

# Teacher-Trainees Attitude towards ICT

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## Abstract

This paper seeks to explore one of the important dimensions of teacher trainees: Attitude towards Information and Communication Technology (ICT). The study focuses on the level of attitude towards ICT among B. Ed teacher trainees. The samples were 952 teacher trainees. The tools used for the study were: Personal data sheet and Attitude towards ICT Scale developed by investigator. The results indicated: That majority of teacher trainees (60.5%) showed uncertainty in their attitude and only 39.5% of the trainees showed positive attitude towards ICT. Further irrespective of gender and Locale the attitude towards ICT of teacher trainees are at the same level. The study suggests that Crash courses especially in ICT applications and Workshops on Modern ICT tools could be conducted to make the teacher trainees aware of the different innovative techniques and methods, which will enhance the attitude towards ICT.

**Keywords:** Information and Communication Technology (ICT), Teacher-Trainees and Attitude

## 1. Introduction

Computer is an electronic device that has the capacity to store, retrieve and process both qualitative and quantitative information fast and accurately. Over the past few years the growth of the computer industry has been quiet remarkable and today it is the fastest growing industry in our economy. The use of computers is not restricted only to office desktops or laptops. We see the use of computers all around us. Computers have made our lives simple and very convenient by catering to our needs at a click of the mouse; we use computers practically for every activity in our lives. Computers are being used in most of the appliances or gazettes that we use in our day to day living, thereby making it the most important part of our lives. Education system is not an exception to the same.

## 2. Information Technology (IT)

Networking of computers gave birth to information technology (IT). UNESCO considered Information Technology as “Scientific, technological, engineering and management techniques used in information handling and processing and their application”. Sansanwal, (2000) defined “IT as the use of information i.e storage, retrieval, processing, communication, diffusion and sharing of information for social, economical and cultural upliftment”. According to Saloman, (1993) the primary motivation for integrating IT in education is the belief that it supports pupils in their own constructive thinking, allows them to transcend their cognitive limitations, and engages them in cognitive operations that they may not have been capable of otherwise. In the words of Tickton(1971) the purpose of Instructional technology is “ to make education a more productive and more individual, to give instruction a more scientific base and to make instruction more powerful, learning more immediate and access more equal.” Armsey & Dahl, (1973) stated that “instructional technology is made up of the things of learning, the devices and materials which are used in process of learning and teaching.” Supportively, Knezevich & Eye, (1970) stated that “instructional technology is an effort with or without machines, available or utilized, to manipulate the environment of individuals in the hopes of generating a change in behavior or other learning outcome”. According to Holmes, Tangney, FitzGibbon, Savage & Mehan, (2000), the current trend around the world is to improve the learner to computer ratio and to improve the quality of access to the internet. The effort of putting technology into the hands of teachers is also being carried out in many countries.

This information technology gave birth to the development of websites, which has been helping in shrinking the world into a global village.

### 2.1 Information and Communication Technology (ICT)

**The National Centre for Technology in Education (NCTE-2000)** states that ICT being an interdisciplinary domain focuses on providing students with the tools to transform their learning and to enrich their learning environment. The knowledge, skills and behaviors identified for this domain enable students to: develop thinking and learning skills that produce creative and innovative insights; develop more productive ways of working and solving problems individually and collaborately; create information products that demonstrate their understanding of concepts, issues, relationships and processes; express themselves in contemporary and socially relevant ways; communicate locally and globally to solve problems; share knowledge and understand the implications of the use of ICT and their social and ethical responsibilities as uses of ICT.

Learning in this domain enables student to focus on the task to be accomplished rather on the technology they are using to do the work. Through the selection and application of appropriate equipments, techniques and procedures, they process data and information skillfully to create information products that are meaningful for themselves and their audience. These products effectively demonstrate their knowledge and understanding of the concepts, issues, relationships and processes that are real concerns of teaching-learning process.

