

## EVALUATION ON THE PERCEPTIONS OF TEACHERS TOWARDS E-LEARNING IN TEACHING LEARNING PROCESS WITH SPECIAL FOCUS TO WEST BENGAL

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### **Abstract:**

The teaching profession is exposed to a wide range of options as a result of technological advancement. However, student instructors must also learn how to use this new technology in the teaching and learning process in the classroom. The role of society in education is also significant. The social attitudes of instructors and students are altered by the use of ICT in education. The development of ICT skills is supported by several facilities for trainees in teacher education. Therefore, the purpose of this study is to ascertain how informed teacher candidates are about ICT use. The community in which we all live and how various personnel interact are significantly impacted by ICT. In this article, evaluation on the perceptions of teachers towards e- learning in teaching learning process with special focus to West Bengal has been discussed.

**Keywords:** Perceptions, Teachers, Teaching, Learning, ICT, West Bengal

### **INTRODUCTION:**

The majority of teacher education institutions (such as B.Ed. colleges and D.Ed. colleges) are struggling with issues such as a lack of ICT-trained, competent experts and teachers, insufficient curricula, flawed admissions procedures, a lack of ICT equipment, and more. The main tools in teacher education are student teachers. [1-3] We cannot anticipate any qualitative improvement to result from teacher education until they are trained. Why ICT is underutilized or not used in teacher education needs to be understood. [4-6] People from a variety of industries have simultaneously expressed a strong interest in the idea of social capital and how it contributes to the development of robust communities and improved economic growth. [7-9] As information and communication technology (ICT) developed, more people began utilizing various technologies in their daily lives, which had an impact on their level of living and how they interacted with others in society. [10] This has a significant impact on their social lives, and it attracts the attention of many scholars and policymakers, who then conduct numerous studies on the relationship between ICT and social capital. [11-12] However, because there are so few studies in this area, researchers were unable to obtain reliable findings. The main aim and rationale of the study was to evaluation on the perceptions of teachers towards e- learning in teaching learning process with special focus to West Bengal.

### **RESEARCH METHODOLOGY:**

Descriptive survey method was used by the researcher for studying the awareness and perception towards the application of ICT and its relationship with ICT social capital possessed by teacher trainees. The researcher has constructed and validated tools with the help of research supervisor for collecting data from teacher trainees involved in the study. The collected data was analysed and interpreted statistically using the statistical analysis software IBM SPSS Statistics 20.

The field of the study includes the entire West Bengal state. Population of the study includes teacher trainees pursuing B.Ed. programmes from Teacher Education Institutions and University Centres in West Bengal. Five hundred and eight teacher trainees were selected from different Teacher Education Institutions and University Centres in West Bengal for the present study.

In the current study a cluster random sampling technique was utilized for choosing the example. Among the Teacher Education Institutions and University Centres in West Bengal, the

researcher selected three Government aided colleges, nine unaided colleges and three University centres for selecting the sample. Five hundred and eight teacher trainees pursuing B.Ed. programme were selected randomly from these institutions as samples for the present study.

To study the awareness and perception of teacher trainees towards the application of ICT and its relationship with social capital possessed by teacher trainees the following tools were developed and standardized by the researcher with the help and guidance of the research supervisor.

- ICT Awareness Test (ICTAT)
- Perception Towards Application of ICT Scale (PTAICTS)
- ICT Social Capital Scale (ICTSCS)

The sample for the current study comprised of five hundred and eight teacher trainees pursuing B.Ed. program in West Bengal were chosen for the current investigation.

The data for the study was collected from the 508 B.Ed. trainees of West Bengal state. The data collection was done by various B.Ed. colleges in West Bengal. Among the Teacher Education Institutions and University Centres in West Bengal, the researcher selected 3 Government aided colleges, 9 unaided colleges and 3 University centres for selecting the sample. 1 Government aided colleges, 3 unaided colleges and 1 University centres from each three regions. 508 teacher trainees pursuing B.Ed. programmes were selected randomly from these institutions as samples for the present study. The investigator took prior permission from the head of the teacher education institution for collecting data. The collected data was thoroughly scrutinized and tabulated for further statistical analysis.

The obtained data was analyzed and interpreted using the following statistical techniques. Descriptive analysis includes Mean, Median, Mode, Standard deviation, Skewness, Kurtosis. Descriptive statistics are used to present quantitative data in a manageable form (Pandya, 2013). It helps to know the nature of the data and to study the characteristics of the data. The

graphical representation histogram, box plot and Q-Q plot were used to check the normality of the data.

