

Attitude of Prospective Teachers towards the Use of Information and Communication Technology (ICT) in Teacher Education

Man Mohan Gupta

Research Scholar – Mewar University, Rajasthan

Reg. no. MUR1406519

H.O.D., Department of Education

Ornate institute of technology, Nakur, Saharanpur-247001, UTTAR PRADESH

ABSTRACT

ICT plays a critical role in information societies' educational systems. In these societies, the stakeholders of educational policy, redesign and reconstruct their educational systems based on the new educational paradigms such as constructivist theory so that both teachers and students develop the necessary knowledge and skills sought in this digital age. Hence, most countries around the world are focusing on approaches to integrate ICT in learning and teaching to improve the quality of education by emphasizing competencies such as critical thinking, decision-making, handling of dynamic situations, working as a member of a team, communicating effectively. ICT has emerged as one of the most important aspect of human life (Saxena et.al, 2009). It is a new medium, a new way of representing, communicating and was copy with information (Kukreti and Saxena, 2004). Students are the future pillars of society must be able to solve different challenges by improving their technical skills, not only with all the problems, but also to overcome the problem and do their job. Attitude of prospective teachers is important in the present education system because without the knowledge of ICT a teacher can't be a perfect teacher. His own interest is important for the future of students. In the present scenario internet is used very commonly with the help of internet one can get the desired information in seconds. Therefore, it is a high time when every teacher must be aware of the Information communication technology.

Initially the use of technology was prevalent only in the business activities which gave us positive results. Then the use of technology spread gradually in other fields which have made the life scientific and luxuries (Saxena, et.al., 2009). Traditionally education remained orthodox towards the use of technology in teaching system but the technology made inroads into the education system with the passage of time. Therefore, technology was mostly used in interaction and communication between the teacher and student. The role of a teacher is pivotal in the progress of nation (Saxena and Gihar, 2009). Teacher plays a crucial role in the development, adoption and

implementation of any educational curriculum and system. This role becomes more important when it comes to integration of information communication technology in the education programme of a country. Knowledge of ICT usage has improves human capacity, including business transactions, industrial use, education programme and activity. Attitude is one of the determining factors in predicting people's behavior. That is to say by understanding an individual's attitude towards something, one can predict with high precision the individual's overall pattern of behavior to the object (Ajzen and Fishbein, 1977).

I. SIGNIFICANCE OF THE STUDY

The study of the attitude of prospective teachers towards the use of ICT in teacher education is very important from the view point of modernizing teacher- student communication technique in the educational system. Most of the Governments of various countries have adopted useful measures for the use of ICT in the educational and training programmes. Some provisions of incentives have also been made for computerization and automation to improve the system of student-teacher communication in all the institutes and universities. But in this technological society where we are using ICT in the classroom, a teacher can no longer be regarded as the sole repository of knowledge that they have to pass to the younger generation. They become partners in a collective fund of knowledge which they have to organize thereby positioning themselves firmly in the vanguard of change. ICT is being considered as the backbone of the education system in the modern days. Today the students learn through internet based system, submit their assignment on line, hold discussion with the educators and counselors.

ICT is the systematic process of collecting and analyzing information to increase our understanding of the phenomenon under study. It is the function of the researcher to contribute to the understanding of the phenomenon and to communicate that understanding to others. It provides rewarding learning experiences for students and producing graduates capable of high

personal and professional achievement. Computerized records and data base in the education system have many advantages and benefits. The pupils are also ready to contribute for the use of ICT in educational infrastructure. But the use of any system depends upon the attitude of the students towards that system. The students should made better use of technology to acquire skill and knowledge but a teacher cannot design a better system of teaching without the knowledge of attitude of the students towards the use of ICT. It is a dynamic force in life which affects all people and their physical, mental, emotional, social and ethical aspects. It allows us to make an original contribution to human life. Realizing the significance of educational program, Government has adopted several measures to facilitate acquisition of ICT equipment for enhancement of education. Government is trying hard to introduce computers in schools and colleges for students (Dey and sexena, 2006). The use of ICT in education has many advantages like: rapid education, flexibility in time and place, high speed in creating new programs compared to the systems of videos, changing the style of the teacher from lecturing to guiding and monitoring, creating classes without walls and getting the ready study material.

