

# INTRODUCTION STUDENT TEACHERS' ATTITUDE TOWARDS USE OF ICT IN TEACHING & LEARNING

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Received: July 18, 2018

Accepted: August 28, 2018

## ABSTRACT

*Research studies in the past decade have shown that ICT is an effective means for widening educational opportunities, but most teachers neither use technology as an instructional delivery system nor integrate technology into their curriculum. Studies reveal a number of factors influencing teachers' decisions to use ICT in the classroom: non-manipulative and manipulative school and teacher factors. These factors are interrelated. The success of the implementation of ICT is not dependent on the availability or absence of one individual factor, but is determined through a dynamic process involving a set of interrelated factors. It is suggested that ongoing professional development must be provided for teachers to model the new pedagogies and tools for learning with the aim of enhancing the teaching-learning process.*

*Present study deals with attitude of student teachers' towards the use of ICT in teaching and learning. The objectives of the study was to find-out significant difference in the attitude of teacher trainees on the basis of Gender, Academic Discipline, Medium & Habitation. Sample consisted of 130 randomly selected student teachers' taken from three teacher training institutions of Patna. Attitude scale developed by Zare-ee, Shekarey and Fathi vajargah, 2009 was used for the collection of data. Findings of the study reveals that there is no significant difference in the attitude of teacher trainees towards the use of ICT on the basis of Gender, Academic Discipline, Medium & Habitation.*

**Keywords:** ICT, Student Teachers, Attitude.

## INTRODUCTION

ICT pervades modern society to the extent that many countries now regard the mastery of information and communication technology as a core element of basic education alongside literacy and numeracy. But ICT is more than just another subject for students to study; ICT has the potential to be a valuable tool in enhancing the quality of teaching and learning. For example the use of radio programmes in classrooms can provide interesting and relevant content in a range of subjects, including social studies and English language; while computer simulations and visualization technologies can help students to learn complex concepts in more concrete ways. An examination of countries in the Asia-Pacific region has shown that in this region ICT is not being used to its full potential in enhancing the quality of teaching and learning. There are both technical and capacity-related barriers that have to be overcome. Many countries of the region do not make use of ICT at all in their education systems due to technical barriers (such as lack of infrastructure, equipment and connectivity) but even in countries where the technical barriers have been overcome and ICT is present in classrooms, other kinds of barriers remain. In these countries, ICT is often used simply as a supplement for existing pedagogical practices. However in order to fulfill the potential of ICT as a tool for enhancing teaching and learning, ICT must be fully integrated into pedagogical processes, which requires a cognitive shift on the part of educators, curriculum developers, administrators and policy makers. With the goal in mind of overcoming the technical and capacity-related barriers, and fully integrating ICT into education in the Asia-Pacific region so as to enhance the quality of teaching and learning, the ICT in Education programme has implemented several cross-cutting projects. These projects bring together teacher-training initiatives with schemes to develop locally relevant and innovative content.

Our world is changing rapidly. Developments in information and communication technologies (ICT) and the emergence of knowledge societies are changing the ways we live, work and interact. Our educational systems must respond accordingly, not only in providing learners with ICT skills, but in harnessing the potential advantages ICT offers in improving teaching and learning.

## DEFINITION

The term, information and communication technologies (ICT), refers to forms of technology that are used to transmit, store, create, share or exchange information. This broad definition of ICT includes such technologies as: radio, television, video, DVD, telephone (both fixed line and mobile phones), satellite

systems, computer and network hardware and software; as well as the equipment and services associated with these technologies, such as videoconferencing and electronic mail.

#### POTENTIAL OF ICT:

UNESCO recognizes the potential of ICT to assist in achieving EFA goals, in particular the potential of

- ICT to enable the inclusion of groups which have so far not had access to education,
- Improve the quality of teaching and learning,
- Increase the efficiency and effectiveness in planning and administration in education ministries, schools, classrooms and community learning centers.

