



ATTITUDE TOWARDS THE USE OF SMART CLASSROOM OF IX STANDARD STUDENTS

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ABSTRACT

Today the need of ICT is of great importance in teaching and learning process, as it facilitates effective teaching and learning. Though ICT has a lot of applications in various fields, one should not forget its application in the field of Education. This piece of research work aimed to find the attitude towards the use of smart classroom of IX standard students. The data was collected from 35 English Medium students those who studied with the help of smart classroom. The tool was constructed and standardized by the researcher. The tool has 38 statements, out of which 31 items are favourably worded and the remaining 7 items are unfavourably worded. Likert's method of summated ratings was adopted to find the level of attitude. This scale has face validity, content validity and construct validity. Test-Retest method was used to find out the reliability which is 0.75. The result shows that the students have a favourable attitude towards the use of the smart classroom.



KEYWORDS : Attitude, Smart classroom and IX Standard Students.

INTRODUCTION

Education elevates one's mind and intellect through a planned process of learning to a higher level of knowledge and better state of efficiency. It always aimed at perfection and excellence. Education is conceived as a powerful agency, it is instrumental in bringing out the desired change in the social and cultural life of a nation. It implies that only education can bring the social change. The whole process of education is to shape and mould the human personality called the student who plays vital role in the system of education. To meet out the challenging needs of the society students should undergo best practices and strategies in the classroom. The concept Education through Computer is an important milestone. It aims at shaping the individual to imbibe self confidence and self reliance in learning.

SIGNIFICANCE OF THE STUDY

Modern times are termed as an age of technology. Computer becomes an integral part of our life. The success in school is determined by three R's READING, WRITING and ARITHMETIC. The success becomes great success if fourth R is added, which is COMPUTER. Smart Classroom is highly systematic in approach, unimaginably swift in its operations and astonishingly multifarious in its applications is the most fitting tool in the field of education. The Smart Classroom will change to the maximum extent the nature of practice of education with respect to the fundamental aspects of What to teach? How to teach? and Why to teach? In Tamil Nadu, probably all Matriculation Schools and some of the Government Aided schools have Smart

Classroom. Tamil Nadu Government has planned to establish Smart Classroom in all Schools. In this juncture it is essential to study the students' attitude towards the use of Smart Classroom. As there is no suitable tool available to study the IX Standard Students' Attitude towards the use of Smart Classroom, the investigator has decided to construct and standardise a scale to measure the IX Standard Students' Attitude towards the use of Smart Classroom.

REVIEW OF RELATED LITERATURE

Anderson (2006) investigated the views of 1027 students from central region of Ghana about the Relevance of Science Education (ROSE). His results showed that the majority of students believed that Science and Technology are useful for the society and can help to reduce poverty and famine in the world.

Stefansson (2006) examined the Icelandic Students' views about Science and Technology and also School Science. He suggested that everyone should learn science in school, the school science is interesting and the school science is useful in day to day life.

Basu and Barton (2007) mentioned that the science curriculum is a key factor in developing and sustaining students' interest in science and students may become disengaged from school science if their funds of knowledge are not incorporated into the science curriculum.

Hirata and Hirata (2008) studied Japanese Students' attitude towards hybrid learning. The findings revealed that the blended learning was more effective. However, few students preferred traditional learning.

Lavonen et al. (2008) studied the interests and experiences of students of Finland in Physics and Chemistry. The research was conducted on 3626 Secondary Students with average of 15 years old. According to their results, students have many experiences related to science and technology outside the school.

Eng-Tek Ong (2009) studied the effectiveness of smart schooling on students' attitudes towards Science. The objective was to study the relative effect of smart and mainstream schooling on students' attitudes towards Science. The sample comprised of 775 Form III students from two smart schools and two mainstream schools. Random sampling technique was used. A quasi-experimental design was employed. The achievement scores of Standardised National Examination was used to analyse the data. Attitudes towards Science in school assessment (ATSSA) were used as tool. The attitudinal data collected were analysed using Analysis of Co-variance. The results indicated that the level of attitude towards Science of Form III students who had participated in the smart schools is statistically significantly higher than the level of attitude towards Science of Form III students who had participated in the mainstream schools.