II. REVIEW OF RELATED LITERATURE

- ❖ Hashim, M. (2010) conducted a study on assess the antecedents of ICT attitude of distance education student at the institute of education development. The antecedents studied were computer anxiety, confidence, liking and usefulness. Five hundred students were the units of analysis for this study and the response rate was 56.8%. Even in this information age, the findings showed that there are still some students who are uncomfortable with using ICT or educational technology for e-learning.
- ❖ Yusuf (2011) conducted a study on “Student-Teachers’ Competence and Attitude towards Information and Communication Technology: A Case Study” this study examined empirically student-teachers’ competence and attitude towards information and communication technology. Gender influence on their competence and attitude were also examined. Participants were 382 student-teachers (181 males and 201 females) from the Faculty of Education, University of Ilorin, Nigeria. The data collected through a questionnaire were analyzed using percentages, means, and chi-square statistics. Findings revealed that majority of the student-teachers have positive attitude towards the use of ICT and they are competent in the use of few basic ICT tools. Overall, no significant difference was established between male and female student-teachers’ attitudes and use of ICT.

The implication is that the student-teachers lacked the necessary competence in the full integration of ICT in the curriculum. This underscores the need to improve the ICT contents of teacher education programs in universities in developing nations.

III. OBJECTIVES

The present study is based on the following objectives:

- To study the attitude of prospective teachers towards the use of ICT in teacher education.
- To assess the attitude of male and female prospective teachers towards the use of ICT in teacher education.
- To compare the attitude of rural and urban prospective teachers towards the use of ICT in teacher education.
- To study the attitude of science and arts background prospective teachers towards the use of ICT in teacher education.

HYPOTHESES

Keeping in view the objectives, the present study is carried out on the basis of following hypotheses:

- There exists no significant difference between the attitude of male and female prospective teachers towards the use of ICT in teacher education.
- There exists no significant difference between the attitude of rural and urban prospective teachers towards the use of ICT in teacher education.
- There exists no significant difference between the attitude of science and arts background prospective teachers towards the use of ICT in teacher education.

DELIMITATION OF THE STUDY

Due to the lack of time resources and finance this study is confined only to the Colleges of Education in Yamuna Nagar district of Haryana state.

DESIGN OF THE STUDY

The study follows normative survey type of descriptive research together the data.

POPULATION

All the students studying in B.Ed. course being offered by colleges of education affiliated to Kurukshetra University, Kurukshetra constituted the population for present study.

SAMPLE & SAMPLING TECHNIQUE

To study the sample for present study the researcher selected the 5 colleges who are offering B.Ed. courses situated in Yamuna Nagar district by using lottery method of random sampling technique. From these selected 05 colleges, 30 prospective teachers were

selected. Therefore the total sample consists of 150 prospective teachers.

TOOL USED

To obtain the data, the data gathering device- 'ICT ATTITUDE SCALE' was prepared by the investigator and it had been given to 4 expert for the content validity and preliminary try out was made on the sample size - 30. The reliability of the tool was established by split half method by computing coefficient of correlation by Karl Pearson Method. The value of coefficient of correlation was found be 0.84. the tool consists of 28 statements involving positive as well as negative items. Thus the tool was standardized by the research investigator.

IV. SCORING PROCEDURE OF ICT ATTITUDE SCALE

The ICT attitude Scale constructed by the investigator is a scale having 28 statements of which 22 of them positive statements and the remaining 6 were negative statements.

SCORES FOR POSITIVE STATEMENTS:

- 5 for Strongly Agree opinion (SA)
- 4 for Agree opinion (A)
- 3for Undecided opinion (U)
- 2 for Disagree opinion (D)
- 1 for Strongly Disagree opinion (SD)

SCORES FOR NEGATIVE STATEMENTS

- 1 for Strongly Agree opinion(SA)
- 2 for Agree opinion(A)
- 3 for Undecided opinion(U)
- 4 for Disagree opinion(D)
- 5for Strongly Disagree opinion(SD)

The sample prospective teachers were asked to tick any one response out of given five alternatives for each statement. There are total 28 items in the present attitude scale. The maximum possible scores on the whole attitude were 140 and the minimum possible scores were 28.

V. STATISTICAL ANALYSIS

To get the meaningful results from the present study the researcher used mean, standard deviation and 't'-test to analyze the data.

ANALYSIS AND INTERPRETATION OF DATA

Table-1 Mean and SD Scores Male and Female Prospective Teachers on ICT Attitude Scale (ICTAS)

Gender	N	Me an	S.D	't'- value (df=1 48)
Male	5 8	38. 81	3.90	0.133 * (N.S)
Female	9 2	38. 72	4.31	

*Not significant

Table 1 shows the mean scores of attitude of male and female prospective teachers towards the use of ICT in teacher education. The mean of male prospective teachers is 38.81 and that of female prospective teachers is 38.72. The 't' ratio for above two groups is 0.133 which is not significant at any level of significance. This means that there is no significant difference between the attitude of male and female prospective teachers towards the use of ICT in teacher education. This can be attributed to the fact that both male and female prospective teachers get equal exposure towards ICT. They are equally motivated to learn the use of ICT in education.

