

## Impact of Interactive Whiteboards in Academic Activities

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**Abstract-** *Now technology plays a major role in the world. According to that use of digital devices is also one of the main advantages for humans to fulfill their daily needs. There are many digital devices that are used in academic studies to meet academic requirements. So Interactive whiteboards are one of the main advantages for the students who are eager to learn education by using technical devices. So, this study was carried out to explore the impact of using Interactive whiteboards in academics. This research was conducted among information communication technology specialized students in arts and culture, South Eastern University of Sri Lanka at Oluvil. This research explored that interactive whiteboard have a considerable impact on students. When we take higher education, the outcome of learning is more appreciated, and the Interactive whiteboards are used by the students in the lecture hall to make their learning perfect and effective. Interactive boards are impacted studies and improve the progress in their learning and enhance the teaching techniques. Many digital devices used by the students for many purposes include interactive boards that impact student's education and their studies. The main focus of this study is to guide students to use interactive boards in their education field.*

**Keywords:** *Interactive, boards, digital, impact, education*

### I. INTRODUCTION

According to smart technology, the use of Interactive whiteboards is one of the fundamental tools used in the educational field. It helps to improve the performance of the students and enhance the progress of the students in the field of education. There are a lot of questions that have arisen by the rapid growth of using Interactive whiteboards in education. So, this study of the impact of using interactive whiteboards in academic activities to address the questions which arose on this impact of Interactive whiteboards. With the rapid development of information technology, the spread of using Interactive whiteboards is very highly appreciated. The

fundamental use of these Interactive whiteboards helps to give proper learning and teaching to enhance the performance and the progress of the students. These Interactive whiteboards were recognized to use this digital device in education for teaching and learning.

Most of the governments were provided many Interactive whiteboards to the students who are studying in schools and universities to enhance their progress and take an interest in studies. Digital opportunity projects were introduced by many countries for making an effective environment for the students and teachers on learning and teaching.

And if we take teachers, they can make their teaching through these Interactive whiteboards meaningfully and successfully and can do multiple tasks using Interactive whiteboards and also provide multimedia facilities and also many fun and enjoyment can get by these Interactive whiteboards while studying and teaching.

Internal and external variables were analyzed for this research. If we see about the interactive digital board, these are most fundamental teaching devices for higher education and development for this purpose; we have used the condition of digital interactive boards for the south eastern university information communication technology special students in the following years of

(2017/18), (2016/2017), (2015/2016), (2015/2014). The use of the interactive digital board applied to the development of personal, academic, and professional competencies is a part of the university goal. By those applications, good progress will be gained by the students in academics and professional competencies, and the students' performance will be increased by these interactive digital boards, and students can improve their performance in studies by the interest of the interactive digital boards.

## II. LITERATURE REVIEW

Based on (Shi et al, 2012); they stated under the heading of "The impact of the Interactive whiteboards on education" whiteboard is one of the potential tools for collaboration, and also it helps to improve learning outcomes and helps to the lesson planning and also the mentioned Interactive whiteboards one of the teaching strategies which is a method to develop in education. Traditional equipment is not unable to meet the modern educational requirements, and also they mentioned the positive side of Interactive whiteboards as well as the negative side also, such as frequent technical problems occurred, the latency of response, and difficulties in operations.

According to (Tufan,2013) stated under the heading of "Interactive whiteboards factor in education: student's points of view and their problem", some countries introduced Interactive whiteboards to elementary students' education, and the government believes that Interactive whiteboards will raise the students' learning efficiency. By the use of Interactive whiteboards, it increases the interest in the lessons and helps to motivate the students and helps to make joy in their studies .and he mentioned that Interactive whiteboards have a positive effect on students' attitudes as well as it is effecting on teacher's attitudes. And Interactive whiteboards are an innovative tool used for learning and teaching processes very effectively. And also, he mentioned problems related to the Interactive whiteboards, which means technical problems, lack of technical skills to operate Interactive whiteboards and analyzed that female students have more positive attitudes towards the Interactive whiteboards than male students.

According to (Gregorcic, Etkina and Planinsic,2018), under the heading of "A new way of using the Interactive whiteboards in high school physics classroom: a case study." Interactive whiteboards help the school to improve the class teaching by adding visual impact to the lessons and interactivity. And Interactive whiteboards have become a common tool for academic activities in western countries' schools. And also, Interactive whiteboards play a crucial tool to explain the teacher to the students in a visual way. And in some countries, Interactive whiteboards use almost a common tool in primary and secondary education. And also, he mentioned that some problems related to Interactive whiteboards like a lack of technical

skills, and some teachers have lack of knowledge of how to use interactive whiteboards, and having lack of appropriate teaching material to use with interactive whiteboards. And students can involve in studies by observing video recordings, voice records related to the studies.

