

College Teachers' Usage of Smartboards For Teaching And Attitude Towards Its Usage

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Abstract: This study focussed on College Teachers' usage of Smartboards for teaching and Attitude towards usage of Smartboards. The study conducted with 422 college teachers working in Arts and Science and Teacher Education Colleges in Ariyalar, Cuddalore, and Tiruchirappalli Districts of Tamilnadu, India. The sample was selected by using Simple Random Sampling Technique. Tools used: 1) College Teachers' usage of Smartboards for teaching scale constructed and validated by the Investigator (2023) and 2) College Teachers' Attitude towards usage of Smartboards for teaching Scale constructed and validated by the Investigator (2023). The score of college teachers' usage of smartboards for teaching taken multi-chose questionnaires achieved by selected sample in college teachers' usage of smartboards for teaching in their college. The findings of the study show college teachers' attitude towards usage of smartboards for teaching is high. College Teachers' attitude towards usage of smartboards for teaching of entire sample of college teachers also found to be high. There is no significant difference between the male and female from gender with Arts, Science, and Education from subject teaching of the college teachers. There is significant difference between the male and female of college teachers with respect to their Attitude towards usage of smartboard for teaching. There is no significant difference between male and female from gender in college teachers with respect to their attitude towards usage of smartboards for teaching and college teachers' attitude towards usage of smartboard for teaching. There is a significant relationship between the college teachers' usage of smartboard for teaching and college teachers' attitude towards usage of smartboards.

Keywords: Smart Board, Smartboards for teaching, Teachers 'attitude towards usage of Smartboards in classroom

Introduction

Smart Boards offer more benefits than computers. Computers are designed for individual use, whereas smart boards are designed for whole-class instruction with interaction. Interactive smart boards have gained a reputation in the educational system from the first class to the university stage. It can be used to enhance all subject areas, especially maths, science and literature. Students feel comfortable using smart board and it is the teacher's responsibility to keep up with the new trends in using technology for class in schools, colleges, universities and institutions. (Wafa Muhanna 2013). In our society today teaching and learning activity has become a little easier than it used to in the past with the use of a more sophisticated technological teaching materials or aids which has helped to enhance teaching and learning. One such technological advancement that has being made or achieved is the production of smart board which is also known as interactive white board or is a large interactive board display board in the form of a white board (Osuku Augustina and Otobo Dina, 2024).

The term 'smart technology' describes the incorporation of communication and computing technologies into other technologies that lacked such feature in the past. A technology is considering 'smart' when it can interact and collaborate with other networked technologies. This capability also enables remote accessibility or operation from any location, as well as automatic or adaptive functioning interactive. Nwoke, Bright Ihechukwu and others (2024). "Smart technologies" as a collection of cutting edge technical techniques for creating a higher education institution's learning and development environment with the goal of guaranteeing the systemic achievement of educational objectives and comprehensive mastering of the content

of professional training, as well as introduction of appropriate forms, methods, techniques with significant developmental potential into the educational practice. (Dychkivska 2013).

Smart board works in conjunction with a projector to create the image on the board. When working with the board, it is very easy to step into the light produced by projector, thus creating a shadow which makes it impossible to see what you are actually writing or doing. The audience is also not able to see the presentation, thus leading to frustration for the audience and presenter. Wafa Muhanna (2023).

Tool used in the present study

1. College Teachers' usage of Smartboards for teaching scale constructed and validated by the Investigator (2023).
2. Attitude towards usage of Smartboards scale constructed and validated by Wafa Muhanna, and Al al-Khamis Mousa Nejem, Al (2013) and revalidated by the investigator.

Sample of the study

The present study consists of 422 College Teachers working in Arts and Science and Teacher Education Colleges in Ariyalur, Cuddalore and Tiruchirappalli districts of Tamilnadu, India. The sample was selected using random sampling technique from each college.

Analysis of The Mean and SD of College Teachers' usage of Smartboards for Teaching

The College Teachers' usage of Smartboards for teaching scores of the 422 College Teachers were calculated from the collected data. For both the total sample and its sub-sample, the mean and SD were determined and are given in Table No.1.

Table No .1

Mean and SD of College Teachers' usage of Smartboards for Teaching

Demographic Variables	Sub sample	N	Mean	SD
Gender	Male	201	55.93	11.155
	Female	221	52.99	8.321
Subject of Teaching	Arts	155	53.43	10.365
	Science	141	55.21	10.145
	Education	126	54.66	8.865
Entire Sample		422	54.39	9.872

The College Teachers' are having a low level of usage of Smartboards for teaching ($M=54.39$).

Further, the mean values for the sub samples indicates that Male, Rural, Tamil medium, age of below 50 years, Government College Teachers and College Teachers of Science subjects are having higher level of usage of Smartboards for teaching than their counterparts.

Analysis of Mean and SD of College Teachers' Attitude towards usage of Smartboards for teaching

The Attitude towards usage of Smartboards for teaching scores of each College Teachers was calculated from the collected data. For both the total sample and its sub-sample, the mean and SD were determined and are given in Table No. 2.

Table No .2**Mean and SD of College Teachers' Attitude towards usage of Smartboards for teaching**

Demographic Variables	Sub sample	N	Mean	SD
Gender	Male	201	81.64	9.558
	Female	221	82.35	9.228
Subject of Teaching	Arts	155	81.06	10.525
	Science	141	82.22	8.887
	Education	126	82.95	8.335
Entire Sample		422	82.01	9.382

The College Teachers are having favourable Attitude towards usage of Smartboards for teaching (M=82.01). Further, the mean values for the sub samples indicates that Female, rural, English medium, Below 50 years of age, Government College Teachers and College Teachers of Education subjects are having more favourable level of Attitude towards usage of Smartboards for teaching than their counterparts.