Inferential statistics helps to make inferences and predictions about a population based on a sample of data taken from the population. Inferential analysis used in the present study for data analysis and interpretation includes:

- Chi-square test (Cross tab)
- Correspondence analysis
- Independent sample t test
- Analysis of variance
- Correlation
- Multiple Regression

#### **DATA ANALYSIS AND INTERPRETATION:**

The present study aimed at studying the awareness and perception of teacher trainees towards the application of ICT and its relationship with ICT Social Capital. The variables used for the study are Awareness about the application of ICT, Perception towards the application of ICT and ICT Social Capital. A cluster random sampling method was used for selecting a representative sample of 508 teacher trainees from West Bengal. Quantitative research method was adopted for the study and descriptive and inferential analyses were used for analysing and interpreting the data.

The quantitative analysis was done in two phases:

- Descriptive analysis
- Inferential analysis

Descriptive Analysis:

Descriptive statistics helps to study the nature of the data. To know how the data is distributed, mean, median, mode, standard deviation (SD), skewness and kurtosis were calculated for the total samples.

Descriptive Analysis of the Data - ICT awareness TEST (ICTAT), Perception of Teacher Trainees towards the Application of ICT Scale (PTAICTS) & ICT Social Capital Scale (ICTSCS) Scores.

**Inferential Analysis:**

Inferential statistics helps to make inferences and predictions about a population based on a sample of data taken from the population. In the present study since the data obtained through three tools used in the study are approximately normally distributed tests like t test, ANOVA, regression analysis, chi square were used for the analysis and interpretation of data.

The researcher categorized the teacher trainees into three different levels namely low, average and high level of awareness group. The low level of awareness group consisted of teacher trainees whose scores on the ICT Awareness Test were below the value of (mean - standard deviation) of the total sample. The average level of awareness group consisted of teacher trainees whose scores on the ICT Awareness Test was between the value of (mean - standard deviation) and (mean + standard deviation) of the total sample. The high level of awareness group consisted of teacher trainees whose scores on the ICT Awareness Test was above the value of (mean + standard deviation) of the total sample.

## **RESULTS AND DISCUSSION:**

The type of management has a significant association with the level of ICT awareness of teacher trainees. Teacher trainees with a high level of ICT awareness are closely associated with University centres. Similarly teacher trainees with average level of awareness are closely associated with government & aided B.Ed. colleges. There is a significant association between the level of ICT awareness of teacher trainees and their educational qualification. Out of 81 teacher trainees having high level of awareness, 70% are post graduated teacher trainees which shows that the number of post graduated teacher trainees having high level of ICT awareness

is more than that of undergraduate teacher trainees. But there is no significant association between the level of ICT awareness of teacher trainees and their gender. So the female and male teacher trainees do not differ significantly in terms of their association with the level of ICT awareness. This may be due to the fact that both male and female teacher trainees have the same level of awareness about the application of ICT in their day to day life. Thakur (2014) in his study on ICT awareness among teacher trainees also found that both the male and female trained teachers showed the same level of awareness about the usage of ICT. But they differ in their ICT awareness with respect to their locality. In the present study also there is a significant association between the level of ICT awareness of teacher trainees and their locality. Teacher trainees from urban areas have more awareness than that of rural areas. Also there is a significant association between the level of ICT awareness of teacher trainees and their teaching subject. Teacher trainees with science as a teaching subject have more awareness than the teacher trainees with humanities as their teaching subject.

The mean scores of ICT awareness test of teacher's trainees who are studying in government and aided B.Ed. colleges are significantly different from those of teacher trainees who are concentrating in unaided B.Ed. colleges. Also the mean scores of ICT awareness test of teachers trainees who are concentrating in University B.Ed. centres is significantly different from those of teacher trainees who are studying in unaided B.Ed. colleges.