#### GOALS:

The integration of information and communication technologies (ICT) into education systems offers the potential to increase the quality of education and the effectiveness and efficiency of education delivery, as well as the potential to facilitate greater access to information and services by marginalized groups and communities. Harnessing of this potential is seen by UNESCO as a means of contributing to the achievement of UNESCO's Education for All (EFA) goals and to the reduction of the Digital Divide.

#### SCOPE:

The ICT in Education programme, funded mainly by Japanese Funds-in-Trust (JFIT), focuses on six key, interrelated areas:

- Education policy: building national capacities to develop appropriate policies and plans for the integration of ICT into education.
- Training of Teachers: building the ICT-capacity of those at the heart of education.
- Teaching and learning: developing and delivering content using ICT.
- Non-formal education: using ICT to bring education to out-of-school youth and adults.
- Monitoring and measuring change: monitoring and measuring the impact of ICT in education using performance indicators.
- Research and knowledge-sharing: collecting, creating and disseminating information and knowledge about ICT in education.

#### USE OF ICT IN EDUCATION:

- **Placement of computers has an impact**

Placing computers in classrooms — rather than separate computer laboratories — enables much greater use of ICTs for 'higher order' skills. Indeed, a smaller number of computers in classrooms may enable more actual use than a greater number of computers located in separate computer labs). Related to this is an increasing amount of attention, given by both teachers and students, to the use of laptops (and in some places, 'computers-on-wheels'), as well as, to a much lesser extent, the use of personal digital assistants and other mobile devices.

- **Models for successfully integrating ICT use in school and after school hours are still emerging**

There are few successful models for the integration of student computer use at home or in other 'informal settings' outside of school facilities with use in school.

- **The appropriate ages for introducing computers to students are hotly debated**

Generally speaking, appropriate ages for student ICT use in general are unclear. However, it is clear that certain uses are more or less appropriate, given student ages and abilities. Emerging research cautions against widespread use at younger ages.

- **ICTs can promote learner autonomy**

Evidence exists that use of ICTs can increase learner autonomy for certain learners.

- **Gender affects impact**

Uses of ICTs in education in many cases to be affected by the gender of the learner.

- **The 'pilot effect' can be an important driver for positive impact**

Dedicated ICT- related interventions in education that introduce a new tool for teaching and learning may show improvements merely because the efforts surrounding such interventions lead teachers and students to do 'more' (potentially diverting energies and resources from other activities).

#### OBJECTIVES OF THE STUDY:

##### General objective:

- To find out the level of student teachers' attitude towards the use of ICT.

**Specific Objective:**

- To find out the level of student teachers' attitude towards the use of ICT on the basis of Gender.
- To find out the level of student teachers' attitude towards the use of ICT on the basis of Academic Discipline.
- To find out the level of student teachers' attitude towards the use of ICT on the basis of Medium.
- To find out the level of student teachers' attitude towards the use of ICT on the basis of Habitation.

**METHODOLOGY:**

- **Design:**  
This study employed a descriptive survey method. This method was used to allow the researcher a vivid description of how Student Teachers' are making use of ICTs in teaching and learning.
- **Population and Sample:**  
The population of this study comprised all Teacher education institution in Patna, the capital of Bihar state, where the study was conducted. Three colleges were randomly selected. Sample consisted of 130 students teachers'.
- **Tools Used:**  
An attitude scale developed by *Zare-ee, Shekarey and Fathi vajargah, 2009* was used to measure student teachers' attitude towards the use of ICT in teaching and learning. Likert Scale consisting of 20 Items with '1' representing strongly disagree and '5' representing strongly agree for positive items. Weightings for negative items (10<sup>th</sup> & 11<sup>th</sup>) were reversed in computation .
- **Method of data Analysis**  
Data collected on this study were analyzed using *Median, Standard Deviation and t-test*.