## **2.2 ICT in Teacher Education**

The programme of teacher education relates closely to the ICT curriculum, and particularly to the stage of development that schools have reached with respect to ICT.

Teacher education programmes have the critical role to provide the necessary leadership in adapting pre-service and in-service teacher education to deal with the current demands of society and economy. They need to model the new pedagogies and tools for learning with the aim of enhancing the teaching-learning process. Moreover, teacher education programmes must also give guidance in determining how the new technologies can best be used in the context of the culture, needs, and economic conditions of their country. The major objective of inculcating ICT in teacher education is to (i) Improve teachers knowledge base and skills through ICT integration. (ii) Develop skills for online and offline information processing and developing learning resources. (iii) Prepare teachers who would be innovative and self-directed, life long learners.

According to Utpal Mallik, (2007) Pre-service programmes in teacher training colleges need more attention than they presently getting. The low quality of ICT integration in schools is the result of low quality of teachers' professional preparation. Most pre-service ICT programmes are heavy on 'teaching the tools' and light on using 'the tools to teach'. That's training versus education. To make matters worse, would-be-teachers do not get any amount of ICT built into their non-ICT courses or in classrooms where they get their field training. Today's students live in a global, knowledge-based age. They deserve teachers whose practice embraces the best that technology can bring to learning

The study conducted by Prasad S.N (2005) to analyze pre service teacher training initiatives and developments revealed that there is a strong government commitment and support towards the implementation of ICT. But, there were very less infrastructure and human resource facilities. In addition to this the study also revealed that teacher educators were treating the tools of ICT as novelty rather than necessity.

Contradictory to this, Mathur, (2005) expressed the importance of ICT learning to teachers and is of the opinion that, teacher educators require reorientation towards use of ICT in their teaching learning process, so that the these teacher educators could generate a great deal of skill in implementing ICT.

As per teacher education curriculum frame work by NCF (2005) teacher education institutions are expected to equip future teachers with latest methods, techniques and strategies for imparting instruction, including the use of technological equipments.

In this regard, Bangalore University has included ICT in its new curriculum for B.Ed. trainees. It helps them in integrating ICT in their subject teaching. According to world Bank "low education and literacy levels, lack of awareness about the capabilities of the technology and absence of skills to develop and use.

## **2.3 Attitude towards Computer Application**

An individual's attitude is an important variable in the learning process. The degree to which a person in the work place effectively applies knowledge and skills obtained through formal training is largely dependent upon the subjects' attitudes toward training (Gattiker & Hlavka, 1992).

However, the main issue in education remains the development of positive attitudes toward information technologies among teachers (Grabe & Grabe, 1998). Attitude are kind of mental processes that are thought to influence future behaviors, experiences, belief and have implications on the use of computers and the internet ( Busch, 1995)

Thus teachers attitude is an important variable in the learning process. Yet, according to Gattiker & Hlvaka, (1992), research assessing the relationship between attitude and learning performances in ICT is lacking.

## **3. Objectives of the Study**

- To study the attitude towards ICT among B. Ed teacher trainees.
- To study the attitudinal difference among B. Ed teacher trainees with respect to their Gender & Locale.

## **4. Hypotheses of the Study**

- B. Ed teacher trainees do have the favorable attitude towards ICT.
- There is no significant difference in the attitude towards ICT among B.Ed teacher trainees with respect to Gender.
- There is no significant difference in the attitude towards ICT among B.Ed teacher trainees with respect Locale.

## 5. Sample of the Study

Sample selection was done in two stages (1) Selection of B.Ed colleges: 16 B.Ed. colleges were selected using proportionate random sampling technique for the study, out of these 15 colleges were from urban and 1 college was from rural background, which included aided and unaided institutions (2) Selection of teacher trainees: The sample of teacher trainees comprise of 952 teacher trainees among them 496 were male and 456 female.

## 6. Tools Used in the Study

- Personal data sheet was prepared by the investigator.
- Attitude towards ICT Scale was developed by the Investigator.

