Utilization of ICT by Student Trainees in a Teacher Education Institution in Tripura – A Study

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ABSTRACT

Integration of ICT in education system has made the dissemination of knowledge and information easier and faster. ICT makes the teaching learning process more effective and highly interactive and brings satisfaction among students and teachers. ICT is very useful to observe and hear the teachings of well-known teachers for specific subject on online mode. Successful integration of ICT, shall occur when teacher trainees, teachers and teacher- educators are trained in the certain dimensions. The study aims to explore the areas wherein the student trainees makes use of ICT in TEI and investigate the opinion of student trainees towards utilization of ICT in a TEI. Data was collected using a questionnaire from 90 student trainees from a teacher education institute. The study revealed that the mean score and standard deviation found to be 42.66 and 2.744 respectively in utilizing ICT for different purposes. Also, there exists no significant difference of opinion between female and male student teachers in utilization of ICT.

Key words: ICT Integration, utilization, teacher education.

Introduction

Integration of ICT in education system has made the dissemination of knowledge and information easier and faster. "Information and Communications Technology" (ICT) users are enable to real-time access for any type of information. Use of ICT in education enabled any individual to become productive. According to George (2012), Information and communication technology (ICT) is a diverse set of technological tools and resources used to communicate and to create, disseminate,

store and manage information. ICT makes the teaching learning process more effective and highly interactive and brings satisfaction among students and teachers. ICT is very useful to observe and hear the teachings of well-known teachers for specific subject on online mode. NEP 2020 has recommended many key initiatives in the domain of online and digital education, taking into account current and future needs in light of existing and upcoming technologies.

Teacher without the knowledge of educational technology cannot be recognized as a trained teacher. It is essential for every teacher to make the use of technology effectively in the classroom during the teaching –learning process. Merely introducing technology to the educational process is not sufficient, but its enforcement in an operational way is important. Thus, the individual attitude and willingness to accept the technological challenges towards modern technology play a significant role. ICT functions as a fuel in the process of learning and proves a milestone in accomplishment of the higher level objectives in the learning process such as: -

1. Understanding basic concepts and operation of computer.
2. Use and application of various software in learning task achievement.
3. Development of communication skills.
4. Easy collection, analyze, tabulation, interpretation of data and preparation of reports.
5. Development of the effective e-learning environments.
6. Best use of technology – enhanced lessons to enrich pupil's learning.
7. Enhance creativity and professional attitude.
8. Collection of additional and effective learning material from various sources.
9. Encouragement to the questioning, exploration, problem – solving, decision – making and group co-operation.

ICT, when used as a tool, has the potential to transform the delivering process of education. Utilization refers to timely transform the system for teaching learning process. Successful integration of ICT, shall occur when teacher trainees, teachers and teacher- educators are trained in the following dimensions. Welliver's Instructional Transformation Model (Welliver, 1990) has

cited teachers progressing through five hierarchical states in order to integrate ICT effectively as shown in the table:

Dimension	Nature of effective integration of ICT
1. Familiarization	Teachers become aware of technology and its potential uses.
2. Utilization	Teachers use technology, but minor problems will cause teachers to discontinue its use.
3. Integration	Technology becomes essential for the educational process and teachers are constantly thinking of ways to use technology in their classrooms
4. Reorientation	Teachers begin to re-think the educational goals of the classroom with the use of technology
5. Revolution	The evolving classroom becomes completely integrated with technology in all subject areas. Technology becomes an invisible tool that is seamlessly woven into the teaching and learning process.

Welliver, P. (1990). *Instructional transformation: A model for change*

Review of Literature

Bindu, C.N. (2017) found that the teachers have positive attitude but lack of competence, came out as problem for ICT integration in the state under study. The researcher pointed out that proper training should be provided to teachers for successful integration of ICT in teaching. And moreover, the researchers found that the teachers are not aware of the importance of ICT in teaching process. It was suggested that training and incentive should be provided to the teachers in this regard.

Simhachalam, T. (2017) study revealed that the languages teachers are in a opinion that ICT plays a major role in language teaching. The study also shows that use of ICT can motivate students and teaching become easy for the teachers.

Ranjan, B.K (2017) found that infrastructural facilities in all DIETS is poor and the knowledge of teachers to use ICT is very less. The data analysis shows that most of the DIET should develop ICT based libraries, laboratories in their diets along with technical person to look after the systems and help the faculties.

Pegu, Uttam Kr (2014) in his research study found that though ICT has the tremendous potential to brought change in education, but in India, it was yet to achieve the satisfactory level of IT implementation in higher education.