According to (Swan, Schenker and Kratoski, 2008) under the heading of "The effects of the use of interactive whiteboards on students achievement" that the use of interactive whiteboards can be used to increase the students' achievement .and it helps to improve the students' scores and standards, and also interactive whiteboards help in mathematics, reading, language, art and for classroom management .and also by his analyzing about interactive whiteboards usage for a particular subject, the students who used the interactive whiteboards performed well in that particular subject.

According to (Davidovitch and Yavitch, 2017) , they mentioned under the heading of "**The effect of smart boards on the cognition and motivation of students'**", students are called as a digital learner because they are using many digital devices for their learning process by the use of these technologies. 72% of students satisfied and helps to understand the material taught in the class by using this digital smart equipment for their studies; it can be motivated and boost their studies and help to show the studying material visually to the students. And it is a common technology tool used in the classroom, and it helps students to understand the material and improve students' achievement in their studies. And mentioned the advantages and disadvantages of smartboards for students and teachers and also and analyzed that smartboard is an important mechanism for students' evaluation. And mentioned changes that occurred with introduced of technology and smart board to the school system.

## III. PROBLEM STATEMENT

The goal of this study is to determine the impact of using interactive boards in academic activities in the learning performance of the students in the faculty of arts and culture students in information communication technology special. Especially it helps to solve the following problem.

1. Lack of interest to the students in learning with manual ways.
2. It is difficult to use the manual boards to explain to the students.

3. It is difficult to study without a visual method
4. Find new ways to use the interactive boards

Those problems were inspired by this research on the theme of the impact of using Interactive whiteboards in academic activities.

#### IV. METHODOLOGY

This study was conducted at south eastern university of Sri Lanka. This educational place consists of information communication technology special students in the faculty of arts and culture. First, we have conducted the interview individually and in the group among the students who are doing information communication technology as a special subject. We have requested the details of the students who are studying in information communication technology special to the dean office and collected the number of students who are studying in information communication technology special. According to that, there are 350 students studying in the faculty of arts and culture, including that 60 are the information communication technology special students from 1<sup>st</sup>, year 2<sup>nd</sup>, year 3<sup>rd</sup> year, and 4<sup>th</sup> year. We have used qualitative research techniques to check whether how interactive digital boards are impacted students in academic activities. Semi-structured questionnaires were used for the purpose of data collection.

The questionnaire has four parts as the first part consists of respondents' background second part related to the what are the subjects mostly Interactive whiteboards are used third part consists of the uses of interactive whiteboards during academic activities the final part consists of identifying the misuse of the digital interactive board in academic activities. According to these questions, the respondent's response to the open and closed-ended questions.

These questionnaires were distributed among the students who are studying information communication technology as a special subject in south eastern university of Sri Lanka because these students are highly involved with the digital environment and devices.

Table 1: Uses of Interactive whiteboards in academic activities.

Uses of Interactive white boards	% of never use	% of always use
Prepare for lesson	5%	85%
Collect resources	20%	70%
Use ppt for teaching	45%	60%
Prepare exercise	60%	30%
Communicate online	35%	60%
Online library	40%	30%
Video clips for teaching	20%	65%

Table 2: Misuse of Interactive whiteboards in academic activities.

Ways of Misusing the Interactive Whiteboards	Percentage of Misusing Interactive Whiteboards
Use for Playing Games	45%
Use for Personal Needs	65%
Use for Watching Films	30%
Use as A Video Conference Tool to Communicate Unwanted Ones	5%
Accessing Social Media	50%

Table 3: The percentage of using interactive whiteboards in a variety of subjects for learning.

Subjects mostly used Interactive whiteboards for learning	Percentage of students used an interactive whiteboard for learning subjects
Practical subjects (word, PowerPoint, Excel, graphic design. etc.)	90%
Programming (VB, python, java, etc.)	80%
Web technology subjects(html, CSS, )	85%
Theory subjects	60%

V. RESULTS AND DISCUSSION

In this section, the results analyzed and choose the students to do the research from information communication technology special students who are in 1<sup>st</sup>-year 2<sup>nd</sup> year 3<sup>rd</sup> year and 4<sup>th</sup> year from arts and culture in the south eastern university of Sri Lanka because they are the students who mostly interact with digital devices and most of the governments are issued these Interactive whiteboards to the universities and schools. In this survey, 60 students have participated.

The ratio of females and males of this survey was 54:6 .and following chart showing the uses of Interactive whiteboards among the students in arts faculty in south eastern university of Sri Lanka the analyzed the uses of Interactive whiteboards in academic activities, above 50% of the students have used the Interactive whiteboards in their academic studies and get benefit in their learning activities, and interactive whiteboards were misused by some students and also most students were used Interactive whiteboards for learning many subjects .so by the use of these Interactive whiteboards, can increase the progress of the students and not only in studying but also they can become an innovative student in the world. So, the bar and pie chart shows the students were used Interactive whiteboards in their academics and used in many subjects.