## 7. Findings of the Study

**Hypothesis-1:** B. Ed teacher trainees do have the favorable attitude towards ICT (Table -1). It was found that 60.5% of the trainees showed uncertainty in their attitude and only 39.5% of the trainees showed positive attitude towards ICT. In short, it is clear that the majority of the trainees showed uncertainty in their attitude towards ICT.

**Hypothesis-2:** There is no significant difference in the attitude towards ICT among B. Ed teacher trainees with respect Gender (Table-2). From the table, it can be viewed that 52.3% of male and 47.7% of female were in moderate attitude classification, further 51.6% of male and 48.4% of female were in above average categories. Supporting to this data, the following table expresses the significant different in the attitude of B.Ed. trainees with respect to gender. (Table 3)

It is found that mean score of male teacher trainees is 127.66 and female is 127.40. With a S.D of 20.35 & 17.73 respectively, t-value (0.207) was not significant at 0.05 levels. Hence the null hypothesis, “there is no significant difference in the attitude of B.Ed. trainees towards ICT with respect to gender is accepted. In other words, we can say that irrespective of gender, the attitude towards ICT of teacher trainees are at the same level (Table 4).

**Hypothesis-3:** There is no significant difference in the attitude towards ICT among B. Ed teacher trainees with respect Locale. The table points out that 95.1% of trainees under urban and 4.9% of trainees under rural showed moderate attitude towards ICT and 94.4% of urban trainees and 5.6% of rural trainees above average attitude towards ICT (Table 5).

From the above table the mean value for the attitude of B.Ed. trainees towards ICT was found to be 127.27 and 132.36 with respect to urban and rural students respectively. T-value (1.815) is found to be not significant at 0.05 level, hence the null hypothesis “there is no significant difference in the attitude of B.Ed. trainees with respect to locale” is accepted.

## 8. Conclusion

From this study conclusions were drawn that majority of teacher trainees (60.5%) showed uncertainty in their attitude and only 39.5% of the trainees showed positive attitude towards ICT. Further irrespective of gender and Locale the attitude towards ICT of teacher trainees are at the same level.

## 9. Implications of the Study

Following implications are drawn from the present study

- While employing ICT teacher Educators with the necessary degrees an attitude test also to be conducted and evaluated to check their attitude towards ICT, as not all teachers who have content knowledge of ICT could be effective.
- All B.Ed teacher educators to be given ICT as part of in-service training as it makes teaching more effective and develops positive attitude towards ICT.
- Crash courses especially in ICT applications could be conducted to improve the attitude of B.Ed trainees.
- Workshops on Modern ICT tools could be conducted to make the teacher trainees aware of the different innovative techniques and methods, which will enhance the attitude towards ICT.

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**Table 1. Showing the attitude of B.Ed. trainees towards ICT**

Category	F	%
Unfavorable	0	0
Uncertain	577	60.5
Favorable	376	39.5
Total	953	100

**Table 2. showing the number and percentage of total male and female having moderate and above average attitude**

Gender	Male	Female	Total
Moderate	302 (52.3%)	275 (47.7%)	577
Above average	194 (51.6%)	182 (48.4%)	376
Total	496	457	953

**Table 3. Showing the mean, S.D. and t-value of student's attitude with respect to gender**

Gender	N	Mean	Std. Deviation	t-value	Sig. level
Male	496	127.66	20.35	0.207	0.836
Female	456	127.40	17.73		

**Table 4. showing the number and percentage of total urban and rural having moderate and above average attitude**

locale	Urban	Rural	Total
Moderate	549 (95.1%)	28(4.9%)	577
Above average	355 (94.4%)	21 (5.6%)	376
Total	904	49	953

**Table 5. Showing the mean, S.D. and t-value of students attitude with respect to locale**

Locale	N	Mean	Std. Deviation	t-value	Sig. level
Urban	903	127.27	19.00	1.815	.070
Rural	49	132.36	20.99		

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