

Effectiveness of Science Teaching through Smartboard Technology among Primary Teacher Training Students of Nagapattinam District

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Abstract: The Smart Board is another piece of technology that enriches student-teacher science learning and provides teacher educator with the skills necessary to adapt to a highly technological society. This specific device can be used in the classroom as a gateway to new technologies and its enhancement to ones learning of teacher education. A Smart Classroom is a learning environment that contains all course materials of education. The conception of the smart classroom has made it possible for students to tackle the features of the internet to create a meaningful and constructivist learning environment of School education. Information and Communication Technology (ICT) is playing an important role in the teaching-learning process of the smart classroom. It increases the flexibility of delivery of education so that student-teacher can access knowledge anytime and anywhere easily. At the same time, the student-teacher gets knowledge or skills from some programs and assignments in the concept of the learning environment. The Smart classroom was considered as one of the essential methods to transform the traditional instructional model. From the last two decades, information technology has brought a great revolution in the education department. Information technology provides additional opportunities to the student-teacher for attractive learning. As a results technology usage has been widely increased in teacher education institutions. From the last few years, the teacher education classroom learning process has been significantly changed. Today the smart board is being utilized as a new educational tool for the teacher educator and student-teacher. This technology attempts to provide the delivery of teaching-learning from teacher educators to a student teacher in a highly flexible and comfortable way. This technology environment is one of such broad technology that has been evolved to rapidly deliver rede in classrooms. The Smart Board is used to enhance ones learning and encourage interactive participation from student teacher. Some teachers, teacher educators and student teachers are not familiar with the Smart Board and tend to shy away from it. The main focus of this study identifies effectiveness of science teaching through the smart board technology among primary teacher students.

Keywords: Primary teacher training students, Smart board technology, Teaching of science and Technology.

I. INTRODUCTION

Technology plays a significant role in each sphere of life and education isn't any exception. The appearance of technology has deeply compacted the academic situation of the globe. Technology has modified the approach we have a tendency to live. It's compact various aspects of life and redefined living. Within the gift era, the event in varied aspects of engineering has reached on the far side of our imagination and expectations. Because the PC becomes half and parcel of our life, information of computers is incredibly abundant required for everybody. Data and Communication Technology (ICT) is taking part in a significant role in teaching and learning to satisfy the requirements and anticipation of the learners on an outsized scale. The main purpose of ICT in education suggests that implementing ICT instrumentality and tools within the teaching and learning method as a media and methodology. The aim of ICT in education is usually to form students acquainted with employment and workings of computers and connected social and moral problems. Thanks to miscellaneous necessities in teaching and learning for a Smartboard, there are a unit opportunities and challenges that area unit to be addressed within the usage of the technology and also the service(s) being provided through ICT.

Significance of the study

Education is the thrust of economic and social development in any country. Hence, it's necessary to seek out ways that to create the education of excellent quality, accessible, and reasonable to any or all,

victimization the most recent technology out there. From the last twenty years, ICT has been used and its usage has caused a revolutionary modification within the development of society. Computer-mediated learning is being allotted by student academics in teacher education for his or her competence and alternative general activities. Each individual life within the internet and social world. It provides loads of facilities for teacher educations, notably good virtual schoolroom learning. It helps with new platforms return new forums for coaching students to debate, video conferencing, etc. It becomes an extremely engaging tool in our teacher education program to develop teaching the competence. In earlier studies, it's indicated that introducing computer-aided learning accustomed nice extent by teacher coaching students. Hence, it's terminated that the good virtual learning of the study is concentrated on the development of science teaching through smart board class rooms among primary teacher training students of Nagapattinam district, Tamil Nadu state.

Objectives of the study

To find out improvement of science teaching through smart board among teacher training students in terms of

- a. Before and after using of smart board
- b. First year and second year teacher training students
- c. Teacher training Students with urban and rural background
- d. Computer science and non-computer science group teacher training students.

II. METHODOLOGY

In order to achieve the objectives of the present research, survey method was employed. The methodological detail like sample, tool, and procedure of data collection, scoring procedure and statistical techniques are given below.

Sample

Survey method was used for the present study. A sample of 42 Primary teacher training (Diploma in Elementary Education) students was selected through purposive sampling technique from District Institute of Education and Training (DIET), Nagapattinam District.

Tools used for the study

The achievement level of science teaching to the sample was determined based on the examination marks in the term exam. The term exam conducted as per the prescribed norms of government on the basis of Tamil Nadu Teacher Eligibility Test. The percentage of total marks of 42 students was taken for the research purpose.

Data collection

In order to assess the improvement of science teaching through smart board among primary teacher training students, the tool was distributed to them and administered faithfully in strict accordance with the directions provided.

Statistical techniques used

In order to analyses and interpret data, the following statistical techniques- Mean, Standard deviation and t-test.

