

# Teachers' Attitude towards ICT Integration in Teaching-Learning Process

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## Abstract:

Now a days, the field of education is not only limited with books but has broadened in various new horizons. Teacher education is a program related with teacher proficiency and competence that would make them competent enough to face new challenges in the education. It is a deliberate enterprise aiming to provide good quality service to its customers in order to enable them to contribute significantly for development of the nation. The 'Fate in the Nation is decided in the classroom' is a remark made by education commission of India. Such qualitative classrooms are created by well qualified, dedicated and committed teachers and these teachers are trained in teacher education institutions. Teacher education institutions should maintain quality in training to ensure the academic efficiency to pupil-teachers who come in teaching profession. ICT is a scientific, technological and engineering discipline and management technique used in handling information, its application and association with social, economic and cultural matters (UNESCO, 2002). ICT stands for Information and Communication Technologies. ICT is a part of our lives for the past few decades affecting our society as well as individual life. ICT is now broadly used in educational world. Teacher, Student, administrator and every people related to education are popularly using ICT. Teacher use ICT for making teaching-learning process easy and interesting. This paper aims to explore teachers' attitude towards the use of ICT as a pedagogical tool in teachers' training institutions of West Bengal and thereafter this study attempts to investigate if there is any difference in attitude towards the use of ICT by teachers from Govt.-aided and Self-financed teachers training institutions. Within this broad aim, the paper provides a better understanding of ICT as a pedagogical tool.

**Keywords:** ICT, Pedagogy, Pedagogical tool.

## 1. Introduction

"Educational technology is not, and never will be, transformative on its own.... Computers cannot replace teachers- teachers are the key to whether technology is used appropriately and effectively." (Carlson & Gadio, 2002).

### 1.1 What is Teacher Education?

Teacher education is a program. It is related to the development of teachers. It is related to the teacher's proficiency and competency. It enables and empowers the teacher to meet the requirements of the profession and face the challenges. Teacher education means all the formal and non-formal activities and experiences that help to qualify a person.

Teacher Education= Teaching Skill + Pedagogical theory + Professional skills.

- According to National Council for Teacher Education, it is a programme of education, research and training of persons to teach from pre-primary to higher education level.

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- According to W.H. Kilpatrick, Teacher education encompasses teaching skill, sound pedagogical theory and professional skills.

## 1.2 What is ICT?

Information Communication Technology (ICT) is the technology required for information processing, in particular, the use of electronic computers, communication devices and software applications to convert, store, protect, process, transmit and retrieve information from anywhere, anytime.

Information Communication Technologies (ICTs) have been used in teaching, learning and assessment for many years in distance learning institutions. Today varieties of ICTs, such as audio, video, computers and network technologies are combined to create a multifaceted instructional delivery system. There is a shift in traditional learning led by the teacher to independent learning facilitated by resource-based learning, including utilization of ICTs. It is essential to use it properly for improving learning. Therefore, the researchers must emphasize on the application/use of ICTs, rather than on ICTs for the sake of it. There is an urgent need to develop a habit of self-learning and positive attitude towards potentials of various ICT, it can help the students in learning effectively and efficiently from those ICTs or other sources of information. There should be explicit objectives in mind before using ICTs.

## 1.3 Use of ICT in teacher Education:

The classroom is now changing its look from the traditional one i.e., from one way to two-way communication. Now teachers as well as students participate in classroom discussions and activities. Now the nature of education is mainly child-centric education. So, the teacher should prepare with different technologies for using them in the classroom to make the teaching-learning process interesting. For effective implementation of certain student-centric methodologies such as project-based learning which puts the students in the role of active researches and technology, ICT has become the appropriate tool. ICT has enabled better and swifter communication; presentation of ideas has become more effective and relevant. It is an effective tool for acquiring information. Thus, students are encouraged to look for information from multiple sources and they are now more informed and updated than before. So, there is a pivotal role of using ICT in Teacher Education.

## 1.4 Use of ICT in Teaching-learning Process:

- (i) ICT enhances the initial preparation by giving good teaching and training materials, use of simulators, recording and feedback in teaching.
- (ii) With the help of ICT, teachers can access with colleagues, schools, institutions, universities, expertise, rich resources in cyber space.
- (iii) Didactic software and intelligent tutoring systems can dramatically reduce the cost of teacher training.
- (iv) ICT enables interaction with students over a physical distance.

- (v) ICT provides lifelong professional development by providing courses in a virtual situation, training on demand, orientation and refresher courses through videoconferencing and online.
- (vi) ICT facilitates sharing of ideas, experience as well as collaborating on projects, and exchange materials through virtual communities.

## 2. Objectives of the Study:

The major objectives of the present study are-

- (i) To find out the teachers' attitude towards the use of ICT in their teaching-learning process in Teachers' Training Institution.
- (ii) To compare the teachers' attitude towards the use of ICT in their teaching-learning process in context of Govt.-aided and Self-financed Teachers' Training Institute.
- (iii) To compare the teachers' attitude towards the use of ICT in their teaching-learning process in relation to gender.
- (iv) To explore the barriers of using ICT in teaching-learning process in the context of Teachers' Training Institution.

## 3. Hypothesis of the Study:

The researchers have framed the following hypotheses for the study-

**H<sub>0</sub>1:** There is no significant difference in the attitudes of teachers towards the use of ICT in teaching-learning process from Govt.-aided and Self-financed Teachers' Training Institute.

**H<sub>0</sub>2:** There is no significant difference in the attitudes of teachers towards the use of ICT in teaching-learning process in relation to gender of the teachers.

