A STUDY ON IMPROVEMENT OF LEARNING OUTCOMES THROUGH SMART VIRTUAL CLASSROOM AMONG TEACHER TRAINING STUDENTS OF NAGAPATTINAM DISTRICT

By

*Palanisamy C

**Sivakumar G

*Ph.D. Scholar, Alagappa University College of Education, Karaikudi. Tamil Nadu, India. **Assistant Professor, Alagappa University College of Education, Karaikudi, Tamil Nadu, India.

Abstract

A Smart virtual classroom is an online learning environment that contains all course materials of education. The conception of the smart virtual classroom has made it possible for students to tackle the features of the internet to create meaningful and constructivist learning environment of school education. Information and Communication Technology (ICT) is playing a vital role in teaching learning process of smart virtual classroom. It increases the flexibility of deliverance of education so that the learners can access knowledge at anytime and from anywhere. At the same time the students get knowledge or skills from some programs and assignment in the concept of learning outcomes.

Keywords: learning outcomes, smart virtual classroom, teacher training, students

Introduction

Technology plays a vital role in every sphere of life and education is no exception. The advent of technology has deeply impacted the educational scenario of the world. Technology has certainly changed the way we live. It has impacted the different facets of life and redefined living. In the present era, the development in various aspects of computer technology has reached beyond our imagination and expectations. As computer becomes part and parcel of our life, knowledge of computers is very much needed for everyone. Thus. Information and

Communication Technology (ICT) is playing a vital role in teaching and learning to meet the needs and anticipation of the learners' in large scale.

The main purpose of ICT in education means implementing of ICT equipment and tools in teaching and learning process as a media and methodology. The purpose of ICT in education is generally to make students familiar with the use and workings of computers, and related social and ethical issues. Due to miscellaneous requirements in teaching and learning for a smart board, there are opportunities and challenges that are to be addressed in usage of the technology and the service(s) being provided through ICT.

Review of related studies

Anurag Chaudhary et all., (2014)conducted a study on A Review on Applications of SMART CLASS and E-LEARNING. The usage of smart teaching techniques is now more prevalent in school as well as other colleges and institutes. It was generated back in 1980s and is growing since then. This new technology helps the students with the benefit of learning with a different experience. The methods of e-learning make the classroom more interactive and interesting. It has also created a greater impact on our society as well as on education system. The government has also started implementing this idea of e-learning in schools. There are several examples available in the market that encourage the idea and work for its betterment. The smart classes have their own merits and demerits but this new technology is welcomed by the society in a great manner.

Mehedi Masud (2016) conducted a study on A System Framework for Smart Class System to Boost Education and Management. The large number of reasonably priced computers, internet broadband connectivity and rich education content has created a global phenomenon by which information and communication technology (ICT) has used to remodel education. E-learning can be explained as of available information. the use computational and communication technologies to assist learning practice. In the modern world, education has become more universal, and people are looking for learning with simplicity and interest. Students are looking for more interactive and attractive learning style rather than old traditional style. Using technological learning, we can enhance the education system. We can deliver quality education to students as well as we can ease and uniform the process of education by using the modern technologies and methods.

Sivakumar and Palanisamy (2018) conducted a study on Improvement of learning outcomes through smart virtual classroom among high school students. A smart virtual classroom is an online learning environment that contains all materials of education. course The conception of the smart virtual class room has made it possible for students to tackle the features of the internet to create meaningful and constructivist learning environment of school education. Information and Communication Technology (ICT) is playing a vital role in teaching learning process of smart virtual

class room. It increases the flexibility of deliverance of education so that the learners can access knowledge at anytime and from anywhere. At the same time the students get knowledge or skills from some programs and assignment in the concept of learning outcomes.

Statement of the problem

The problem of the study is stated as, "A study on improvement of learning outcomes through smart virtual classroom among teacher training students of Nagapattinam district."

Definitions of terms used in the study

Learning outcomes

Learning outcomes are statements that specify what a learner will know or be able to do as a result of a learning activity. Outcomes are usually expressed as knowledge, skills, or attitudes.

Smart virtual classrooms

A smart virtual classroom is a teaching and learning environment where participants can interact, communicate, view and discuss presentations, and engage with learning resources while working in groups, all in an online setting.

Significance of the study

Education is the driving force of economic and social development in any country. Hence, it is necessary to find ways to make education as a good qualitative one, accessible and affordable to all, using the latest technology available. From last two decades ICT has been used and its usage has caused a revolutionary change in the development of society. Computer mediated learning is being carried out by student teachers in teacher education for their competency and other general activities. Every human being lives in the web and social world. It provides lot of facilities for the teacher educations, particularly smart virtual classroom learning. It helps with new platforms and new forums for training students to discuss, video conferencing, etc.. It becomes a highly attractive tool in the teacher education program to develop teaching competency. In earlier studies, it is indicated that introducing computer aided learning used to great extent by teacher training students. Hence, it is concluded that the smart virtual learning of the study is focused on improvement of learning outcomes through smart virtual classroom among teacher training students of Nagapattinam district.

Objectives of the study

To find out improvement of learning outcomes through smart virtual classrooms among teacher training students in terms of

- a. Before and after using of smart virtual class room
- 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.

Hypotheses of the study

- a. There is no significant difference in the improvement of learning outcomes before and after using of smart virtual classroom.
- b. There is no significant difference in the improvement of learning outcomes between first year and second year teacher training students.
- c. There is no significant difference in the improvement of learning outcomes between urban and rural teacher training students.
- d. There is no significant difference in the improvement of learning outcomes between computer science and noncomputer science group teacher training students.