Null Hypothesis

There is no significant difference in college teachers' usage of Smartboards for teaching with respect to their gender.

For the purpose of testing the hypothesis 't' value is calculated.

Table No. 3**.The significance of difference in college teachers' usage of Smartboards for teaching with respect to their Gender**

Gender	N	Mean	SD	t-value	State of significance
Male	201	55.93	11.155	3.086	Significant
Female	221	52.99	8.321		

It is found from the above Table No 3, that the calculated 't' value (3.086) is greater than the table value. Hence the formulated null hypothesis is disproved, and it is concluded that there is a significant difference in college teachers' usage of Smartboards for teaching with respect to their gender.

Analysis of significance of difference in college teachers' usage of Smartboards for teaching with respect to their subject of Teaching**Null Hypothesis**

There is no significant difference in College Teachers' usage of Smartboards for teaching with respect to their subject of teaching.

For the purpose of testing the hypothesis 'F' value is calculated.

Table No.4

The significance of difference in College Teachers' usage of Smartboards for teaching with respect to their subject of teaching

Source of Variation	Sum Squares	Df	Mean Square	F	State of significance
Between Subjects	248.647	2	124.323	1.277	Not significant
within Subjects	40779.839	419	97.327		
Total	41028.486	421			

Form the above Table No.4, since the 'F' value (1.277) is not significant at 0.05 level, the null hypothesis is accepted and it is concluded that there is no significant difference in College Teachers' usage of Smartboards for teaching with respect to their subject of teaching.

Differential Analysis – College Teachers' Attitude towards usage of Smartboards for teaching

Analysis of mean scores of College Teachers' attitude towards usage of Smartboards for teaching with respect to their Gender

Null Hypothesis

There is no significant difference in college teachers' attitude towards usage of Smartboards for teaching with respect to their gender.

For the purpose of testing the hypothesis 't' value is calculated.

Table No. 5

The significance of difference in attitude towards usage of Smartboards for teaching with respect to their Gender

Gender	N	Mean	SD	t-value	State of significance
Male	201	81.64	9.558	0.777	Not significant
Female	221	82.35	9.228		

It is found from the above Table No 5, that the calculated 't' value (0.777) is lesser than the table value. Hence the formulated null hypothesis is accepted, and it is concluded that there is no significant difference in college teachers' attitude towards usage of Smartboards for teaching with respect to their gender.

Analysis of significance of difference in College Teachers' attitude towards usage of Smartboards for teaching with respect to their subject of Teaching

Null Hypothesis

There is no significant difference in College Teachers' attitude towards usage of Smartboards for teaching with respect to their subject of Teaching.

For the purpose of testing the hypothesis 'F' value is calculated.

Table No.6

The significance of difference in College Teachers' attitude towards usage of Smartboards for teaching with respect to their subject of teaching

Source of Variation	Sum Squares	Df	Mean Square	F	State of significance
Between Subjects	256.661	2	128.331	1.461	Not significant
within Subjects	36799.254	419	87.826		
Total	37055.915	421			

Form the above Table No. 6, since the 'F' value (1.461) is not significant at 0.05 level, the null hypothesis is accepted and it is concluded that there is no significant difference in College Teachers' attitude towards usage of Smartboards for teaching with respect to their subject of teaching.

CORRELATION ANALYSIS

Correlation between dependent variable and independent variables

Null Hypothesis

There is no significant relationship exists between dependent variable and independent variables.

Correlation computed between the College Teachers' usage of Smartboards for teaching and their Attitude towards usage of Smartboards for teaching, Perceived problems in the usage of Smartboards for teaching, and Competency in usage of Smartboards for teaching scores by using Pearson's product moment formula.

Table No.7

Correlation between the College Teachers' usage of Smartboards for teaching and their Attitude towards usage of Smartboards for teaching

Dependent Variable	Independent Variables	'r' vale	State of significance
usage of Smartboards for teaching	Attitude towards usage of Smartboards for teaching	0.694	Positive and Significant

It is found from the above Table No 7, that the calculated r-value (0.694) is significant and positive between usage of Smartboards for teaching and Attitude towards usage of Smartboards for teaching, and negative and significant for usage of Smartboards for teaching. Hence the null hypothesis is accepted and it is concluded that there is a significant positive relationship exists between College Teachers' usage of Smartboards for teaching and their attitude towards he usage of Smartboards for teaching and there is significant negative relationship exists between College Teachers' usage of Smartboards for teaching and their perceived problems in usage of Smartboards for teaching, significant and positive relationship exists between and their in the usage of Smartboards for teaching.

Conclusion

The result of the study shows that college teachers' usage of smartboard for teaching of entire sample of college teachers is high. College teachers' attitude towards usage of smartboards for teaching also found to be high. There is no significant difference between the male and female college teachers with respect to their college teachers' usage of smartboards for teaching.

There is significant difference between the male and female college teachers with respect to their attitude towards usage of smartboards for teaching.

There is no significant difference between Arts, Science, and Education from subject teaching college teachers with respect to their college teachers attitude towards usage of smartboards for teaching. There is a significant relationship between the college teachers' usage of smartboards for teaching and college teachers' attitude towards usage of smartboards for teaching. Hence, the teachers should adopt mixed strategies to enhance attitude towards usage of smartboards for teaching and usage of smartboards of teaching.

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