

Utility of Interactive Whiteboards in Second Language Classrooms

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Abstract- Interactive White Boards are one of the electronic devices which is useful for teaching learning process, particularly for repetition of work, review work, storing the class teacher's work in the board as well as the direct use of internet etc. It is a large touch-sensitive panel that connects to a digital projector and a computer, displaying the information on the computer screen. In this experimental study the objectives consists of (i) to know the utility of interactive whiteboard program for second language classrooms; (ii) to apply the interactive whiteboard program and to find out their utility level for the second language classrooms at Bachelor of Engineering level. For that, the samples of 140 B.E. Students were selected among five different Engineering colleges namely; Government College of Engineering, Francis Xavier Engineering College, Infant Jesus College of Engineering, SCAD College of Engineering, PSN College of Engineering in Tirunelveli District of Tamil Nadu state of Indian Country. After the analysis, the conclusion was, the utility of interactive whiteboard between male and female as well as rural and urban B.E. Students significantly differ with each other. They are in need of more awareness and in service training of interactive whiteboard.

Index Terms- Interactive whiteboard, teaching process, students, language classroom, utility

I. INTRODUCTION

An interactive whiteboard is a large, touch-sensitive panel that connects to a digital projector and a computer, displaying the information on the computer screen. It resembles a traditional whiteboard and is used similarly. The computer connected to the interactive whiteboard can be controlled by touching the board directly or by using a special pen. Such input actions are transmitted to the computer instead of using a mouse or keyboard. Interactive white board is used in many Engineering colleges as replacements for traditional whiteboards or flip charts. They provide ways to show students anything which can be presented on a computer's desktop as educational software, websites and others. In addition, interactive white boards allow teachers to record their instruction and post the material for review by students at a later time. This can be a very effective instructional strategy for students who benefit from repetition, who need to see the material presented again, for students who are absent from classes, for struggling learners, and for review for examinations. Brief instructional blocks can be recorded for review by students they will see the exact presentation that occurred in the classroom with the teacher's audio input. This can help transform learning and instruction.

II. USE OF INTERACTIVE WHITE BOARDS IN CLASSROOMS

Interactive White Boards educational resources allow students to engage and interact with the technology to become active participants in learning. Students with special needs can particularly benefit from the Interactive White Boards presentation of multimedia content on a large screen as it can aid in both information processing and retention. Optimal use of an Interactive White Board involves both the teacher and students using it in a classroom situation. It can be used to i) allows presentation of students in more interactive and collaborative way; ii) show video clips that explain difficult concepts in any curricular area; iii) demonstrate how an educational software program works using their fingers and hands to draw an object; iv) display internet resources in a teacher – directed manner and v) create hand written drawings, notes and concept maps during class time and all of which can be saved for further references.

III. TECHNICAL CONSIDERATIONS

Interactive White Boards have five separate components viz., i) touch sensitive white board, ii) digital projector, iii) computer, iv) software and v) connectivity between the computer, white board and the projector. The computer and the associated white board software are fundamental to the process. The digital projector allows everything that is happening on the computer screen to be projected onto the white board where everyone can see it. The touch sensitive white board allows users, either the teacher or students, to interact with the information being displayed, i.e. to interact with the computer. Normally marker pens (electronic or ordinary) are used as input devices, but some white boards allows user's fingers as the pointing device, directly on the board.

IV. TYPES OF BOARDS

The surface of an white board is critical to its functionality and is a distinguishing factor between the different technologies used in the board themselves. The boards range in size from 37 inches diagonal to 80 inches diagonal and these can be fitted to a moveable stand enabling access in different locations. There are three different technologies viz., (i) Resistive membrane; (ii) Electro- magnetic pick up board and (iii) Infra- red scan board

V. INDIAN CLASSROOMS WITH INTERACTIVE WHITE BOARD

The impact of Interactive White Boards on teaching and learning enables teachers to demonstrate a wide range of concepts, while removing many of the time-consuming elements of writing on a traditional board. For instance, diagrams related to transcoding i.e. flow chart, bar chart, pie chart, can be easily drawn from the internet and annotated in real-time, increasing the pace of delivery and allowing more time for quality teaching. More important, however, is the transformational effects Interactive White Boards have had on learning. They appeal to different learning styles, and through the process of participation, they promote high levels of interaction, support links between learning episodes and encourage individuals to take ownership of their learning (Vijayakumar, 2012). It is clear from the research that to fully realize the benefits of Interactive White Boards must accompany the introduction of the technology. College teachers still differ vastly in their attitude and approach to implementing such technology (Senthilkumar, 2012).

Those who are more enthusiastic about the Interactive White Board tend to embrace its use and want to explore the opportunities that it brings to the classroom. It is therefore important that college teachers are aware of the Interactive White Board training available, both face-to-face and online. In addition, regular access to Interactive White Boards is essential as it enables teachers to practice their skills and become confident users of the technology. Similarly, providing access to software outside the classroom makes it far easier for teachers to prepare lesson content and explore its versatility (University of Stockholm, 2006).

Furthermore, as Interactive White Board use continues to evolve, the technology is increasingly being seen as a hub to which we can attach additional solutions. A technology that is providing particularly popular is Learner Response Systems, which allows individual students to participate through handheld devices and provides teachers with instant insight into their understanding. There is also a growing interest in visual presenters, which enable teachers to capture, display and annotate still and moving images.