Methodology

In order to achieve the objectives of the present investigation, survey method was employed. The methodological details 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 D.El.Ed (Diploma in Elementary Education) students was selected through purposive sampling technique from District Institute of Education and Training (DIET). Kurukkathi, Nagappattinam District.

Tools used for the study

The level of learning outcomes 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 learning outcome through smart virtual classroom among 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 were used.

Delimitation

The following are the delimitation of the study.

 a. The present study was conducted among the selected Government teacher training students of District Institute of Education and Training, Nagapattinam District only. b. For this study the investigator collected data from 42 first year and second year 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 the improvement of learning outcomes before and after using of smart virtual classroom.

Table 1. Difference in the improvement of learning outcomes before and after using ofsmart virtual classroom

Variables	No	Mean	S.D	't' Value	Significant Level
Before using smart virtual class room	42	37.19	4.1569	4 000	Significant
After using smart virtual class room	42	42.286	5.1338	4.999	Significant

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

Hypothesis – 2

There is no significant difference in the improvement of learning outcomes

between first year and second year teacher training students.

Table 2. Difference in the improvement of learning outcomes between
first year and second year teacher training students.

Variables	No	Mean	S.D	't' Value	Significant Level
First year teacher training students	16	39.875	6.936	2 1 2 7	Significant
Second year teacher training students	26	43.769	2.888	2.137	Significant

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

Hypothesis - 3

There is no significant difference in the improvement of learning outcomes between urban and rural teacher training students.

Table 3. Difference in the improvement of learning outcomes between urban and ruralteacher training students

Variables	No	Mean	S.D	'ť Value	Significant level
Teacher training rural students	18	40.166	6.626	2.22	Significant
Teacher training urban students	24	43.875	2.893		

From the above table, it is observed that the 't' value with respect to learning outcomes (2.22) is significant at 0.01 level, indicating that the urban teacher training

students have higher level of improvement in learning outcomes through smart virtual classroom. Hence the null hypothesis that "there is no significant difference in the improvement of learning outcomes between rural and urban teacher training students" is rejected.

Hypothesis - 4

There is no significant difference in the improvement of learning outcomes between computer science and noncomputer science group teacher training students.

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Variables	No	Mean	S.D	'ť Value	Significant Level	
Computer science group	20	40.5	6.3037	2 1877	Significant	
Non-Computer science group	22	43.909	3.1154	2.1077	Significant	

Table 4. Difference in the improvement of learning outcomes between computerscience and non-computer science group teacher training students

From the above table, it is observed that the 't' value with respect to learning outcomes (2.1877) is significant at 0.01 level, indicating that the computer science group teacher training students have higher level of improvement in learning outcomes through smart virtual classroom. Hence the null hypothesis that "there is no significant difference in the improvement of learning outcomes between computer science and non-computer science group teacher training students" is rejected.

Findings

• The implementation of smart virtual classroom for teacher training

students before and after differ significantly in terms of improvement of learning outcomes through smart virtual classroom.

- The first year and second year teacher training students differ significantly in terms of improvement of learning outcomes through smart virtual classroom.
- The urban and rural teacher training students differ significantly in terms of improvement of learning outcomes through smart virtual classroom.
- The computer group and non computer group teacher training students differ significantly in terms

of improvement of learning outcomes through smart virtual classroom.

Implications of the study

The following are the educational implications of the study.

- These findings of the study will be an immense use of understanding the improvement of learning outcomes of teacher training students by using smart virtual classroom.
- This study proved that improvement of learning outcomes by using smart virtual class room among teacher training students.
- Thus, this study strongly evinced the importance of technology aided learning environment in the teaching learning process of teacher education.

Areas for further research

Some of the areas for research in the future may be as follow.

 The present study was confined to the District Institute of Education and training only. This study can be done in various types of teacher education departments like B.Ed colleges, Universities etc. This work can be done as a comparative study in different colleges, universities, districts etc.

Conclusion

It is fact that smart virtual classrooms, i.e., Information and Communication Technology is playing a vital role in improvement of learning outcomes to teacher education platform. Smart virtual classroom 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 colleges or universities with advanced and significant use of technology. They can interact directly without any hesitations. Smart class has many benefits to the students and faculties. It is very clear that innovation in technology is impacting everywhere and bringing new opportunities for schools, universities and educationalists. We can help students, student teacher as well educators by using advanced technologies to make the future bright. This paper reveals that the teacher training students have better improvement of learning outcomes by using smart virtual classroom.

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ABOUT THE AUTHORS



Palanisamy C is a Research Scholar in University College of Education at Alagappa University, Karikkudi, Sivagangai District, Tamil Nadu, India. He holds M.Sc., Degree in Botany and Psychology, M.Ed., and M.Phil., in Education, and M.A., Yoga for Human Excellence and has qualified TNSET in Education in 2017. He has participated seminars and workshops at National and International level. At present, he is working as a senior lecturer and Head of the Department of Pre-Service in District Institute of Education and Training (DIET), Kurukkathi, Nagapattinam District, TamilNadu, India.



Dr Sivakumar G is presently working as an Assistant Professor in Education in University College of Education at Alagappa University, Karikkudi, Sivagangai District, TamilNadu, India. He has participated in National and International level seminar, conferences, workshops and presented research papers (89) several times. He has published 3 articles in International level and 7 articles in National level. He has additional responsibilities in Career Guidance and Counselling Cell (UGC SCHEMES). He has membership in Council for Teacher Education and has life member in Karanthai Tamil Sangam, Thanjavur and expert committee member of the Faculty Recruitment Board – Sethu Baskara Agricultural College and Research Foundation, Karaikudi, Sivagangai District, Tamil Nadu, India.