But the mean scores of ICT awareness tests of teacher trainees who are concentrating in government and aided B.Ed. colleges and the University B.Ed. centres do not differ significantly. There is a significant change in the mean score of ICT awareness test of teacher trainees based on their educational qualification. The mean score (20.87) of ICT awareness test of postgraduate teacher trainees is greater than the mean score (18.98) of ICT awareness test of undergraduate teacher trainees which shows postgraduate teacher trainees have better awareness about application of ICT than undergraduate teacher trainees. The male and female teacher trainees do not differ significantly in their awareness about application of ICT. The teacher trainees from urban and rural areas do not change significantly in their awareness about application of ICT. There is a significant difference in the mean score of ICT awareness test of teacher trainees based on their teaching subject. The mean score (20.84) of ICT awareness test

of teacher trainees having science as teaching subject is higher than the mean score (18.98) of ICT awareness test of teacher trainees having humanities as teaching subject which shows teacher trainees with science as teaching subject have better awareness about application of ICT than teacher trainees with humanities as teaching subject. Yuenis and Mais (2002) in their study on gender difference in teacher computer acceptance investigated actual usage of ICT and didn't find any significant gender differences. Ahmad (2012) in his study on teacher trainees' awareness on ICT hardly found any change between a) gender; b) teaching subjects, but differed between c) urban and rural respondents. Thakur (2014) also found a significant change in the ICT awareness of student teachers from urban and rural areas. The urban student teachers were less aware when compared to the teacher trainees from rural areas which contradicts the result obtained in the present study.

These studies support the result that investigators got with respect to gender strongly but contradict with the results with respect to teaching subject and locality. It may be due to the exposure and learning experiences that the teacher trainees receive during their teacher training. But Philomina and Amutha (2016) in their study on ICT awareness supports the finding of the present study that the teacher trainees with science background have better awareness about ICT when compared to those teacher trainees with humanities background. Aslan and Zhu (2017) in their study on teacher trainees' ICT integration into teacher training programs, especially pedagogical knowledge and ICT-related curricula, have a significant effect in enabling trainees to use ICT in their entire learning process. This shows that the integration of ICT is an indispensable part in teacher education programmes. In order to improve the awareness of teachers about the application of ICT it is essential to give proper ICT awareness to them while they are teacher trainees. So the awareness about the application of ICT is very essential in teacher trainees irrespective of their gender, locality, educational qualification, teaching subject and type of management of their institution. Hence it is essential to incorporate methodology to improve the awareness about the application of ICT so that it will help them to enhance their skill in using ICT in their teaching learning process.

The teacher trainees do not change significantly in terms of their perception towards application of ICT with respect to type of management, educational qualification, gender and their teaching

subjects. But the teacher trainees differ in their perception towards the application of ICT with respect to their locality. Perception of teacher trainees towards the application of ICT has low positive significant correlation with locality. But the perception of teacher trainees towards the application of ICT has negligible correlation with gender, type of management, educational qualification and teaching subject which is not significant. Hart (2009) in his study on ICT found that the teacher trainees develop integration of ICT during their practicum with respect to its recognized educational value and their identified personal capacity in using it. In the present study it was found that the teacher trainees' perception changes based on their locality. It may depend upon the exposure and experience they receive and their awareness about the application of ICT.

The mean scores of social capital possessed by teacher trainees who are concentrating in government and aided B.Ed. colleges do not differ significantly different from those of teacher trainees who are studying in unaided B.Ed. colleges. But the mean scores of social capital possessed by teacher trainees who are studying in University B.Ed. centres is significantly different from those of teacher trainees from unaided B.Ed. colleges. Also the mean scores of ICT Social Capital possessed by teacher trainees from government and aided B.Ed. colleges and the University B.Ed. centres differ significantly. Whereas the post graduated teacher trainees and undergraduate teacher trainees do not differ significantly in their ICT Social Capital related to their ICT usage. But trainees differ significantly in their ICT Social Capital related to the usage of ICT based on their gender and locality. The teacher trainees having science and humanities as teaching subjects differ significantly in their ICT Social Capital related to the usage of ICT. According to Yang, Lee and Kurnia (2018), "Social capital is one of the influential concepts in social sciences to understand contemporary societies which has been found to influence many aspects of social life, directly or indirectly". It is also widely studied related to ICT. In this digital era, the way an individual interacts in the society depends on their awareness and perception about the application of ICT. In the present study it is found that the ICT Social Capital possessed by teacher trainees in relation to application of ICT is influenced by their type of management, gender, locality and teaching subjects. This may be due to their interaction and association with the society and the experience and exposure that they are receiving from their institution and through their subject. Giving proper awareness



about the application of ICT during their teaching training, a positive attitude can be developed towards the application of ICT and thereby influencing their ICT Social Capital positively.

It is found that there exist a significant positive low correlation between the awareness about application of ICT and ICT Social Capital possessed by teacher trainees. The computer aspect of awareness about application of ICT and the family aspect of ICT Social Capital possessed by teacher trainees are having significant low positive correlation. The application of software aspect of awareness about application of ICT and the family aspect of ICT Social Capital possessed by teacher trainees are having significant low positive correlation. The application of software aspect of awareness about application of ICT and the school aspect of ICT Social Capital possessed by teacher trainees are having significant low positive correlation. The broadcasting technology aspect of awareness about application of ICT and the school aspect of ICT Social Capital possessed by teacher trainees are having significant low positive correlation.

