Penetration of E-Learning among B.Ed Teacher Trainees in Tiruchirappalli District

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Abstract:

E-Learning is an instructional approaches that uses electronic resources to deliver education. It allows knowledge and skills to be transmitted to multiple learners simultaneously at different time.The present research aims to study the penetration of e-learning among B.Ed. Teacher trainees. The sample of the study was selected by the Stratified Random Sampling method which included 200 (60 Male and 140 Female) from the Tiruchirappalli district. The sample was selected by the Stratified Random sampling method. A tool used for the research was the penetration learning, by an investigator. Research finding reveals that 68.7% of them have moderate. Results also revealed that there is a significant difference between rural and urban B.Ed. teacher trainees in their penetration of e-learning. There is a significant difference between art and science B.Ed. Teacher trainees in their penetration of e-learning for the group.

Keywords: *E-Learning, Penetration and B.Ed., Teacher Trainees.*

1. Introduction:

E-Learning, which refers to electronic learning, constitutes a comprehensive and system. E-Learning, "e" learning however we write it, definitions abound. Some of the definitions are the convergence of the Internet and learning or Internet-enabled learning. The use of network teachnologies to create, foster, deliver and facilitate learning, anytime and anywhere. The delivery of individualized, comprehensive, dynamic learning content in real-time, aiding the development of communities of knowledge, linking learners and practitioners with experts. A phenomenon delivering accountability, accessibility, and opportunity to allow people and organizations to keep up with the rapid changes that define the Internet world. A force that gives people and organizations the competitive edge to allow them to keep ahead of the rapidly changing global economy.

Review of Related Studies

Vivek singh, Tana Riza(2022) showed that the attitude of male students is higher than the attitude of female students towards e-learning.

Katur,A., &Singh,S.(2021) found that men pupil teachers online Teaching attitude more positive rather then women pupil teachers.

Ahmed, S., & Hina Hussain Kazmi(2020) found that there was no significant difference between men and women faculty attitudes towards the use of ICTs.

Periyasamy, R(2019) study revealed that men attitude was higher than the women B.Ed. Trainees.

C.Palanichamy(2018) and **G.Sivakumar(2018)** reported the concept of the smart virtual classroom has made it possible for students to tackle the features of the internet to create a meaningful and constructivist learning environment for school eduction. Information and communication technology (ICT) is playing a vital role in the teaching and learning process of smart virtual classrooms.

Zhang et al(2004) reported that the economy has become knowledge-based and this has therefore resulted in an increasing demand for new ways of delivering education. Since the traditional educational systems were unsuccessful to satisfy the crucial and changing learning needs of the learners, there was a shift to new forms. Therefore, the methodology experienced a transition from a teacher-centered to a learner-centered approach. It was time for an e-learning system.

Delivery Methods Used in E-Learning:

E-Learning is done over the WORLD WIDE WEB or by CD-ROM, and some variations (distance learning) incorporate traditional media. Here is common delivery methods used in e-Learning:

I. **Print -** e-text, textbooks, e-zines

II. **Video -**streaming video, videotape, satellite transmission cable

III. **Audio -**streaming audio, audiotape

IV. **Review and Exams -**electronic interactive paper.

V. **Communication -**Asynchronous, email, threaded discussion, weblogs forums, Synchronous, Chat, Video-conferencing, Teleconferencing

Benefits of E-Learning

1. Learning is 24/7

Students can access e-Learning anywhere and at any time of the day. Its "just in time-any time" approach makes the learning process ubiquitous.

a. Universality

E-Learning is web-enabled and takes advantage of the universal Internet protocols and browsers. Concern over differences in platforms and operating systems is rapidly fading. Everyone on the Web can receive virtually the same material at virtually the same time.

b. Scalability

E-Learning solutions are highly scalable. Programs can move 10 participants to 100 or even more participants with little effort or incremental cost(as long as the infrastructure is in place).

c. Builds communities

The Web enables students to build enduring communities of practice where they can come together to share knowledge and insight. This can be a tremendous motivator for learning.

d. Distance learning

E-Learning has also been used synonymously in dialogue concerning flexible distance learning. However, the recent surge to incorporate more computer technology into classrooms, at all levels within Education Departments across India, has caused the notion of E-Learning to be re-discovered. The rapidly increasing awareness of E-Learning is continually raising its profile with the general as well ass parental public and in turn, is creating.

e. E-Learning lowers costs

Despite outward appearances, e-learning is often the most cost-effective way to deliver intruction or information. It cuts travel expenses; it can also reduce teaching time, and significantly reduces the need for a classroom/teacher infrastructure.

2. Information is consistent or customized

Depending on the need everyone gets the same content, presented in the same way. Yet the programs can also be customized for different learning needs or different groups of people.