Adas and Abu Shmais (2011) conducted a study on Palastinian University Students to find out their perception towards blended learning environment. The results show that the majority of learners expressed their positive attitude towards blended learning. But no significant difference was mentioned.

In a study by Tanveer (2011) with Omani students to explore the students' attitude towards integrating e-learning in classroom, he found that majority of students preferred blended learning and thought that teachers who use e-learning in the classroom were better teachers.

Jena(2013) has investigated the effect of smart classroom learning environment on academic achievement of rural high achievers and low achievers in science. This experimental study was conducted in Jalandhar district of Punjab. The result of the study reveals that smart class learning environment is better to teach both low achievers and high achievers than traditional class.

Anita Menon (2015) conducted a research on effectiveness of smart classroom teaching on the achievement in Chemistry of secondary school students. The researcher investigated 320 Class IX students from Amritsar city. An achievement test was used to collect the data. Experimental group was taught in smart classrooms and control group was taught by conventional mode of instruction. The results revealed that students achieved higher when taught in smart classes as compared to conventional mode of

instruction. Learning styles of students did not affect their achievement in experimental and control group. No interaction effect of instructional strategies and learning style was found.

Madhu Gupta (2016) studied the opinions of teachers for effectiveness of smart classroom teaching in Social Science for seventh graders. The objectives of the study were to develop an opinionnaire to know the opinions of teachers towards effectiveness of smart classroom teaching in Social Science for seventh graders. The opinionnaire was given to 40 teachers individually from various senior secondary schools equipped with smart classrooms of Haryana. The results of the study revealed that 80.19% of teachers have favourable opinion towards smart classroom teaching with respect to content presentation, utility for the students and utility for the teachers. The study further revealed that 7.78% of teachers were found having non-favourable opinion towards smart classroom teaching and 12.02% of teachers remained undecided about the effectiveness of smart classroom teaching. The analysis disclosed the fact that the smart classroom teaching is highly useful for teachers as well as students. It is very helpful determined in increasing the achievement level of students at own pace in motivating and fascinating way in today competitive education system.

OPERATIONAL DEFINITIONS

ATTITUDE

An Attitude is a permanent mental disposition of an individual. Attitude means the individual's prevailing tendencies to respond favourably or unfavourably to an object, person or group of people, institutions or events.

SMART CLASSROOM

A Smart Classroom is equipped with multimedia components like networked computer with monitor, key board, mouse, ceiling mounted projector, screen, DVD players, remote control, microphone and classroom speakers.

IX STANDARD STUDENTS

Students those who are studying IX Standard in the Sourashtra Higher Secondary School of Madurai Educational District of Tamil Nadu Government.

OBJECTIVES OF THE STUDY

The objective of the study was to find out the extent to which the students are favourably or unfavourably disposed towards the use of smart classroom. The researcher formulated the following objectives for the study.

- i) To find out the difference, if any, between the gain scores of Students' Attitude towards the use of Smart Classroom at the pre-test and post-test level.
- ii) To find out the difference, if any, between the gain scores of Students' Attitude towards the use of Smart Classroom with respect to their locality.
- iii) To find out the difference, if any, between the gain scores of Students' Attitude towards the use of Smart Classroom with respect to their family type.

HYPOTHESES OF THE STUDY

In order to verify the objectives the researcher devised the following null hypotheses.

- i) There is no significant difference between the gain scores of Students' Attitude towards the use of Smart Classroom at the pre-test and post-test level.
- ii) There is no significant difference between the gain scores of Students' Attitude towards the use of Smart Classroom with respect to their locality.

- iii) There is no significant difference between the gain scores of Students' Attitude towards the use of Smart Classroom with respect to their family type.

METHOD AND SAMPLE OF THE STUDY

This is an experimental study. Pre-test Post-test Equivalent Group Experimental Design was constructed. The researcher aimed to study the IX standard students' attitude towards the use of smart classroom. This study is possible only where the smart classroom facility is available. Such a facility is available in Sourashtra Boys Higher Secondary School, Madurai. This is a Government aided school governed by Department of School Education, Tamil Nadu. The sample consists of as many as 35 English Medium students of IX Standard. Purposive sampling method is adopted for the present study.