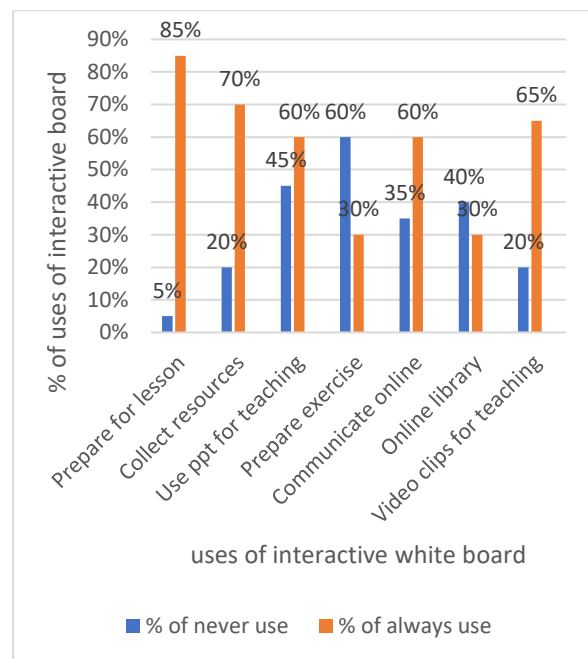


Figure 01: Uses of Interactive whiteboards by the information communication technology special students in academic activities.

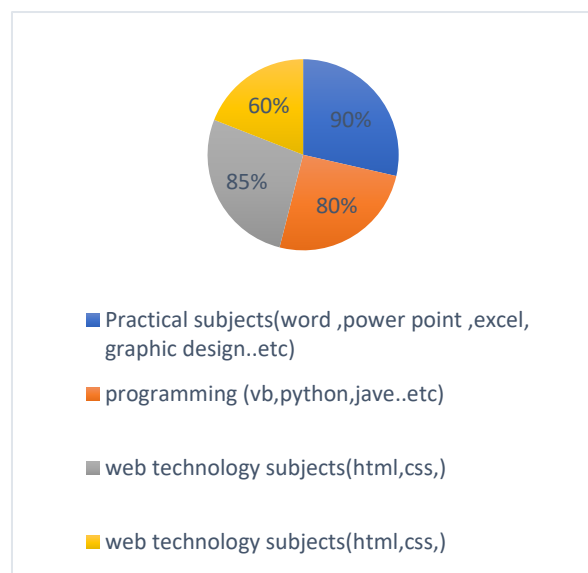


Figure 02: Percentage of students using interactive whiteboards for learning a variety of subjects.

The end of this study found something related to the impact of Interactive whiteboards.

- Averagely 57% of the students have always used the Interactive whiteboards in their academic activities, and 33% of the students are never using the Interactive whiteboards in their academic activities.
- And if we analyzed the misuse percentage, averagely Interactive whiteboards are misused by 43% of students.

- Furthermore, 80% of the subjects are learned by the use of Interactive whiteboards.
- With the use of interactive boards, we can use many applications.
- Most of the teachers and students are using Interactive whiteboards for their teaching and learning purposes.
- Most of the students are very interested while they are studying with a digital device (interactive whiteboard)
- Most of the teachers and students will use Interactive whiteboards for all learning and teaching purposes.
- If we take a class, all the students cannot get the same use of interactive whiteboards.

So those are the findings have found through this study of the impact of Interactive whiteboards in academic studies.

## VI. RECOMMENDATION

A very vital and successful way to improve the students' performance is establishing Interactive whiteboards in their learning process to learn with interest without any difficulties and can study in an effective manner. And want to give proper digital devices for their study purpose to enhance their progress. In some classes, this interactive facility is not available and very poor, so they want to fulfil this lack of shortage. And by introducing practical based subjects like visual graphics, animation subjects and can show practical with the help of interactive whiteboards. And provide internet connection facilities to every Interactive whiteboard to access the internet. And provide a free wi-fi facility to use the Interactive whiteboards. And also want to conduct an awareness program about the effects of the Interactive whiteboards on the students when they misuse them.

## VII. CONCLUSION

This study provides the significance of using digital interactive boards in academic studies. In earlier literature we can understand that the learners and teachers used these Interactive whiteboards for their teaching and learning process to motivate the students' performance and their progress in studies and make fun and enjoyable class. Can note the changes in the progress and the improvement of learning and in the education process of the students when comparing who are using a manual whiteboard and Interactive whiteboards for their study

purposes and can note the impact of it in academic activities. It can ensure that ubiquitous and digital innovation with information communication technology. And it easy to understand the way of using Interactive whiteboards, which is very useful for students rather than studying manually. And Interactive whiteboards it has a positive impact at the same time it has a negative impact on academics when they use them in negative ways. Still, if we compare the positive impact with negative impact, the positive impacts are mostly can be derived from the use of Interactive whiteboards in academic studies than the negative impact. So by analyzing all, we can note that the students can interact with other students and make communication and also can enhance knowledge with the use of Interactive whiteboards.

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