3. Content is more timely and dependable

Because it is web-enabled, e-learning can be updated instantaneously, making the information more accurate and useful for a longer period. The ability to upgrade E-Learning content easily and quickly and then immediately distributing the new information to users is extremely time-efficient.

Need for the Study:

Studying B.Ed. Trainees among towards e-learning is important bacause it helps educational Institutions understand their Penetration and Performance regarding online learning. The rapid development of Information and Communication Technologies(ICT), especially the recent explosive growth of Internet capacities, offers tremendous educational opportunities. E-Learning enhances individual learning and also updates information in the field of education. The future growth and development of e-learning technologies are, perhaps, the most important of these trends in the realm of education. E-Learning is slowly being accepted as ome of the criteria of a progressive, innovative, and leading higher educational institution. While the bulk of the studies related to e-Learning focuses on the quantitative impact of e-Learning, the purpose of this research is to study the penetration of faculties and students on e-Learning in colleges, specifically professional educational institutions. E-Learning has an important role in the enhancement and development of students' critical thinking. The benefits of e-Learning for learners and faculty include a flexible schedule and instruction at convenient locations, institutions, or homes. It increases achievement and retention since there is immediate feedback to the learners about their progress and accomplishment of specified performance. Just like the classical ones, these models assume the existance of an efficient learning process based on efficient cooperation and a communication activity well established.

Statement of the Problem:

The investigator has thought of the conduct of the present study and which is entitled "**Penetration of E-Learning among B.Ed Teacher Trainees in Tiruchirappalli District**".

Operational Definitions

The investigator has adopted the following definitions for the terms used in this title.

Penetration: Refers to the process of attaining awareness or understanding of sensory information Teaching Profession based on their experience, expectations, Competencies.

E-learning: Refer to the online delivery of information, communication, and education as perceived by the students of the B.Ed. Colleges.

B.Ed. Teacher Trainees: Refers to the students studying in B.Ed., the course in College of Education at Tiruchirappalli District affiliated with the Tamil Nadu Teachers Education University, Chennai.

Objectives of the Study:

1. To find the level of penetration of e-learning among B.Ed. teacher trainees

2. To find out the significant difference between male and female B.Ed. teacher trainees in their penetration of e-learning.

3. To find out the significant difference between rural and urban B.Ed. teacher trainees in their penetration of e-learning.

4. To find out the significant difference between art and science B.Ed. teacher trainees in their penetration of e-learning with respect to group.

Hypotheses of the Study:

1. The level of penetration of e-learning among B.Ed.teacher trainees are satisfactory.

2. There is no significant difference between male and female B.Ed.teacher trainees in their penetration of e-learning.

3. There is no significant difference between rural and urban B.Ed. Teacher trainees in their penetration of e-learning.

4. There is no significant difference between art and science B.Ed. Teahcer trainees in their penetration of e-learning with respect to group.

Tool Selected for the Present Study:

The investigator developed a "penetration of e-learning among B.Ed. Teacher trainees" consisting of 30 items. Each item of the tool focused to measure the different penetration learning in the sample. The responses were asked to put a tick mark against one of the three alternatives (Yes/No/Some Times) that is most appropriate. There are positive items, for these positive items scoring are 2, 1, 0.

Population of the Study:

"A population is any group of individuals that have one or more characteristics in common that are of interest to the researcher. The population may be all the individuals of a particular type or more restricted group". The population of the present study consists of B.Ed. Teacher trainees in Tiruchirappalli District.

Sample and Sampling Technique:

"A sample is a small portion and analysis by observing the characteristics of the population from which it is drawn". The investigator has used a simple random sampling technique. The investigators have randomly selected 200 Teacher Trainees from different colleges of Education in the Tiruchirappalli District.

Table: 1

Level of Penetration of E-Learning among the B.Ed. Teacher Trainees

Level	Low		Moderate		High	
	N	%	N	%	N	%
Penetration of E-learning	30	14.65	135	68.7	35	16.9

It is defined from the above table that 14.65% of the B.Ed. Teacher trainees have low, 68.7% of them have moderate and 16.9% of them have a high level of penetration of learning. Hence the hypothesis is rejected. Levels of penetration of e-learning among B.Ed. Teacher trainees are moderate.

Hypothesis: 1

There is no significant difference between male and female B.Ed. Teacher trainees in their penetration of e-learning.