Nath, R.C. (2017) study revealed that all university had ICT facilities like laptop, desktop, video conferencing, interactive white board etc. The study found that Tezpur university, which is a central university had more ICT facilities than other universities in Assam. It was also found that all universities are using computerized management system, examination, automation software for library. The students of Assam university were more efficient in using ICT for academic purpose.

Rahman M (2021) found that all the teacher educator were having positive attitude towards the use of ICT, irrespective of gender, i.e. either male or female. The researcher found that there is no significant difference in attitude towards ICT utilization between male and female teacher educators. Regarding the utilization of ICT, there is no significant difference between male and female teacher educators, on the other hand there is significant difference in utilization of ICT between more experienced and less experienced teacher educators. Results also showed that there is no significant difference between government and private teacher educators towards ICT utilization.

Nair, G. et al. (2012) in their study found that the teachers had reluctance attitude towards the utilization of ICT in teaching of English languages. Moreover, the study also reveals that teachers had lower level of skills for utilization of ICT for teaching.

According to (Mansell & Wehn 1998), effective use of ICT has the capability to develop and empower societies through lower addition, good, cooperation and participation. ICT affects quality of life through knowledge, education and chops. Use of the ICT has a positive impact on closing the gender employment gap as ICT has tendency to give employment openings for women(Shehata 2017). Involvement of the ICT with the support of educational need helps to empower women in the society (Chen 2004). Beena and Mathur(2012) shoveled part of ICT education for women commission in the terrain of India by using ICT as independent variable and women's commission as dependent variable and the sample size of the exploration was 200 by number of trainees and 30 by number of preceptors of different governmental and nongovernmental associations of Jaipur quarter. Experimenter used arbitrary slice fashion to opt the sample for the study. This exploration concluded that the information and communication technology empower a women in colorful areas like social, educational, personal, psychological, political, technological and economical.

Objective of the study

1. To explore the areas wherein student trainees makes use of ICT in TEI.
2. To investigate the opinion of student trainees towards utilization of ICT in a TEI

Methodology

This is a descriptive survey conducted to explore the utilization of ICT in a TEI. The population for the study was student trainees in a Teacher Education Institution (College of Teacher Education,) located at Unakoti district in Tripura. The data for the study was collected using a questionnaire from 90 respondents.

Analysis and Interpretation

Both quantitative and qualitative data analysis procedures are followed by the researcher. Data collected through questionnaire, was subjected to quantitative and qualitative analysis.

General Information

General information about student teachers is put forward in Table 1. Out of 90 number of respondents, 32.22% hailed from urban area and rest 67.78% hailed from rural area. With respect to educational qualifications of the respondents, it is found that 61.11% were graduates; and 38.89% were post graduates. 60% of the respondents were found to be female and 40% of them were male shown in table1 and fig.1.

Table 1: General Information about student trainees

Particulars	Options	No. of responses	%
Area	Urban	29	32.22
	Rural	61	67.78
Educational Qualification	BA/BSc/BCom	55	61.11
	MA/MSc/MCom	30	33.34
	MBA	2	2.22
	MSW	3	3.33
Gender	Female	54	60.0
	Male	36	40.0

Fig. 1 General information about respondents

Legend:
- Area Urban
- Area Rural
- Educational Qualification BA/BSc/BCom
- Educational Qualification MA/MSc/MCom
- Educational Qualification MBA
- Educational Qualification MSW
- Gender Female
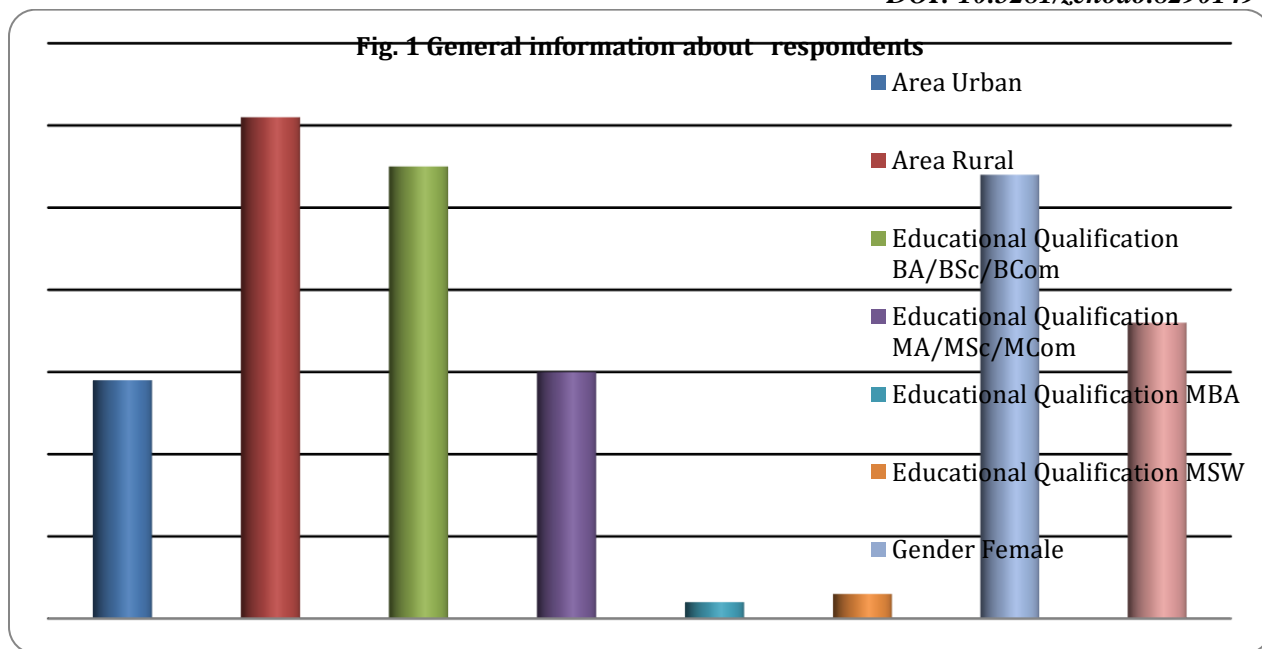
a) Areas wherein student trainees makes use of ICT in TEI