Delimitation

The following are the delimitation of the study

- a. The present study has selected from the primary teacher training students of District Institute of Education and Training, Nagapattinam District.
- b. For this study the investigator collected data from 42 first year and second year primary teacher training students only.

Analysis and interpretation of data

For analysis and interpretations of data, the relevant input and analytical finding and inferences derived have been presented in different tables and their discussion provided after the table;

Hypothesis - 1

There is no significant difference in an improvement of science teaching before and after using of smart board.

Table: 1

Variables	No	Mean	S.D	't' Value	Significant Level
Before using smart board	42	37.19	4.1569	4.999	Significant
After using smart board	42	42.286	5.1338		

From the above table:1, it is observed that the 't' value with respect to learning outcomes is (4.999) is significant at 0.01 level, indicating that after using smart board class room has higher level of effectiveness in science teaching through smart board class room. Hence the null hypothesis that "There is no significant difference in an effectiveness of science teaching before and after using of smart board class room" is rejected.

Hypothesis - 2

There is no significant difference in effectiveness of science teaching between first year and second year primary teacher training students.

Table: 2

Variables	No	Mean	S.D	't' Value	Significant Level
1 st year primary teacher training students	16	39.875	6.936	2.137	Significant
2 nd year primary teacher training students	26	43.769	2.888		

From the above table, it is observed that the 't' value with respect to science teaching is (2.137) is significant at 0.01 level, indicating that the second-year primary teacher training students have higher level of effectiveness in science teaching through smart board class room. Hence the null hypothesis that "there is no significant difference in effectiveness of science teaching between first year and second year primary teacher training students" is rejected.

Hypothesis - 3

Table: 3

There is no significant difference in an effectiveness of science teaching between urban and rural primary teacher training students.

Variables	No	Mean	S.D	't' Value	Significant level
Rural students	18	40.166	6.626	2.22	Significant
Urban students	24	43.875	2.893		

From the above table, it is observed that the 't' value with respect to science teaching is (2.22) is significant at 0.01 level, indicating that the urban primary teacher training students have higher level of effectiveness in science teaching through smart board class room. Hence the null hypothesis that "there is no significant difference in effectiveness of science teaching between rural and urban primary teacher training students" is rejected.

Hypothesis - 4

There is no significant difference in an effectiveness of science teaching between computer science and non-computer science group primary teacher training students.

Table: 4

Variables	No	Mean	S.D	't' Value	Significant Level
Computer science group	20	40.5	6.3037	2.1877	Significant
Non-Computer science group	22	43.909	3.1154		

From the above table, it is observed that the 't' value with respect to science teaching is (2.1877) is significant at 0.01 level, indicating that the computer science group teacher training students have higher level of effectiveness in science teaching through smart board class room. Hence the null hypothesis that "There is no significant difference in an effectiveness of science teaching between computer science and non-computer science group teacher training students" is rejected.

A. Other Recommendations

- The present study was confined to the Nagapattinam, District Institute of Education and training, TamilNadu only. This study can be done in various types teacher education departments like B.Ed college, Universities etc.
- This work can be done in comparative study of different colleges, Institutes and universities, districts, states etc.
- This study focused only teaching of science subject only. This study can be done in various subject of teacher education curriculum.

III. RESULT AND DISCUSSION

- The implementation of smart board class room for primary teacher training students before and after differ significantly in terms of effectiveness of science teaching through smart board class room.
- The first year and second year primary teacher training students differ significantly in terms of effectiveness of science teaching through smart board class room.
- The urban and rural primary teacher training students differ significantly in terms of effectiveness of science teaching through smart board class room.
- The computer group and non-computer group primary teacher training students differ significantly in terms of effectiveness of science teaching through smart board class room.
- These findings of the study will be of immense use of understanding the effectiveness of science teaching from primary teacher training students by using smart board classroom.
- This study proved that effectiveness of science teaching by using smart board class room among primary teacher training students.
- Thus, this study strongly evidenced the importance of technology aided learning environment in the teaching learning process of teacher education.

IV. CONCLUSION

It is fact that smart board rooms, i.e., Information and Communication Technology is playing a vital role in effectiveness of science teaching to teacher education platform. Smart board class room is designed to help faculties and teacher trainees to compete with new challenges and developing teaching competency and performance. It provides improved way of education in which teachers teach and students learn in an institute or colleges or universities with advanced and significant use of technology. They can interact directly without hesitations. Smart board class has many benefits to the students, student teacher and faculties. It is very clear that innovation in technology is impacting everywhere and bringing new opportunities for schools, colleges, institutes, universities and educationalists. We can help students, student teacher as well teacher educators by using advanced technologies to make the future bright. In this paper reveals that the primary teacher training students have better improvement of science teaching by using smart board class room.

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