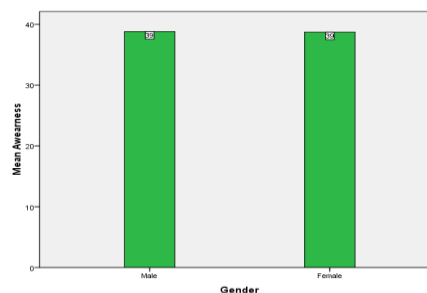


Figure-1 Showing Mean Value of Male and Female Prospective Teachers on ICT Attitude Scale (ICTAS)

Table-2 Mean and SD Scores Rural and Urban Prospective Teachers on ICT Attitude Scale (ICTAS)

Local ity	N	Me an	S. D	't'- value df=14 8
Urban	82	27. 44	3.6 28	2.117 * (Sign)
Rural	68	26. 10	4.0 96	

*Significant at 0.01 level

Table 2 shows the mean score of attitude of urban and rural prospective teachers towards the use of ICT in

teacher education. The mean of urban prospective teachers 27.44 and that of rural prospective teachers is 26.10. The 't' ratio obtained from above two groups is 2.117 which is significant at the levels of significance i.e. 0.05 and 0.01 level. This means that there is significance difference between urban and rural attitude of prospective teachers towards the use of ICT in teacher education. This can be attributed to the fact that urban prospective teachers use the computer and different kinds of technology at their home so; this may be the reason that urban prospective teachers have positive attitude compare than rural prospective teachers towards the use of ICT in teacher education.

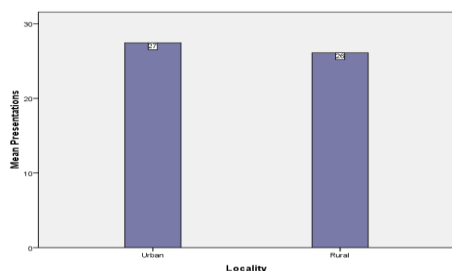


Table-03 Mean and SD Scores Science and Arts Prospective Teachers on ICT Attitude Scale (ICTAS)

Stream	N	Mean	S.D	't'-value df=98
Science	75	40.90	4.661	0.431* (N.S)
Arts	75	41.28	4.141	

*Not significant

Table 03 shows the mean score of attitude of science and arts prospective teachers towards the use of ICT in teacher education. The mean of science prospective teachers is 40.90 and that of arts prospective teachers is 41.28. The 't' ratio for above two groups is 0.431 which is not significant at any levels of significance. This means that there is no significant difference between attitude of science and arts prospective teachers towards the use of ICT in teacher education.

Silwa, et al. (2009) also supported this finding.

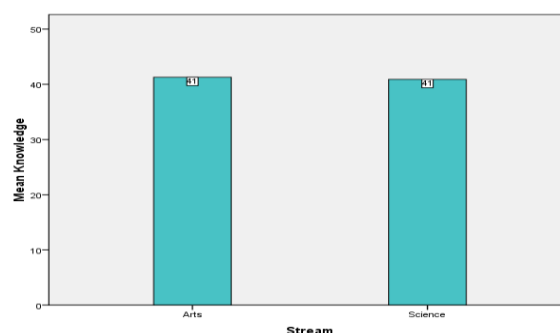


Figure-03 Shows Mean Value of Science and Arts Prospective Teachers on ICT Attitude Scale (ICTAS)

VI. SUGGESTION FOR FURTHER RESEARCHES

On the basis of the finding of the present investigation the investigator would like to suggest following for further research:

- The present study is confined only to district Yamuna Nagar, similar study may also be conducted in Haryana State.
- Present study is deals with a sample of 150 prospective teachers. A large number of samples can be used.
- In the present study is only prospective teachers were taken, for further research similar study can also be conducted with various levels of teachers.
- The present study is related only to the teachers. In the same way study can be conducted on M.Ed. students also for measuring their attitude towards the use of ICT in teacher education.
- The present study is delimited to Kurukshetra University Kurukshetra. The same can be extended to different universities.

