

## STATUS OF ICT LITERACY AWARENESS OF TEACHER TRAINEES IN TRAINING COLLEGES OF BALESORE DISTRICT

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### ABSTRACT

There is an immediate need for integrating ICT in school education, college education and teacher education. There should be feasible policies at the central government and state government level with respect to ICT in education. For integrating ICT in school education, it is necessary to strengthen ICT in teacher education. It is really a challenging task to strengthen ICT in teacher education because a large majority of the teacher education institutions are illequipped or underequipped with respect to ICT. Each teacher training institute needs to have an ICT laboratory having a server and adequate number of nodes with UPS and the required accessories to cater to the needs of teacher training on ICT. In addition to the above mentioned equipment, it is highly desirable to have multimedia systems, modem, lap-tops, digital cameras, optical scanners, LCD projectors, DVD, CD writers, DMP, Laser printers, TV, VCR, CDs, Panaboard and ICT learning resources. There should be a technician to maintain the ICT laboratory; courses should be organized by the IASES and University Departments (^ Education to train the teacher educators on ICT. ICT in education should be offered as a compulsory course at B.Ed, level and special area at M.Ed., level. ICT should be an essential component of the orientation and refresher courses offered by the Academic Staff Colleges and UGC refresher course resource centers.

### Introduction

Information and Communication Technology (ICT) is a word of recent origin which usually confused with Information Technology (IT) and Communication Technology (CT). ICT can be termed as the synchronization of both IT and CT. The history of ICT would be incomplete without discussing CT as well as IT. So ICT is defined as term used to describe the tools and processes to access, retrieve, store, manipulate, produce or exchange information by electronic and automatic means. This include hardware, software, and telecommunication in the form of personal computer, scanner, digital canvas, C.D. and D.V.D. players and programmes like data base system and multi-media applications. Different scholars stated the meaning of ICT in different ways. Some of the definitions of ICT is given here which would help to explain the meaning of ICT. According to Garg, "ICT stands for information and communication technology. It is a method that involves processing, storage and communication of information using

computers and other electronics devices.” According to Devmani, “ICT means the advancement of sending and receiving of information from different parts of the world.” “It is the way of communication by means of technology, which is by telephone, faxes, internet, etc.”

Finally, it can be concluded that ICT is a tool for communication and presentation which helps in bringing individuals together on a common platform for exchange of views, presentation of ideas (through, chatting or E-mail) and increases the interactivities between individuals and between individuals and technologies. The modern science and technology have brought out new changes in all walks of human life. People are now living in the information society, the latest in the evolution of human civilization, information and communication technology has brought out newer changes in education, with the application of new electronic and other technology to the storage, selection and transformation and distribution of information of all kinds. It involves scientific, technological and engineering disciplines and management techniques that are used in information handling and processing, their application, computers and their interaction with men and machines, and associated with social, economical and cultural matters. According to Kapur (1998), ICT has revolutionized education; teachers can give their assignment in a specified home page for the course on the internet and students can copy from there or can get printed copies of the assignment from their computers. After the teacher has corrected the assignment, the teacher gives the complete solution of the assignment, the marking scheme and mistakes made by students on the internet, so that the students can check not only their marks, but know also the types of mistakes that they usually commit in the problem given in the assignment. In fact, sometimes the teachers allow the students to mark the assignments themselves according to the marking assignment scheme given and usually the difference in the marks given by the teachers and the students to themselves is very little.

## REVIEW OF LITERATURE

**1. Thakur, N (2014)** conducted a study on “*A Study on Awareness of Trained Teachers in relation to Information and Communication Technology*” by considering following objectives (i) To study the level of ICT awareness among the trained teachers. (ii) To compare the level of awareness about ICT among male and female trained teachers. (iii) To compare the level of ICT awareness among rural and urban trained teachers. The data was collected by self made questionnaire form in which thirty different secondary schools five from urban and five from rural of three districts in West Bengal. Ten secondary trained teachers were allowed to administer the questionnaire from each. In that way all total three hundreds trained teachers participated to administer the questionnaire. To analyze the data Frequencies, Percentage, Mean, Standard Deviation (S.D.) and ‘t’ test were used. The findings were (i) there was no significant difference in the level of ICT awareness among the male and female trained teachers and (ii) there was a significant difference between the urban and rural trained teachers.