**RESULTS:**

The results of the analysis are as follows:

**HYPOTHESIS 1:**

- ***There is no significant difference in attitude towards the use of ICT on the basis of Gender.***

TABLE 1 shows the summary of t-value on the basis of Gender

Back ground	N	Mean	S.D	t- ratio	level of significance
MALE	39	76.66	7.55	0.64	N.S*
FEMALE	91	77.60	7.78		

\* Not significant

For 128 degree of freedom at 5% level of significance ,the table value of 't' is 1.98. The calculated value of 't' is 0.64 which is less than the 't' value of the table . Hence the Null hypothesis is not rejected. There is no significant difference in attitude towards the use of ICT on the basis of Gender.

**HYPOTHESIS 2:**

- ***There is no significant difference in attitude towards the use of ICT on the basis of Academic Discipline.***

TABLE 2 shows the summary of t-value on the basis of Academic Discipline.

Back ground	N	Mean	S.D	t- ratio	level of significance
ARTS	99	77.15	7.96	0.481	N.S*
SCIENCE	31	77.87	6.87		

\* Not significant

For 128 degree of freedom at 5% level of significance , the table value of 't' is 1.98 and calculated value 't' is 0.48 which is less than the 't' value of the table. Hence the Null hypothesis is not rejected. *There is no significant difference in attitude towards the use of ICT on the basis of Academic Discipline.*

**HYPOTHESIS 3:**

- ***There is no significant difference in attitude towards the use of ICT on the basis of Medium.***

TABLE 3 shows the summary of t-value on the basis of Academic Discipline.

Back ground	N	Mean	S.D	t- ratio	level of significance
ENGLISH	43	76.27	7.19	1.12	N.S*
HINDI	87	77.83	7.92		

\* Not significant

For 128 degree of freedom at 0.05 level of significance , the table value of ‘t’ is 1.98 and calculated value ‘t’ is 1.12 which is less than the t – value of the table .Hence the Null hypothesis is not rejected . *There is no significant difference in attitude towards the use of ICT on the basis of Medium.*

**HYPOTHESIS 4 :**

- ***There is no significant difference in attitude towards the use of ICT on the basis of Habitation.***

TABLE 3 shows the summary of t-value on the basis of Habitation.

Back ground	N	Mean	S.D	t- ratio	level of significance
URBAN	51	78.42	6.85	1.37	N.S*
RURAL	79	76.58	8.17		

\* Not significant

For 128 degree of freedom at 0.05 level of significance , the table value of ‘t’ is 1.98 and calculated value ‘t’ is 1.37 which is less than the t- value of the table. Hence the Null hypothesis is not rejected. *There is no significant difference in attitude towards the use of ICT on the basis of Habitation.*

**MAJOR FINDINGS:**

- *There is no significant difference in attitude towards the use of ICT on the basis of Gender.*
- *There is no significant difference in attitude towards the use of ICT on the basis of Academic Discipline.*
- *There is no significant difference in attitude towards the use of ICT on the basis of Medium.*
- *There is no significant difference in attitude towards the use of ICT on the basis of Habitation.*

**CONCLUSION:**

On the basis of above findings it can be concluded that student teachers' are aware of use of ICTs in teaching & learning. -----

The proliferation of technologies has complicated the teaching-learning process and finding the best ways of integrating technology into classroom practices is one of the challenges the 21st century teachers face. Effectively integrating ICT into learning systems is much more complicated than providing computers and securing a connection to the Internet. They should have knowledge, skills and positive attitudes toward the implementation ICT in schools. In this way, they can create changes in their schools by focusing on action and by converting their teachers to be leaders who will eventually become agents of change. It is a fact that teacher training programmes play an important role to provide the necessary leadership in training. They should model the new pedagogies and tools for learning with the aim of enhancing the teaching- learning process. Hence, building the capacity of teachers in the utilization of ICT for education requires long-term continuous development of the lead trainers, sharing of knowledge among teachers, partnerships and collaboration among educators and organizations, and support from principals and administrators. These factors must be available in order to create changes in the classroom. Therefore, both teachers and trainers require ongoing support and opportunities to experiment with new skills and strategies over time.

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