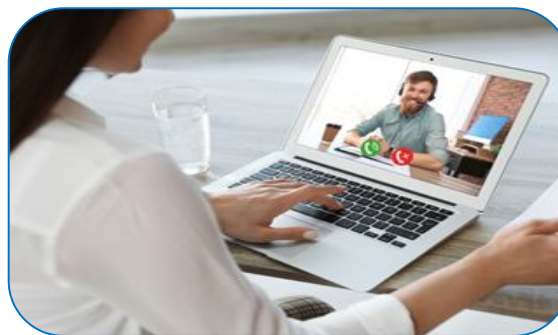
### ABSTRACT :

Educational scenario over the world has transformed with the arrival of internet and teleconferencing. Such information technology has been able to transform the traditional classroom situation to electronic and virtual classrooms. Online learning technique could be more useful for the solution of many problems faced by our ordinary classroom since it involves student-teacher interaction, on the spot doubt clearance and interacting with subject experts. In this context, the investigator considered it necessary to develop an online learning strategy for teaching Biology at Higher Secondary Level. Three techniques of online learning strategy, namely Website learning, E-mail learning and Voice chatting technique were selected for the purpose. The experimental method was selected for finding out the effect of this strategy. The Pre-test, Post-test Non-Equivalent group design is adopted for conducting the study. The groups selected for the study were an experimental group and a control group from two schools at two districts of Kerala State. The tools used in the study are, Achievement test, Lesson transcripts for Website learning, E-mail learning and Voice chatting.

**KEYWORDS :** Website Learning, E-Mail Learning, Voice Chatting.

### INTRODUCTION

In the present scenario, for all students, the same type of teaching is not effective. In a normal classroom, only the needs of average students are satisfied. To make the students more interesting in the teaching learning process, different methods are used. Educators are being talking more about the use of information and communication technology in the field of education. Advances in telecommunication technologies, have changed the student's demographics and have resulted in the proliferation of Online learning opportunities which is now introduced into the educational field. The term 'Online learning' in general refers to learning facilitated and supported using information and communications technology. It can cover a spectrum of activities from supported learning, to blended learning, to learning that is entirely online. Online learning, therefore, is an approach to facilitate and enhance learning through both computer and communication technology. Online learning today allows students to get fully involved in interactive and collaborative learning processes with the internet. The traditional classrooms are being converted into a modern electronic classroom by the introduction of online learning. Recently in every school, smart classrooms are introduced, and the well-equipped lab has been introduced with internet facility. For online teaching, Voice- chat technique, E-mail learning and



website learning can be used. By using online, the students get much detail about the topic from the expert teachers other than their class teachers. One of the most interesting and powerful dynamics in online communication is "many to many communication" quality that facilitates group learning. Any member can communicate with all other members in the given group network or conference. Each member, in turn, can reply not only to the sender but to everyone else in the network. Thus, the internet connects the pupil from various parts of the world and provides a rich resource of information. Through websites, higher educational institutes can make use of them to impart education in an effective manner. Voice chatting helps the students to interact with the teacher and even clear their doubts. Online learning promises to remove the time constraints of the traditional classroom. In the traditional classroom, the students should capture the information at the time of delivery. There is no option of revisiting the discussions other than referring to notes captured during the session or from memory. Online learning is expected to overcome this disadvantage by providing access to the sessions asynchronously after the virtual sessions. This asynchronous nature opens another possibility of deferred learning at a convenient time of the students choosing. The emphasis on the written word in Online learning should encourage a deeper level of thinking among students.

The investigator assumes that Online learning technique could be more useful for the solution of many problems faced by our ordinary classroom since it involves student-teacher interaction, on the spot doubt clearance and interacting with subject experts. In this context, the investigator considered it necessary to develop an online learning strategy, i.e. website learning E-mail learning and voice chatting and to compare the effect of these techniques in the achievement of Biology at the higher secondary level.

### OBJECTIVES

- To develop a Web site for teaching biology at higher secondary level.
- To develop Voice Chatting technique for teaching biology at higher secondary level.
- To develop E-mail learning for teaching biology at higher secondary level.
- To compare the effect of Voice chatting technique over the Website learning and E-mail learning on the achievement in biology of the students at higher secondary level.

### HYPOTHESIS

1. Voice chatting technique is more effective for teaching Biology than the Website learning in teaching Biology at Higher Secondary Level.

### METHODOLOGY IN BRIEF

To develop an online learning strategy for teaching biology at higher secondary level the investigator selected three techniques of online learning strategy that is Website learning, E-mail learning and Voice Chatting technique.

First, the lesson transcripts were developed for these techniques. For this, a topic from the Biology textbook of Higher Secondary Level was selected. The chapter Photosynthesis is selected, and the chapter is divided into nine lessons. For preparing the lessons, Direct Instructional model was used. Since the study was based on self-learning i.e. the students must learn through Website, E-mail and Voice Chat by themselves with minimum help from the teacher, the direct instructional model is found to be suitable. Keeping the model of Gerardo Mendoza, the investigator prepared the lesson transcripts for Website, and Voice Chatting technique.

