

# Improvement of Learning Outcomes Through Smart Virtual Classroom Among Teacher Training Students -A Study

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**Abstract:-** A Smart virtual classroom is an online learning environment that contains all course materials of education. 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 vital role in teaching learning process of smart virtual class room. It increases the flexibility of delivery of education so that learners can access knowledge 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 and smart virtual classroom.

## 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. 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 (2014)** This paper is about the much growing technology "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 the 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)** 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 the use of available information, 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 (2018)** A Smart virtual classroom is an online learning environment that contains all course materials of education. 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 vital role in teaching learning process of smart virtual class room. It increases the flexibility of delivery of education so that learners can access knowledge 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, "Improvement of learning outcomes through smart virtual classroom among teacher training students."

## 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 class rooms

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 of good quality, 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 teacher's 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 come new forums for training students to discuss, video conferencing, etc., It becomes highly attractive tool in our 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

- First year and second year teacher training students
- Teacher training Students with urban and rural background
- Computer science and non-computer science group teacher training students.

### Hypotheses of the study

- There is no significant difference in improvement of learning outcomes between first year and second year teacher training students.
- There is no significant difference in an improvement of learning outcomes between urban and rural teacher training students.
- There is no significant difference in an improvement of learning outcomes between computer science and non-computer science group teacher training students.

From the above table, it is observed that the 't' value with respect to learning outcomes is (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.

## METHODOLOGY

In order to achieve the objectives of the present investigation, 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 D.El.Ed ( Diploma in Elementary Education) students was selected through purposive sampling technique from District Institute of Education and Training (DIET), Kurukkathi, Nagapattinam 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 class room 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.

### Delimitation

The following are the delimitation of the study

- The present study has selected Government teacher training students of District Institute of Education and Training, Nagapattinam District only.
- 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;

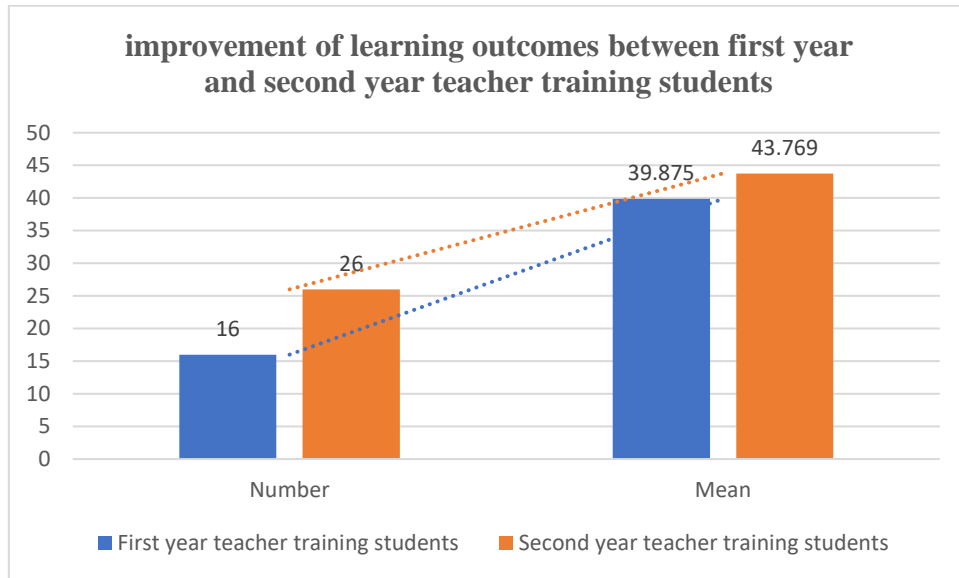
### Hypothesis - 1

*There is no significant difference in improvement of learning outcomes between first year and second year teacher training students.*

Table: 1

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

Hence the null hypothesis that "there is no significant difference in improvement of learning outcomes between first year and second year teacher training students" is rejected.



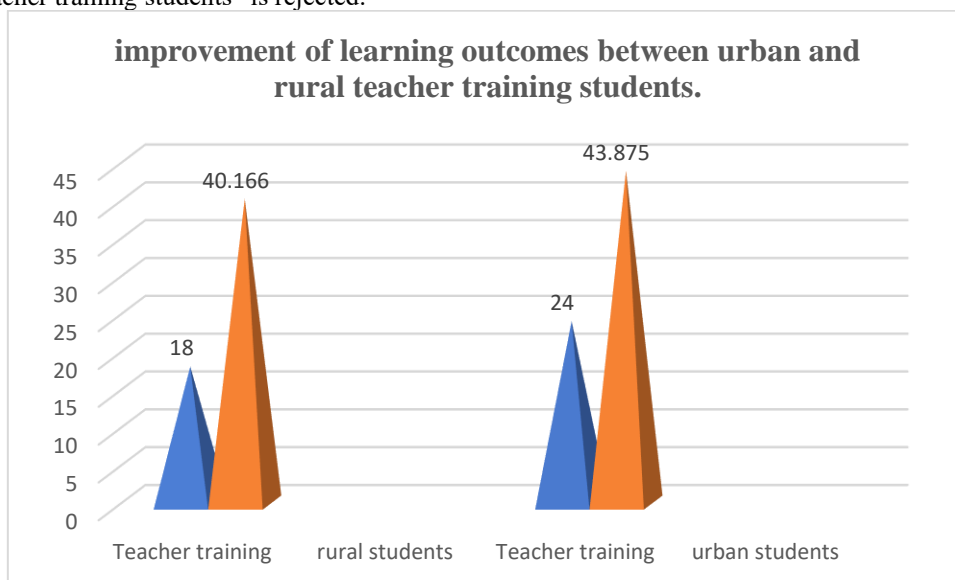
**Hypothesis - 2**

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

Table: 2

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 learning outcomes is (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 class room. Hence the null hypothesis that "there is no significant difference in improvement of learning outcomes between rural and urban teacher training students" is rejected.