VI. OBJECTIVES AND HYPOTHESIS OF THE STUDY

The objectives of the study are i) to know the utility of Interactive White Board program for second language classrooms; ii) to apply the Interactive White Board program and to find out their utility level for the second languages classrooms at Bachelor of Engineering level. The hypothesis of the study are ; i) there is significant difference between the utility of Interactive White Board for B.E Students with respect to the gender and ii) there is a significant difference between the utility of Interactive White Boards for B.E Students with respect to their locality.

VII. SAMPLE FOR THE STUDY

Explorative method was adopted with the convenience sampling size of 100 B.E Students were selected among 5 different Engineering Colleges namely: 1. Government College of Engineering 2. Francis Xavier Engineering College 3. Infant

Jesus College of Engineering 4. Scad College of Engineering 5. PSN College of Engineering in Tirunelveli district of Tamilnadu state of Indian country.

VIII. METHODOLOGY OF THE STUDY

For this research a second language class teaching was conducted by the investigator through Interactive White Board method and to explain the different uses with demonstrations. An utility of Interactive White Board questionnaire was prepared with four point scale by the investigator and that was found that with face validity and reliability (0.81) with 15 statements asking of Strongly Agree (SA), Agree (A); Dis Agree (DA) and Strongly Dis Agree (SDA). Two hours second language lecture was discussed through Interactive White Board and the questionnaire was distributed to the group of students and to collect it. The collected data was scored as 4 for SA, 3 for A, 2 for DA and for 1 for SDA and then interpreted with Mean, S.D. and 't' test through Statistical Package for Social Sciences (SPSS Ver. 19.0) and it explained in table-1 and the questionnaire was attached in Appendix

Table -1 : Utility of Interactive White Board of B.E Students (Gender wise)

Variable	Strength	Mean	S.D.	't' value
Male	70	15	1.732	7.138
Female	70	13	1.581	

Significant at 0.05 level

The table – 1, explains the utility of Interactive White Board between the Engineering students according to their gender wise. The acquire 't' value (7.138) is greater than the tabulated 't' value (1.97 at 0.05 level) and the acquired 't' value is significant. Hence, the utility of Interactive White Board between male and female Engineering Students are significantly differ each other.

Table – 2: Utility of Interactive White Boards of B.E Students (Locality wise)

Variable	Strength	Mean	S.D.	't' value
Rural	70	13	1.501	8.323
Urban	70	11	1.338	

Significant at 0.05 level

The table – 2, explains the utility of Interactive White Board between the Engineering Students according to their locality wise. The acquired 't' value (8.323) is greater than the tabulated 't' value (1.97 at 0.05 level) which is significant. Hence the utility of Interactive White Boards scoring between rural and urban Engineering students are significantly differ each other.

The findings of the study are : i) Interactive White Board program is differ utilization in students learning in second language classrooms at B.E level either in gender wise and in locality wise; ii) Interactive White Board program is effective in teacher education program and it improved competencies of the particular subject (English) and learning approach; iii) Interactive

White Board programs created more utilization awareness about use of technology in second language classrooms.

IX. CONCLUSION

The conclusions of the study are as follows i) the use of Interactive White Board program impacts positively on the B.E program ii) it improves effectiveness of practice teaching lesson through Interactive White Board preparations iii) it motivate the students to plan and implement practice lessons more efficiently through Interactive White Board preparations iv) the Interactive White Board class teaching effectively develop the students' knowledge in the part of video resources and the use of usage of YouTube, Wikis, Face book, Twitter and open educational resources. (Wany, J and Hartley, K 2003).

Interactive White Boards are being adopted in classrooms around the world. They have generally been well received, with many college teachers claiming they could no longer teach without one. A number of benefits are identified includes impact on presentation, on teaching practice, on the learning environment and on learning itself. To ensure maximum benefit, they are in need of awareness of Interactive White Board and also needs in service training in Interactive White Boards utilization.

The reality is that Interactive White Boards have now become an integral part of the fabric of many second language classrooms and offer teachers a valuable tool offering a number

of benefits, both in terms of the practical advantages for teaching and learning. The utility of Interactive White Board will help college teachers to reap the rewards of the technology and ensure innovative and effective use in the classrooms.

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APPENDIX

Utility of Interactive WhiteBoards Questionnaire

No	Statements	SA	A	DA	SDA
1	Teaching students how to navigate the internet through IWB				
2	Teach editing skills using cut, edit and paste through IWB				
3	Save lessons to present to students who were absent				
4	Reinforce skills by using on-line interactive web sites				
5	Use individually in IWB and asked to save it				
6	Use the software to create lessons before teaching the subjects				
7	Create video files to teach as a subject review				
8	Take notes directly from PowerPoint presentations				
9	Students are enjoying the subject demonstrations				
10	Students are attracted by the different learning styles in IWB				
11	Students are interactive through NET in IWB				
12	Teachers use ready-made presentations Eg. Slide share				
13	Teachers teach avoiding inappropriate contents Eg. Facebook				
14	Teachers teach avoiding inappropriate contents Eg. Facebook				
15	Through open educational resources, they can open materials				