In order to ascertain the areas wherein student trainees utilize ICT it is clear from the table 2 that 79.63% of females make use of computer for a variety of work and 88.89% among males; 61.11% of females make use of ICT tools for Lesson Plan and 75% among males; 74.07% of females make use of MS-Word software and 80.56% among males;

59.26% of females make use of MS-PPT and 66.67% among males; 29.63% of females make use of MS paint and 38.89% among males; 70.37% of females make use of ICT tools for assignment and 75% among males; All females and males make use of internet.

Table 2: Student trainees make use of ICT in TEI

ICT Tools used	Options	Frequency	
		Female	Male
Computer for variety of work	Agree	43(79.63)	32(88.89
	Undecided	10(18.52)	4(11.11)
	Disagree	1(1.85)	0
ICT tools for Lesson Plan	Agree	33(61.11)	27(75.0)
	Undecided	3(5.56)	3(8.33)
	Disagree	18(33.33)	6(16.67)
MS-Word software	Agree	40(74.07)	29(80.56)
	Undecided	3(5.56)	3(8.33)
	Disagree	11(20.37)	4(11.11)
MS-PPT	Agree	32(59.26)	24(66.67)
	Undecided	15(27.78)	9(25.0)
	Disagree	7(12.96)	3(8.33)
MS paint	Agree	16(29.63)	14(38.89)
	Undecided	15(27.78)	12(33.33)
	Disagree	23(42.59)	10(27.78)
ICT tools for assignment	Agree	38(70.37)	27(75.0)

	Undecided	10(18.52)	7(19.44)
	Disagree	6(11.11)	2(5.56)
Help of internet	Agree	54(100.0)	36(100.0)
	Undecided	0	0
	Disagree	0	0

55.56% of females make use of Smart class and 80.56% among males; 38.89% of females make use of LCD projector and 55.56% among males presented in table 3.

Table 3: Student Trainees make use of ICT inside class in TEI

ICT Tools used	Options	Frequency	
		Female	Male
Smart class	Agree	30(55.56)	29(80.56)
	Undecided	9(16.67)	4(11.11)
	Disagree	15(27.78)	3(8.33)
LCD projector	Agree	21(38.89)	20(55.56)
	Undecided	15(27.78)	10(27.78)
	Disagree	18(33.33)	6(16.67)

All the females and males make use of Smart phone; 98.15% of females make use of Social sites for educational purpose and 97.22% among males; 98.15% of females make use of WhatsApp for study material and 100% among males; all the females and males make use of WhatsApp to communicate with classmates; and 77.78% of females make use of Email to communicate and 88.89% among males presented in table 4.