TOOL USED FOR THE STUDY

The selection of tool is considered as a significant part of the research. The research findings depend upon the data and the data depends upon the accuracy of the tool. The accuracy of the tool plays vital role in the establishment of validity and estimation of reliability. Therefore the investigator developed and standardized a tool for the present study. After reviewing many related studies done in the field of ICT both in India and other countries dimensions having positively and negatively correlated were selected for constructing the tool. The scale has been constructed by making use of Likert's Method of Summation to get five point judgements on each item. The scale consists of 38 statements out of which 31 statements are favourably worded and remaining 7 statements are unfavourably worded.

VALIDITY AND RELIABILITY

The scale has content validity as it has the "Universe of Content" (Edward.L.Allen, 1957). It has construct validity as the items selected were having the 't'-values greater than or equal to 1.75 (Edward.L.Allen, 1957). The reliability of the scale was found to be 0.75 by using test-retest method.

STATISTICAL TECHNIQUES USED

The present study was concerning to the IX standard students' attitude towards the use of smart classroom. For analyzing and computing the result, the investigator used descriptive analysis and inferential analysis.

Table – 1
Distribution of scores of attitude towards the use of smart classroom

Measures	Pre - Test	Post - Test
N	35	35
Mean	138.6857	150.1714
Std. Error of Mean	2.16107	2.06836
Median	141.00	148.000
Mode	142.00	145.00
Std. Deviation	12.78504	12.23660
Variance	163.457	149.734
Skewness	-0.234	-0.285
Kurtosis	-0.748	-0.374
Minimum	112.00	119.00
Maximum	160.00	170.00

Scores on attitude towards smart classroom of group with teacher support at pre-test level

The Scores on attitude towards smart classroom at pre-test level are found to form a normal distribution with a mean of 138.68 whose standard error is found to be 2.161 and the standard deviation is 12.78. The confidence of the mean gain score at 0.05 level lies within the limits of 112 to 160. The median and mode are found to be 141 and 142.

The co-efficients of skewness and kurtosis are found to be -0.935 and 0.212 respectively. The distribution is negatively skewed and leptokurtic. It is concluded therefore the scores on attitude towards smart classroom at pre-test level are slightly amassed at the right end of a leptokurtic curve.

Scores on attitude towards smart classroom of group with teacher support at post-test level

The Scores on attitude towards smart classroom at post-test level are found to form a normal distribution with a mean of 150.17 whose standard error is found to be 2.06 and the standard deviation is 12.23. The confidence of the mean gain score at 0.05 level lies within the limits of 119 to 170. The median and mode are found to be 148 and 145.

The co-efficients of skewness and kurtosis are found to be -0.85 and -0.374 respectively. The distribution is negatively skewed and platykurtic. It is concluded therefore the scores attitude towards smart classroom at post-test level are slightly amassed at the right end of a platykurtic curve.

Table - 2

Table showing the levels of attitude towards the use of Smart Classroom of the Sample at the Pre-Test and Post-Test

Variable		Level of Attitude (percentage)				
		Highly Unfavourable	Unfavourable	Neutral	Favourable	Highly Favourable
Attitude towards the use of Smart Classroom	Pre-Test	0	2.86	2.86	68.57	25.71
	Post-Test	0	0	0	40.00	60.00

Interpretation:

In the above table, 2.86% of students have unfavourable attitude, 2.86% of students have neutral attitude, 68.57% of the students have favourable attitude and 25.71% of students have highly favourable attitude towards the use of smart classroom at the pre-test level.

In addition, 40% of the students have favourable attitude and 60% of students have highly favourable attitude towards the use of smart classroom at the post-test level.

It is found from the table that the degree of favourableness on the attitude towards the use of smart classroom of the sample have increased at post-test when compared to that of pre-test. It is concluded that students are favourably disposed towards the use of smart classroom.

Objective – i) To find out the difference, if any, between the gain scores of Students' Attitude towards the use of Smart Classroom at the pre-test and post-test level.

