

# AN EMPIRICAL STUDY OF ATTITUDE OF IN-SERVICE AND PROSPECTIVE TEACHERS' TOWARDS THE USE OF ICTs IN TEACHING AND LEARNING.

<sup>1</sup>TAJ SHAMIMA SULEMAN

<sup>2</sup>KUMAR GAURAV

<sup>3</sup>ARVIND KUMAR

<sup>1,2,3</sup>ASSISTANT PROFESSOR

<sup>1,2,3</sup>DEPARTMENT OF EDUCATION

<sup>1,2</sup>PSc COLLEGE, MADHEPURA (BIHAR)

<sup>3</sup>T.T.C, SIWAN (BIHAR)

## 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 ICTs 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 prospective teachers' and in-service teachers' towards the Use of ICTs in teaching and learning. The objectives of the study is to compare the prospective teachers' and in-service teachers' attitude towards the use of ICTs. Sample consists of 150 randomly selected prospective teachers' and in-service teachers' taken from teacher training institutions and govt. schools. Attitude scale developed by (Zare-ee, Shekarey and Fathi vajargah, 2009) used for the collection of data scale consisting of 20 Items with 1 representing strongly disagree and 5 representing strongly agree. Present paper discuss that both are aware of use of ICTs in teaching & learning.

Key words – Attitude, in-service e , pre – service, ICTs in teaching and learning.

## INTRODUCTION :

### INFORMATION COMMUNICATION TECHNOLOGY

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 (Technologies for Education: Achievement & further Initiatives in The Asia- Pacific Region, UNESCO 2005).

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.

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.

### POTENTIAL OF ICTs:

UNESCO recognizes the following potential of ICTs in Teaching & Learning:

- 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.

### AIMS:

The aim of the ICTs in Education programme is to empower learners, teachers, educators, managers and leaders to use ICT judiciously and effectively for expanding learning opportunities and ensuring educational quality and relevance. In addition, the programme aims to facilitate wider access to Locally-relevant forms of ICT. In these ways, the programme aims to contribute both to achieving EFA goals and to reducing the digital divide. The ICT in Education programme is now moving into its fourth year and has established a strong foundation for achieving its objectives. Its success so far forms the basis for the UNESCO Asia-Pacific ICT in Education *Vision 2008*, which states that by 2008 all the Member States in the Asia-Pacific region will have:

- ❖ A national ICTs in education policy.
- ❖ ICTs as a component of pre-service teacher training.
- ❖ The beginnings of a process of developing relevant, multilingual and appropriate educational content, especially for disadvantaged groups.
- ❖ Networks for sharing of knowledge and experiences.
- ❖ Key indicators developed and used to monitor development and to form strategies.

### SCOPE:

The ICTs in Education programme, 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 ICTs IN EDUCATION:

- ❖ Placement of computers has an impact
- ❖ Models for successfully integrating ICT use in school and after school hours are still emerging
- ❖ The appropriate ages for introducing computers to students are hotly debated
- ❖ ICT can promote learner autonomy

### OBJECTIVES OF THE STUDY:

- ❖ To find out the significant difference in the attitude towards the use of ICTs in teaching and learning among the prospective and in-service teachers.
- ❖ To find out the significant difference in the attitude towards the use of ICTs in teaching and learning on the basis of academic discipline.
- ❖ To find out the significant difference in the attitude towards the use of ICTs in teaching and learning on the basis of medium.
- ❖ To find out the significant difference in the attitude towards the use of ICTs in teaching and learning on the basis of habitation.
- ❖ To find out the significant difference in the attitude towards the use of ICTs in teaching and learning on the basis of gender.

### METHODOLOGY:

#### ❖ Design:

This study employed a descriptive survey method. This method was used to allow the researcher a vivid description of how prospective and in-service teachers' are making use of ICTs in teaching and learning.

#### ❖ Population and Sample:

Present study was conducted in Bhagalpur. Schools and colleges were randomly selected. Sample consisted of 150 prospective and in-service teachers.

❖ **Tools Used:**

An attitude scale developed by *Zare-ee, Shekarey and Fathi vajargah, 2009* was used to measure prospective and in- service teachers' attitude towards the use of ICTs 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 the attitude towards the use of ICTs in teaching and learning among the prospective and in- service teachers.*

TABLE 1 shows the summary of t-value :

TABLE-1

Back ground	N	Mean	S.D.	t- Ratio	Level of Significance
In-service teachers	75	76.12	9.24	2.84	Beyond 0.01 level
Prospective teachers	75	80.26	8.60		

(For 148 degree of freedom at 5% level of significance ,the table value of 't' is 1.98)

The obtained t-ratio is 2.84 . Hence the Null hypothesis is rejected .There is significant difference in the attitude of prospective and in-service teachers' towards the use ICTs in teaching and learning. This reveals that prospective teachers are effectively using ICTs in comparison to in -service teachers.