**2. Ahmad M. et. al. (2016)** conducted a study on *The Application of 21st Century ICT Literacy Model among Teacher Trainees* by considering the following objectives (1). To Identify the level of ICT competency among teacher trainees in the domain of accessing, managing, creating, integrating and

communicating (2) to Recognize the level of ICT competency among teacher trainees,3. Find the difference of ICT competency level of teacher trainees according to courses. The researcher had conducted a quantitative study and used survey method to collect the data .The researcher had selected approximately 104 teacher trainees who registered at UniversityofKebangsaan, Malaysia (UKM) (National University of Malaysia) for 2015-2016 session. All data was collected using the determined questionnaire. The data were statistically analyzed with Statistical Package for the Social Sciences (SPSS). The finding of the study were teacher trainees in UKM had great ICT skills by scoring well in five out of seven domains in 21st Century ICT Literacy Model.

**3. Vasimalairaja, M. (2015)** conducted a study on *The Awareness of ICT and Self Esteem of B.Ed. Trainees*, by considering the following objective 1. To find out the level of Awareness of ICT and self-esteem of B.Ed. trainees,2. To find out whether there is any significant difference between male and female B.Ed. trainees in their awareness of ICT, 3. To find out whether there is any significant difference between male and female B.Ed. trainees in their self-esteem, 4. To find out whether there is any significant difference between age of B.Ed. trainees in their self-esteem, 5. To find out the relationship between Awareness of ICT and self-esteem of B.ED Trainees. The researcher had adopted the survey method and conducting

this study by taking the population for the study consisted of all the B.Ed. trainees studying in the colleges of education in the academic year 2014 and 2015 at Sivaganga districts in Tamil Nadu. The sample was of 250 B.Ed. students from five colleges in Sivaganga district in TamilNadu. The researcher used stratified Random Sampling technique for his study. The following tools are used for data collection, Awareness of Information Communication Technology scale and Adopted Self-Esteem Inventory .The researcher used Mean, Standard Deviation, t-test ,Chi-square, and Pearson's product moment correlation for analysis of data .The finding of study were; (1). 11.0 % of the male B.Ed. trainees have high level of awareness of ICT, (2). 11.3 % of the female B.Ed. trainees have high level of awareness of ICT, (3). 13.7 % of the male B.Ed. trainees have high level of self-esteem, (4). 18.1 % of the female B.Ed. trainees have high level of self-esteem, (5). There is no significant difference between male and female B.Ed. trainees in trainees in their awareness of ICT,(6). There is no significant difference between age of B.Ed. trainees in their awareness of ICT, (7). There is significant difference between (7). male and female B.Ed. train trainees in their self-esteem.

**3. Markauskaite, L(2006);** conducted a study on "*Gender issues in pre-service teachers' training: ICT literacy and online learning*" by considering following objectives (1) to study female and male teacher trainees beliefs about their capabilities in the following areas of ICT literacy: (a) present ICT literacy (b) sustainability of ICT literacy and (c) transferability of ICT literacy into their future professional domain (2) to investigate gender differences in trainee teacher's ICT literacy and online learning . Two different methods were employed to assess trainee teachers' ICT literacy and their engagement in online learning, a questionnaire based survey, and a quantitative analysis of students' contributions to compulsory online learning activities. The population of the study was Two hundred and seventeen trainees (151 (69.6%) were females and 66 (30.4%) were males). The samples of the study are One hundred and twenty two students

(56.2%) (96 females and 26 males). A chi-square test and an independent pair t-test were used for the detection of gender differences. Hierarchical multiple regression was also employed. The findings are even having similar technical opportunities, female students were significantly less intensive users of ICT than their male classmates. Male students were significantly more confident about their capabilities to plan, find information and select ICT tools. However, on the whole, the confidence of female and male trainee teachers about their general cognitive capabilities was quite similar. Female students prefer cooperative learning situations, thus it is more likely that they will seek for human help. Males however like a competitive learning style, and consequently it is more likely that they will try to find the solutions on their own. The most alarming is the gap between female and male student's confidence about their technical ICT capabilities. The items included in the instrument for the self assessment of technical ICT skills were based on the national and international standards relevant to trainee teachers.