For finding out the effect of online learning strategy, the investigator adopted Experimental method. The pre-test post-test Non-equivalent group design is used for the study. The design is often used in classroom experiments when experimental and control groups are such naturally assembled groups as intact classes which may be similar. The investigator for finding out the effect of online learning strategy has prepared an Achievement test. This achievement test has been given as the pre-test for both the control and

experimental groups. Then the investigator used the Activity Oriented method for the control group and the online learning strategy over the experimental group.

The tools used in the study are achievement test, lesson transcripts for Website learning, E-mail learning and Voice Chatting technique.

### ANALYSIS AND INTERPRETATION OF DATA

To find out the most suited technique among the different online learning, analysis of variance has been conducted.

Means and Standard deviations of the achievements of Website learning, E-mail learning and Voice chatting technique were found out and given in the table 1.

**Table 1: Means and SDs of the Achievements of Website Learning, E-Mail Learning and Voice Chatting Technique**

Serial No	Groups	Mean	Standard Deviation
1	Website learning	13.84	3.06
2	E-mail learning	14.90	2.93
3	Voice chatting technique	15.58	2.92

The mean scores obtained for the Website learning, E-mail learning and Voice chatting techniques are 13.84, 14.90, and 15.58 respectively. This shows that the mean value of voice chatting group is more than the E-mail learning group and Website learning group.

The standard deviation of the Website learning, E-mail learning, and Voice Chatting technique are 3.06, 2.93, and 2.92 respectively. This also shows that the scores do not vary much from the mean value.

This is subjected to Analysis of variance to find out the most effective online learning technique for teaching Biology at Higher Secondary level. The result of the analysis of variance is given in the Table-2.

**Table 2: Summary of Analysis of Variance of Achievements of Website, E-Mail and Voice Chatting Technique**

Sources of variation	df	Sum of squares	Mean squares	SD
Among the group	2	58.27	29.14	25.74
Within the group	93	749.97	7.98	
Total	95	808.24		

$$F = 29.14/7.98$$

$$= 3.65$$

$$F \text{ at } .01 = 4.85$$

From the Table F

$$F \text{ at } .05 = 3.10$$

The obtained F value 3.65 is greater than the table value 3.10 at .05 level. This shows that there are significant differences between and among the groups.

To find out which pairs differs; Scheffe's test is used as a posthoc analysis. The pairs taken for comparison are Website- Voice chatting, Website- E-mail and Voice chatting- E-mail groups. The result of Scheffe's test is given in Table-3.

**Table 3: Result of Scheffe's test for comparing Website-Voice chatting, Website-E-mail and Voice chatting-E-mail groups**

Groups compared	Mean difference	F- Value
Website- Voice chatting	-1.90	7.22
Website- E-mail	-0.87	1.51
Voice chatting- E-mail	1.03	2.12

The result of scheffe's test indicate that among the three paired groups compared, significant differences exist only between Website- Voice chatting groups students, whereas Website- E-mail groups and Voice chatting- E-mail groups don't show any significant difference. This inference is supported by the following findings. The F value of Website- Voice-chatting is 7.22, Website- E-mail group is 1.51, and Voice chatting- E-mail group is 2.12. Taking the mean scores, it is inferred that the Voice chatting technique is more effective in teaching Biology at Higher Secondary level.

**There is significant difference between the achievement of students taught through Website learning, E-mail learning, and Voice Chatting technique**

From the analysis of variance of the scores of achievements of students taught through E-mail learning, Website learning and Voice Chatting technique, the F value obtained (3.65) is greater than the table value at .05 level.

The result of Scheffe's test indicate that among the three paired groups compared; significant differences exist only between Website- Voice chatting groups students whereas Website- E-mail groups and Voice chatting- E-mail groups don't show any significant difference. **Taking the mean scores, it is concluded that the Voice chatting technique is more effective in teaching Biology at Higher Secondary level.**

## CONCLUSION

From the findings of the study, it was seen that Voice Chatting are more effective than the website learning and E-mail learning for teaching Biology at Higher Secondary Level. The three techniques selected help the students to learn the content at their own pace. It helps the students to practice the lessons whenever it is needed. Individual learning can be done so that the students might be more interested. When the students learn through the website, the lessons are prepared in such a way that they can proceed to the next lesson only after answering the questions; they cannot skip any topic. Without the presence of a teacher, the students learn through the website. But the other two techniques i.e. E-mail learning and Voice Chatting is done in the presence of a teacher. The resource person can sit at any place and through Voice Chatting, they can give the lessons to many students who sit in different parts of the world at the same time. The students are given the opportunity to ask their doubts. From the study, it is proved that even though the technology has developed a lot, only with the presence of a teacher, the teaching-learning process becomes more effective.

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