**HYPOTHESIS 2:**

- ❖ *There is no significant difference in attitude towards the use of ICTs in teaching and learning on the basis of Academic Discipline.*

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

TABLE-2

DISCIPLINE	N	Mean	S.D.	t- Ratio	Level of Significance
ARTS	75	78.29	8.43	0.13	N.S.*
SCIENCE	75	78.09	9.85		

\* Not significant

(For 148 degree of freedom at 5% level of significance, the table value of 't' is 1.98)

The obtained t-ratio is 0.13 for the attitude towards the use of ICTs in teaching and learning on the basis of Academic Discipline is not significant, Hence the Null hypothesis is not rejected. It reveals that Academic Discipline doesn't have any impact on the use of ICTs. People belonging to any academic discipline can use ICTs effectively in their teaching and learning.

#### **HYPOTHESIS 3:**

- ❖ *There is no significant difference in attitude towards the use of ICTs in teaching and learning on the basis of Medium.*

TABLE 3 shows the summary of t-value on the basis of Medium:

TABLE-3

MEDIUM	N	Mean	S.D.	t- Ratio	Level of Significance
ENGLISH	70	78.8	9.65	0.75	N.S.*
HINDI	80	77.66	8.69		

\* Not significant

(For 148 degree of freedom at 0.05 level of significance, the table value of 't' is 1.98)

The obtained t-ratio is 0.75 for the attitude towards the use of ICTs in teaching and learning on the basis of medium is not significant, Hence the Null hypothesis is not rejected. It reveals that medium doesn't have any impact on the use of ICTs. Information & Communication Technology is effective in any language in teaching and learning.

#### **HYPOTHESIS 4 :**

- ❖ *There is no significant difference in attitude towards the use of ICTs in teaching and learning on the basis of Habitation.*

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

TABLE-4

HABITATION	N	Mean	S.D.	t- Ratio	Level of Significance
RURAL	70	78.41	9.49	0.047	N.S.*
URBAN	80	78	8.88		

\* Not significant

(For 148 degree of freedom at 0.05 level of significance, the table value of 't' is 1.98)

The obtained t-ratio is 0.047 for the attitude towards the use of ICTs in teaching and learning on the basis of Habitation is not significant, Hence the Null hypothesis is not rejected. This result reveals that ICTs is not only blooming or limited in urban areas whereas it is also playing an important role in rural areas in teaching and learning.

#### **HYPOTHESIS 5 :**

- ❖ *There is no significant difference in attitude towards the use of ICTs in teaching and learning on the basis of gender.*

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

TABLE-4

GENDER	N	Mean	S.D.	t- Ratio	Level of Significance
FEMALE	64	79.76	8.43	1.86	N.S.*
MALE	84	77.02	9.51		

\* Not significant

(For 148 degree of freedom at 0.05 level of significance, the table value of 't' is 1.98)

The obtained t-ratio is 1.86 for the attitude towards the use of ICTs in teaching and learning on the basis of gender is not significant, Hence the Null hypothesis is not rejected. It reveals that both male & female has same awareness and interest towards the use of ICTs in Education. It shows that ICTs has an important place in teaching and learning

#### **MAJOR FINDINGS:**

- ❖ *There is significant difference in the attitude the prospective and in- service teachers' towards the use of ICTs in teaching and learning .*
- ❖ *There is no significant difference in attitude towards the use of ICTs on the basis of Gender.*

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

## CONCLUSION:

On the basis of above findings it can be concluded that attitude of student teachers' towards the use of ICTs is not affected by Gender, Academic Discipline, Habitation and Medium. This result reveals that ICT is taking an important place in teaching and learning.. Hence, teacher education institutions and programmes must help teachers to understand how the new technologies can best be used in the context of the culture, needs, and economic conditions of their country.

## REFEENCES:

- Apple Computer, (2002). The impact of technology on students' achievement. Available at: <http://www.apple.com/education/research/index2.html> Accessed on 10/11/2005 Bank Institute.
- Bauer, J., & Kenton, J. (2005). Technology integration in the schools: Why it isn't happening. *Journal of Technology & Teacher Education*, 13, 519-526.
- Carvin, A. (1999). Technology Professional Development for Teachers: Overcoming a pedagogical digital divide. *The Digital Beat*, 1(16), 1-5. Retrieve Jun 24, 2004, from: <http://www.benton.org/DigitalBeat/db093099.html>
- CEO Forum on Education Technology (2001). School technology and readiness report: Key building blocks for student achievement in the 21st century: integrating digital content. Washington, DC: Author. Available at: <http://www.ceoforum.org/downloads/report4.pdf>
- Ogunsola, L.A. (2005). Information communication technologies and the effects of globalization: Twenty-first century "digital slavery" for developing countries- Myth or Reality? *Electronic Journal of Academic and Special Librarianship* 6 (1- 2) 1-10.
- Olakulehin, F.K. (2007). Information communication technologies in teachers training and professional development in Nigeria. *Turkish Journal of Distance Education TODJE* 8, (1), 133- 142