VII. EDUCATIONAL IMPLICATIONS

The present inquiry has assessed the attitude of prospective teachers towards the use of ICT in teacher education. ICT in teacher education is very important from the view of modernizing the teacher student communication technique in the educational system. Most of the Governments of various countries have adopted useful measures for the use of ICT in the educational and training programmes. Some provisions of incentives have also been made for computerization and automation to improve the system of communication between teacher and student in the institute and universities. Teacher plays a crucial role in the development, adoption and implementation of any educational curriculum and system. This role becomes more important when it comes to integration of information communication technology in the education programme of a country. It has been discovered that the knowledge of ICT usage improve human capacity,

including business transactions, industrial use, education programme and activity. ICT is an important resource not only because of its unique control capabilities, but because these attributes are also isomorphic with the representations and processes involved in human learning.

REFERENCES

- ❖ Abbas, (1995). conduct on as Attitude towards using computers among Malaysian teacher education student, in conference on computer in education VI: (WCCE95) *Journal of liberating the learner*, pp. (153-162).
- ❖ Aiken, (2000) as cited in Yushau, B. (2006). A study on The Effects of Blended E-Learning on Mathematics and Computer Attitudes in Pre-Calculus Algebra. *The journal of The Montana Mathematics Enthusiast*, 3 (2), pp176- 183.
- ❖ Ajzen, Fishbein,(1977) as cited in Yushau, B. (2006). A study on The Effects of Blended E-Learning on Mathematics and Computer Attitudes in Pre-Calculus Algebra. *The journal of The Montana Mathematics Enthusiast*, 3 (2), pp176- 183.
- ❖ among Malaysian teacher education student, in conference on computers in education VI: (WCCE95) *Journal of liberating the learner*, pp. (153-162).
- ❖ Archibong, I. A, & Joseph and Anijaobi, (2010). conduct as a ICT competence academic staff in universities in cross rivers state, Nigeria. <http://www.ccsenet.org/journal/index.php/cis/article/download/7050/6119>
- ❖ Birisci, Metin, Karakas (2007). Conduct as determining prospective elementary teachers' attitudes towards computer: a sample from urkey *Bulgarian Journal of Science and Education Policy (BJSEP)*, Volume 3, Number 1,(2009) <http://bjsep.org/getfile.php?id=55>
- ❖ Dixon and Siragusa, (2009). Conduct as a attitudes towards ICT-based interaction: A Bachelor of education case study. <http://www.aare.edu.au/09pap/dix091331.pdf>.
- ❖ Hammond (2009). what happens as a student teacher who made very good use of ICT during pre service training Enter their. *Journal of Teacher development*, volume 13 N2 p3 -106.
- ❖ Hashim et.al.(2010). Antecedents of ICT attitude of distance education students. *Turkish online journal of educational technology-TOJET*, volume 9N.1, pp. 28-36.
- ❖ Kutluca, Dr.T. (2011). A study on computer usage and attitude towards computer of prospective preschool teacher. *The journal of New Trends in Education and Their Implications Vol: 2 Issue:1 ISSN 1309-6249*.
- ❖ Lawrence, Samah, Shaffril and Hassan (2009). conduct as Factors That Influence Attitude Towards ICT Usage among Rural Community Leaders in Malaysia. *Australian Journal of Basic and Applied Sciences*, 4(10): 5214-5220, 2010 ISSN 1991-8178 © 2010, INSInet Publication.
- ❖ Panday (2005). *frame work of information communication technology & teacher education*. Isha books Adarsh nagar , Delhi.
- ❖ Papasterqiou (2010). Enhancing physical Education and sport science student" self-efficiency and attitude regarding information and communication technology through a computer literacy course. *Journals computer and education vol 54 , N1, p298-308*.
- ❖ Scturnyn (1997) Vandna, Newa, (2009). Schoolteacher' attitude towards information and communication technology [ICT]. *Edutrac vol. 8-No.6,(2009)*.
- ❖ Siribodhi Tinsiri (2007). conduct as ICT in Teacher Education: Case Studies from the Asia-Pacific Region http://www2.unescobkk.org/elib/publications/151_152/ICT_in_Teacher_Education.pdf
- ❖ Yushau, B. (2006). A study on The Effects of Blended E-Learning on Mathematics and Computer Attitudes in Pre-Calculus Algebra. *The journal of The Montana Mathematics Enthusiast*, 3 (2), pp176- 183.
- ❖ Yusuf and Balogun. (2011). Conduct as Student-Teachers' Competence and Attitude towards Information and Communication Technology: A Case Study in a Nigerian University *Journal of contemporary educational technology*, 2011, 2(1), pp 18-36 <http://cedtech.net/articles/212.pdf>