Table: 2

Difference Between Male And Female B.Ed. Teacher Trainees in Their Penetration of E-Learning

Gender	Number	Mean	SD	't' Value	df	Remarks
Male	60	29.42	4.043	1.425	197	Not Significant
Female	140	26.42	4.462			

(At 0.05 level of significant the table value of t is 1.97)

Table 2 shows that the mean value of male and female were 26.42 and 29.42 respectively with a standard deviation of 4.04 and 4.62. The calculated value (t=425) is lesser than the critical value of 1.97 at a 0.05 level of significance with df=198. Hence, the null hypothesis "There is no significant difference between B.Ed. Teacher trainee's male and female students in their penetration of e-learning" is accepted.

Hypothesis 2

There is no significant difference between rural and urban B.Ed. Teacher trainees in their penetration of e-learning.

Table: 3

Difference Between the Rural And Urban B.Ed. Teacher Trainees in Their Penetration of E-Learning

Locality	Number	Mean	SD	't' value	df	Remarks
Rural	130	26.07	4.325	2.710	197	Significant
Urban	70	29.87	3.910			

(At 0.05 level of significance the table value of t is 1.97)

Table 3 shows the mean value of rural and urban 26.07 and 29.87 respectively with a standard deviation of 4.325 and 3.910. Urban mean scores (M=29.87) are higher than the rural mean score (M=26.87). The calculated value (t=2.710) is greater than the critical values of 1.97 at a 0.05 level of significance with df=197. Hence, the null hypothesis "There is no significant difference between rural and urban B.Ed. Teacher trainees in their penetration of e-learning" is accepted. Therefore, it may be concluded that urban students have more penetration of their e-learning tha rural students.

Hypothesis 3

Table: 4

Difference Between The Art And Science B.Ed. Teacher Trainees in Their Penetration of E-Learning with Respect to Group

Group	Number	Mean	SD	't' value	df	Remarks
Arts	58	26.84	4.578	3.603	197	Significant
Science	142	27.42	4.180			

(At 0.05 level of significance the table value of t is 1.97)

The above table 4 shows that the mean value of arts and science is 26.84 and 27.42 respectively with a standard deviation of 4.578 and 4.180. Science students' mean scores (M=27.44) are higher than the Arts student's mean score (M=26.84). The calculated value (t=3.603) is greater than the critical values of 1.97 at a 0.05 level of significance with df=197. Hence, the null hypothesis "There is no significant difference between art and science B.Ed. Teacher trainees in their penetration of e-learning with respect to group" is rejected. Therefore, it may be concluded that science students have more penetration in their e-learning than arts students.

Findings:

1. 14.65% of the B.Ed. Teacher trainees have low, 68.7% of them have moderate and 16.9% of them have a high level of penetration of e-learning.

2. There is no significant difference between B.Ed. Teacher trainees male and female students in their penetration of e-learning is accepted.

3. "There is a significant difference between rural and urban B.Ed. Teacher trainees in their penetration of learning" Urban mean scores (M=29.87) are higher than the rural mean score (M=26.07). The calculated value (t=2.710)is greater than the critical values of 1.97 at a 0.05 level of significance with DF=197. Hence, the null hypothesis is rejected. Therefore, it may be concluded that urban students have more penetration of their e-learning than rural students.

4. There is a significant difference between art and science B.Ed. Teacher trainees in their penetration of e-learning with respect to group. Science students mean scores (M=27.42) are higher than the Arts student's mean score (M=26.84). The calculated value (t=3.603) is greater than the critical values of 1.97 at 0.05 level of significance with DF=197. Hence, the null hypothesis is rejected. Therefore, it may be concluded that science students have more penetration in their e-learning than arts students.

Interpretation and Discussion:

The main finding of the study stated that the penetration of e-Learning is moderate. Which is a welcomed trend and also the faculties are realizing to utilize modern technology in their learning. The students are realized to know the importance of modern technology in their studies. The findings of the present study reveal that there is a significant difference between rural and urban B.Ed. Teacher trainees in their penetration of e-learning. Urban students have a higher penetration of e-learning than rural students. Urban students have more exposure to using computers with internet facilities than urban. Urban students have a more opportunities to use ICT.

The findings of the present study show that there is no significant difference between B.Ed. teacher trainee's male and female students in their penetration of

e-learning:

Findings suggest that before taking an online course, working-class students perceive e-learning systems more positively than their middle-class peers but that little difference exists between genders.

The findings of the present study show that there is a significant difference between art and science B.Ed. Teacher trainees in their penetration of e-learning with respect to group. Science group students have more opportunities to use ICT, computers with internet facilities that the arts group.

Conclusion:

According to the study finding, it appears that men tend to exhibit a more positive penetration among e-learning compared to female. Students can access e-Learning anywhere and at any time of the day. It's just in time-any time approach makes the learning process ubiquitous-Learning can be updated instantaneously, making the information more accurate and useful for a longer period. The ability to upgrade e-learning content easily and quickly and then immediately distribute the new information to users is extremely time-efficient.

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