Hypothesis – i) There is no significant difference between the gain scores of Students' Attitude towards the use of Smart Classroom at the pre-test and post-test level.

Table – 3
Paired 't'-test showing the significant difference between the pre-test and post-test scores of attitude towards the use of smart classroom

Attitude towards the use of smart classroom	N	Mean	SD	r-value	t-value	Remarks (5% level of significance)
Pre - test	35	138.68	12.78	0.68	6.79	S
Post - test	35	150.17	12.23			

S-Significant

Interpretation:

In the above table, the calculated value of 't' (6.79) is greater than the table value (2.00) for df 68, at 0.05 level of significance. Hence the null hypothesis is rejected. It is concluded that there is a significant difference between the pre - test and post – test.

It is inferred from 'r'-value (0.68) that there is a positive correlation between the pre-test and the post-test score.

The mean score shows that the mean value of post - test is greater than that of pre - test. It reveals that the favourableness of attitude towards the use of smart classroom is increased.

Objective – ii) To find out the difference, if any, between the gain scores of Students' Attitude towards the use of Smart Classroom with respect to their locality.

Hypothesis – ii) There is no significant difference between the gain scores of Students' Attitude towards the use of Smart Classroom with respect to their locality.

Table – 4
't'-test showing the significant difference between the gain scores of attitude towards the use of smart classroom with respect to Locality

Variable		N	Mean	SD	t-value	Remarks (5% level of significance)
Locality	Rural	4	14.75	18.19	0.68	NS
	Urban	31	11.06	8.87		

NS - Not Significant

Interpretation:

In the above table, the calculated values of 't' (0.68) is less than the table value (2.042) for df 33, at 0.05 level of significance. Hence, the null hypothesis is accepted. It is concluded that there is no significant difference between the gain scores of students' attitude towards the use of smart classroom with respect to locality.

Objective – iii) To find out the difference, if any, between the gain scores of Students' Attitude towards the use of Smart Classroom with respect to their family type.

Hypothesis – iii) There is no significant difference between the gain scores of Students' Attitude towards the use of Smart Classroom with respect to their family type.

Table - 5

't'-test showing the significant difference between the gain scores of attitude towards the use of smart classroom with respect to Type of family

Variable		N	Mean	SD	t-value	Remarks (5% level of significance)
Type of family	Nuclear	29	12.31	10.66	1.07	NS
	Joint	6	7.50	4.59		

NS - Not Significant

Interpretation:

In the above table, the calculated values of t (1.07) is less than the table value (2.042) for df 33, at 0.05 level of significance. Hence the null hypothesis is accepted. It is concluded that there is no significant difference between the gain scores of students' attitude towards the use of smart classroom with respect to type of family.

FINDINGS OF THE STUDY

The findings of the study are as follows:

- i) The students are favourably disposed towards the use of smart classroom.
- ii) IX Standard Students' Attitude towards the use of Smart Classroom at the post-test is increased than that of pre-test.
- iii) There is no significant difference between the gain scores of Students' Attitude towards the use of Smart Classroom with respect to their locality.
- iv) There is no significant difference between the gain scores of Students' Attitude towards the use of Smart Classroom with respect to their family type.

EDUCATIONAL IMPLICATIONS

Based on the findings and the conclusion of the study, the following recommendations are put forward.

- i) This study would help to bring out the IX standard students' attitude towards the use of smart classroom.
- ii) This study would help the IX standard teachers to make the students more active in learning Science.
- iii) This study would help the IX standard teachers to understand the necessity of smart classroom in the teaching and learning process.
- iv) This study would help the IX standard teachers to understand the expectations of the students regarding the teaching methods.
- v) This study would help the education department to know the requirements of IX standard students.

SUGGESTIONS FOR FURTHER RESEARCH

The researcher by virtue of experience gained from the study would like to put forward the following suggestions for the future study.

- i) Sample size can be enlarged.
- ii) The same study can be conducted for girls also.

- iii) The same study can be conducted for teachers also.
- iv) A similar study can be carried at primary and higher secondary level.

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