## 4. Methodology of the Study:

### 4.1 Research Approach:

The descriptive survey method was used to carry out the above-mentioned descriptive survey research and to meet the objective lines of the study. To test the pre-determined null hypothesis, the study involved the administration of suitable tool. In order to procure the necessary data for the study, a tool, namely, Teachers' Attitude towards ICT Integration in Teaching-learning Process was constructed by the researcher.

### 4.2 Population:

All the teachers of Teachers' Training Institutions of West Bengal are considered as the population of the present study.

### 4.3 Sample and Sampling:

60 teachers from three govt. aided B.Ed. colleges and three self-financed B.Ed. colleges are taken as the sample of the study. Due to lack of time, purposive sampling technique is used for collecting data.

### 4.4 Tool:

A self-made attitude scale, namely, Teachers' Attitude towards ICT Integration in Teaching-learning Process has been used to collect the data and after that an informal interview is conducted to explore the barriers in using ICT in teaching-learning process.

## 5. Data Analysis:

The collected data are edited, coded, classified and tabulated. After tabulation, the data is analyzed by using t-test to test the pre-determined null-hypothesis.

**Table- 1: Parameters of the first group (teachers from Govt.-aided teachers' training colleges)**

Mean	24.07
Standard Deviation	2.54
Standard Error of Mean	0.68

**Table 2: Parameters of the second group (teachers from Self-financed teachers' training colleges)**

Mean	23.60
Standard Deviation	1.31
Standard Error of Mean	0.35

After analysis of the above data, the t-value is **0.62**

From t-table, the t value at 0.05 level is 2.05 and at 0.01 level is 2.76. The calculated value is much lower than the table value from both levels, Hence the null hypothesis is accepted at both levels. This result indicates that there is no significant difference in attitude towards the use of ICT between the teachers from Govt. - aided and Self-financed Teachers' Training Institutes.

**Table- 3: Parameters of the third group (male teachers from the teachers' training colleges)**

Mean	24.74
Standard Deviation	2.01
Standard Error of Mean	0.53

**Table-4: Parameters of the fourth group (female teachers from the teachers' training colleges)**

Mean	22.93
Standard Deviation	1.61
Standard Error of Mean	0.43

After applying t-test, the researchers get the t-value as **2.65**.

From t-table, t value at 0.05 level is 2.05 and at 0.01 level is 2.76. Our calculated value 2.65 which is higher than the table value from 0.05 level, and lower than the table value from 0.01 level. Hence the null hypothesis is rejected at 0.05 level and accepted at 0.01 level. Which indicated that there is a significant difference in attitude towards the use of ICT between the

male teachers and female teachers at 0.05 level and there is no significant difference in attitude towards the use of ICT between the male teachers and female teachers at 0.01 level.

## 6. Results:

**6.1** The null hypothesis  $H_01$  is accepted at both level of significance. This result indicates that there is no significant difference in attitude towards the use of ICT in teaching-learning process among the teachers from Govt. - aided and Self-financed Teachers' Training Institutes.

**6.2** The null hypothesis  $H_02$  is accepted at 0.01 level of significance. This indicates that there is a significant difference in attitude towards the use of ICT between the male teachers and female teachers.

**6.3** Observations from informal interview: from these qualitative data the researchers have found the following challenges in implementation of ICT.

## 7. Challenges in implementation of effective ICT integration in teachers' training institutes:

Although ICT has the potential to improve education system of a country to a great extent, yet it is not the case in developing countries. There are multiple issues and challenges confronting the implementation of ICT education in educational institutions in this country. For teacher's training institution, the introduction of ICT faces hindrances in the form of internal and external barriers. Internal barriers to ICT implementation in teacher's training institutions include-

- Lack of trained teachers is a major obstacle in the use of ICT in Teachers' training institution.
- Lack of resource access, inadequate training opportunities, lack of confidence amongst among teachers, paucity of time, and insufficient knowledge about integration of ICT in lessons, technical issues, poor administrative support and poor fit with the curriculum.
- Even the basic ICT equipment and computers in rural institutions are unreliable and undependable.  
Shortage of equipment such as lack of computers and computer-related resources such as printers, projectors, scanners etc. is also a genuine problem.
- Unfavorable organizational culture and poor attitude and beliefs often in developing nations, the educational organizations and management fail to perceive the importance and seriousness of the role of ICT in education enhancement. Also, the teachers' attitudes and beliefs are outdated and orthodox. They are unaware and rigid and not willing to adopt to the change. They harbor false beliefs that ICT is meant primarily for the youngsters and skeptical about the effectiveness and utility of ICTs in teachers' education.
- Other external factors inhibiting the usage of ICT in educational institutions are social and cultural factors inherent to these religions, lack of initiative by community leaders, corruption and burglary.
- There is resistant from teachers, basically from older teachers as compared to younger ones, to apply ICT in their subject... Hence teachers need to update their knowledge and skills as change in the curriculum and technologies.

## 8. Conclusion:

Therefore, ICT is an important factor which can remove the barriers in the teaching-learning process and maintain the quality and standard of the education system. Skilled and proper implementation can bring positive changes in the field of teacher education. ICT prepares teacher for the use of their skills in the real classroom situation and also make students for their future occupation and social life. ICT used as an assisting tool for example while making assignments, communicating, collecting data & documentation, and conducting research. Teachers' attitude towards ICT integration in their teaching-learning process should be reinforced in order to maintain the quality of teacher education programme.

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