The correlation coefficient and significant value obtained for the correlation between perception towards application of ICT and ICT Social Capital possessed by teacher trainees are 0.623 and 0.000 respectively. This reveals that there exists a significant positive moderate correlation between perception towards application of ICT and ICT Social Capital possessed by teacher trainees. The personal aspect of perception towards the application of ICT and the family aspect of ICT Social Capital possessed by teacher trainees are having significant low positive correlation. The personal aspect of perception towards the application of ICT and the school aspect of ICT Social Capital possessed by teacher trainees are having significant moderate positive correlation. The personal aspect of perception towards the application of ICT and the social network aspect of ICT Social Capital possessed by teacher trainees are having significant low positive correlation. The academic aspect of perception towards the application of ICT and the family aspect of ICT Social Capital possessed by teacher trainees are having significant low positive correlation. The academic aspect of perception towards the application of ICT and the school aspect of ICT Social Capital possessed by teacher trainees are having significant moderate positive correlation. The academic aspect of perception towards the application of ICT and the social network aspect of ICT Social Capital possessed by teacher trainees are having significant moderate positive correlation. The professional aspect of

perception towards the application of ICT and the family aspect of ICT Social Capital possessed by teacher trainees are having significant low positive correlation. The professional aspects of perception towards the application of ICT and the school aspect of ICT Social Capital possessed by teachers are having significant moderate positive correlation. The professional aspect of perception towards the application of ICT and the social network aspect of ICT Social Capital possessed by teacher trainees are having significant low positive correlation.

The social aspect of perception towards the application of ICT and the family aspect of ICT Social Capital possessed by teacher trainees are having significant low positive correlation. The social aspect of perception towards the application of ICT and the school aspect of ICT Social Capital possessed by teacher trainees are having significant low positive correlation. The social aspect of perception towards the application of ICT and the social network aspect of ICT Social Capital possessed by teacher trainees are having significant low positive correlation.

Ellison, Steinfield and Lampe (2007) in their study on the relationship between use of ICT and social media and the formation and maintenance of social capital found a strong association between them. Waters and Zhu (2017), in their study on use of ICT and social capital found that the use of face-to-face conversations and text messages during meetings positively impact on bridging social capital. The use of ICTS in between the meetings was not a significant predictor in developing social capital. But the study conducted by Wellman, Haase, Witte and Hampton (2001) on social capital found that online interaction of the people supplements their face-to-face and telephone communication, without any change in it. However, high usage of the internet is associated with increasing association with voluntary organizations and politics. Also there is a positive association with the online and offline participation with these organisations. All these show that the internet and social media are highly associated with daily life. Likewise all the information and communication technologies are very much associated with the day to day life.

From the regression analysis for ICT awareness possessed by teacher trainees, it is found that the type of management, educational qualifications and teaching subject are good predictors of awareness about application of ICT. From the regression analysis for perception of teacher trainees towards the application of ICT, it is found that the locality is the only predictor of perception of teacher trainees towards the application of ICT. From the regression analysis of ICT Social Capital possessed by teacher trainees, it is found that type of management, teaching subjects, perception towards the application of ICT are the predictors. Hart (2009) in the study on ICT found that the teacher trainees develop integration of ICT during their practicum with respect to its recognized educational value and their identified personal capacity in using it. In the present study it was found that the teacher trainees' perception changes based on their locality. It may depend upon the exposure and experience they receive and their awareness about the application of ICT. Also, the type of management of the institution where the teacher trainees are pursuing their B.Ed. programme, their educational qualification and their teacher subjects contributes to their awareness about application of ICT.

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and offline participation with these organizations. All these show that the internet and social media are highly associated with daily life. Likewise, all the information and communication technologies are very much associated with the day to day life.

## **CONCLUSION:**

The analysis of the present study on awareness and perception towards the application of ICT and its relationship with the ICT Social Capital possessed by the teacher trainees shows that the teacher trainees' awareness about the application of ICT and their perception towards the application of ICT influence their ICT Social Capital. The perception towards application of ICT is a strong predictor of ICT Social Capital possessed by them. The study highlights the importance of awareness of teacher trainees about ICT, how they perceive the application of ICT and how it is related to their ICT Social Capital.

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