Table 4: Student trainees make use of ICT as social sites

ICT Tools used	Options	Frequency	
		Female	Male
Smartphone	Agree	54(100.0)	36(100.0)
	Undecided	0	0
	Disagree	0	0
Social sites for educational purpose	Agree	53(98.15)	35(97.22)
	Undecided	1(1.85)	1(2.78)
	Disagree	0	0
WhatsApp for study material	Agree	53(98.15)	36(100.0)
	Undecided	1(1.85)	0
	Disagree	0	0
WhatsApp to communicate with classmates	Agree	54(100.0)	36(100.0)
	Undecided	0	0
	Disagree	0	0
Email to communicate	Agree	42(77.78)	32(88.89)
	Undecided	10(18.52)	4(11.11)
	Disagree	2(3.7)	0

Scale based minimum score happens to be 14 and maximum is 56. Among the females minimum score obtained is 36 and maximum score is 47; for males minimum is 38 and maximum is 49 and in total minimum is 36 and maximum is 49 with respect to the student teachers utilize ICT. The mean score for female is 41.8; for male is 43.94 and in total it is 42.66 with standard deviation of 2.468; 2.661 and 2.744 respectively.

Thus, it is evident that total mean score and standard deviation found to be 42.66 and 2.744 respectively in utilizing ICT for different purposes shown in table 5 and fig.2.

Table 5: Overall areas wherein student trainees make use of ICT

Particulars	Gender	Sample	Minimum score	Maximum score	Mean	Standard Deviation
Areas ICT Tools used	Female	54	36	47	41.80	2.468
	Male	36	38	49	43.94	2.661
	Total	90	36	49	42.66	2.744

Fig.2 ICT tools utilized
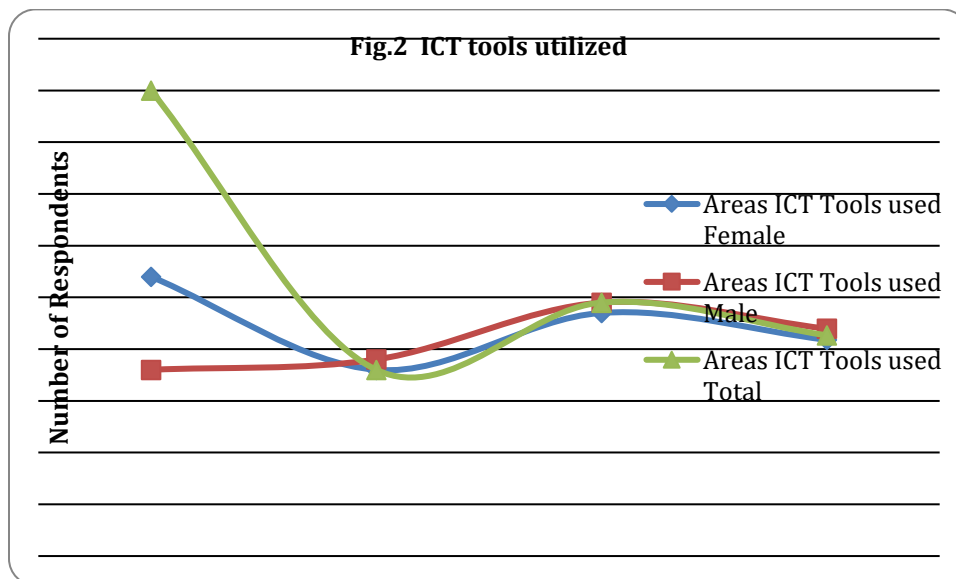
b) Opinion of student trainees towards utilization of ICT in a TEI

In order to find out the opinion of student teachers in utilization of ICT, 't' test was conducted with the available information put forward in Table 6. As the calculated value of 0.9871 is less than the tabulated value of 1.96 at 0.05 level, the 't' test is not significant. To conclude, with 95% confidence level there exists no significant difference of opinion between female and male student trainees in utilization of ICT.

Table 6: Opinion of student trainees in utilization of ICT

Gender	N	Mean	Standard Deviation	df	t	Significance
Female	54	74.43	3.478			
Male	36	73.53	5.180	88	0.9871	Not Significant
	90					

Findings and Discussion

Total mean score and standard deviation found to be 42.66 and 2.744 respectively in utilizing ICT for different purposes. Studies conducted by Simhachalam, T. (2017); Nath, R.C. (2017); Rahman M (2021) found to be in favour but, Bindu, C.N. (2017); Ranjan, B.K (2017); Nair, G. et al. (2012) does not conform. Also, the study revealed that there exists no significant difference of opinion between female and male student teachers in utilization of ICT. The study by Rahman M (2021) conforms to the finding.

Conclusion

Utilizing and procuring the knowledge of ICT, student trainees will definitely play the role of effective and skilled teachers. For adapting to the rapid changes in education system, ICT is one

of the dominant elements. Integration of ICT is changing the nature of education and roles of students and teachers in the entire teaching learning process. Teachers need to be prepared to provide technology-supported learning opportunities to their students in the present-day classroom. Integrating technology based skills in professional teaching, teachers will surely support student learning.

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