**Hypothesis - 3**

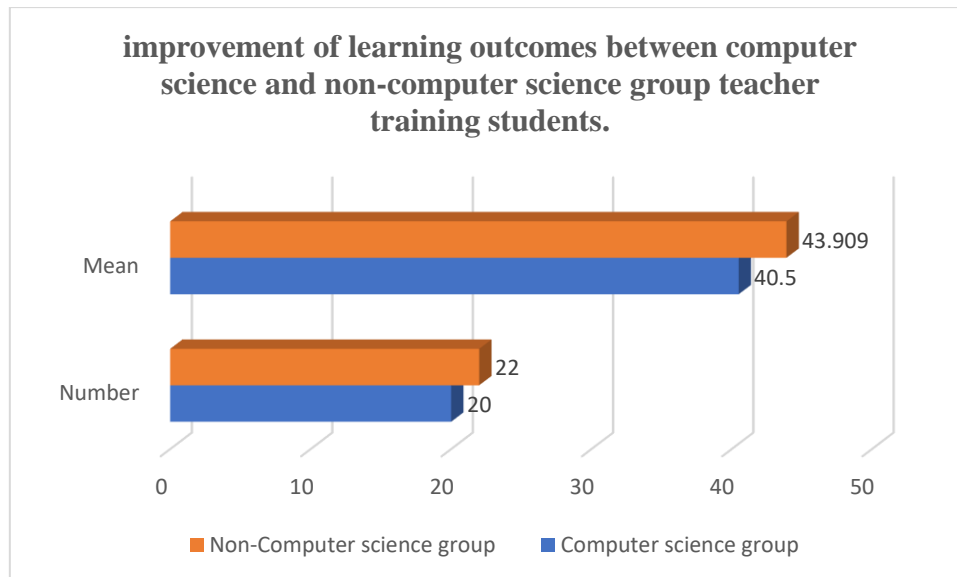
*There is no significant difference in an improvement of learning outcomes between computer science and non-computer science group teacher training students.*

Table: 3

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 learning outcomes is (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

class room. Hence the null hypothesis that "There is no significant difference in an improvement of learning outcomes between computer science and non-computer science group teacher training students" is rejected.



#### Findings

- The implementation of smart virtual class room for teacher training students before and after differ significantly in terms of improvement of learning outcomes through smart virtual class room.
- The first year and second year teacher training students differ significantly in terms of improvement of learning outcomes through smart virtual class room.
- The urban and rural teacher training students differ significantly in terms of improvement of learning outcomes through smart virtual class room.
- The computer group and non-computer group teacher training students differ significantly in terms of improvement of learning outcomes through smart virtual class room.

#### Implications of the study

The following are the educational implications of the study

- These findings of the study will be of 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 follows.

- The present study was confined to the District Institute of Education and training 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, universities, districts etc.

#### CONCLUSION

It is fact that smart virtual class rooms, i.e., Information and Communication Technology is playing a vital role in improvement of learning outcomes to teacher education platform. Smart virtual 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 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. In this paper reveals that the teacher training students have better improvement of learning outcomes by using smart virtual class room.

#### REFERENCES

- [1] Kothari,C.R., & Gaurav Garg. (2014). *Research methodology: Methods and techniques* (3<sup>rd</sup> ed., pp.129-135) New age international (P) limited, Publishers, New Delhi.
- [2] Lokesh koul. (2008). *Methodology of educational research* (3<sup>rd</sup> revised ed., pp.111-125) Vikas Publishing house (P) limited, Noida (UP).

- [3] Radha Mohan. (2010) *Research methods in education* (2<sup>nd</sup> ed., pp.35-44) Neelkamal Publications (P) limited, Hyderabad.
- [4] Vanaja, M. (2005). *Educational technology* (1<sup>st</sup> ed., pp.10-20) Neelkamal Publications (P) limited, Hyderabad.
- [5] ERNET India, Training manual for smart virtual classroom project, DeitY, Government of India.  
Centre for teaching support and innovation, Roberts Library,  
<https://teaching.utoronto.ca/teaching-support/course-design/developing-learning-outcomes/what-are-learning-outcomes/>
- [6] Ernet India, Smart Virtual classroom project,  
<http://www.eis.ernet.in/projects/svc.html>
- [7] Ahmed Al-Hunaiyyan., Salah Al-Sharhan., & Rana Alhajri.(2017) A New Mobile Learning Model in the Context of Smart Classroom Environment: A Holistic Approach. *International journal of interactive mobile technologies*, Vol 11, No 3 (2017).
- [8] Anurag Chaudhary., Gaurav Agrawal., & Meghna Jharia (2014). A Review on Applications of Smart Class and E-Learning. *International Journal of Scientific Engineering and Research*, Volume 2 Issue 3, March 2014.
- [9] Mehedi Masud. (2016). A System Framework for Smart Class System to Boost Education and Management. *International Journal of Advanced Computer Science and Applications*, Vol. 7, No. 10, 2016.  
<https://arxiv.org/ftp/arxiv/papers/1707/1707.02924.pdf>
- [10] Sivakumar, G & Palanisamy, C.(2018) Improvement of learning outcomes through smart virtual classroom among High school students, *Paripex - Indian journal of research* Volume-7 Issue-10, October-2018 .