**4. Yusuf, M.O et.al (2015)** conducted a study on *ICT Literacy among student teachers in Universities in North Central Nigeria*, the objective of the study was to find out the information and communication technology literacy levels among student teachers in the universities in North-Central Nigeria. The study involved a total of 638 student-teachers (360 males and 278 females). The instrument used for the study was a researcher-designed questionnaire. The major findings were (i) There was no significant difference in the level of ICT literacy between male and female student teachers. (ii) The student teachers in the north central zone of Nigeria have an average ICT literacy.

**5. Deivam, M. (2016)** conducted a study on *"the ICT Literacy among B.Ed. Teacher Trainees"* by considering the following objectives 1. To explore the ICT literacy among the B.Ed. teacher trainees, 2. To find out the mean score of B.Ed., teacher trainees on ICT literacy. (3). To explore the significant difference between rural and urban of B.Ed. Teacher Trainees on ICT Literacy. The researcher had used the survey method to collect the data. The researcher had selected 40 teacher trainees studying in B.Ed. course at Sri Ragavendara College of Education in Dindigul district. The researcher used Simple Random Sampling technique for his study. In this study a test tool (a 12-items structured questionnaire assessment tool) was developed by the researcher to assess the ICT literacy among B.Ed. The researcher used the Mean, S.D, and T-value as statistical techniques for data analysis. The findings of the study were (i). There was no significant difference between male and female B.Ed. teacher trainees on ICT Literacy. (ii). There was significant difference between Rural and Urban B.Ed. teacher trainees on ICT Literacy. (iii). Urban teacher trainees ICT literacy was higher than the rural B.Ed. teacher trainees.

**6. Nyunt, S. Set.al (2010)** conducted a study on *"The computer literacy M.Ed students in Yangon Institute of Education"* by considering the following objectives (i) to investigate the effectiveness of teaching computer literacy to M.Ed. students who learned the course at the B.Ed. level. (ii) to assess the computer literacy by focusing six areas; Basic computer skill, Word Processing, Internet use, Software use, Microsoft PowerPoint, and Microsoft Excel. A

sample consists of 140 M.Ed students teacher were selected by using cluster sampling technique (different age under 25 and above 25). The t- test was used for analysis of data. The finding of the study revealed that,

there is no significant difference between the two groups which are divided according to the geographical area, rural and urban areas. But, there were significant differences between the two groups which are divided on age, under 25 and above 25 years old.

**7. Deivam, M(2016)** conducted a study on “*Computer literacy among B.Ed teacher trainees’ – An exploratory study*”, by considering following objectives (1) To explore the Computer literacy among the B.Ed teacher trainees. (2)To find out the mean score of B.Ed., teacher trainees on Computer literacy. (3)To find out the significant difference between Arts & Science subject B.Ed Teacher trainees’ on Computer Literacy. The investigator has used the survey method to collect the data. The sample was 50 teacher trainees. The findings of the study were (1)There was no significant difference between means scores of computer literacy among male and female teacher trainees.(2) There was significant difference between mean scores of computer literacy among Arts and Science Subject teacher trainees’.(3) B.Ed Teacher Trainees had moderate level of Computer Literacy.

**8. Sagar, P. et al (2014)** conducted a study on “*The effect of PowerPoint presentations on academic achievement of B.Ed. teacher trainees*”, by considering the following objectives1. To study the effect of PowerPoint presentation on achievement of B.Ed. teacher trainees. 2. To find out gender differences in academic achievement of B.Ed. teacher trainees.3. To find out the effect of interaction between gender and teaching method on academic achievement of B.Ed. teacher trainees. This research was experimental in nature where pre-test and post-test was conducted. The non equivalent control group design was used. The sample was two intact classes (62 students in each) of B.Ed. Specialization students in MJP Rohilkhand University, Bareilly campus. An achievement test developed and standardized by researcher was administered on both classes to obtain pre-test scores. 2X2 analysis of covariance (ANCOVA) was carried out on the data yielded through achievement tests. The major findings were (i) there was significant difference among the two teaching methods with regard to achievement of the teacher trainees and (ii) achievement of girls is better than boys using PowerPoint.

**9. Wilson, K. B(2014)** conducted a study on “*Impact of Emerging Technologies on Teacher Education: Experiences of Teacher-Trainees*” by considering following objectives (1)to explore student teacher’s access to technology (2)to judge pupil teacher’s experience with emerging technology during their professional development. Using a blend of quantitative and qualitative methods empirical evidence was collected from teacher-trainees through an online survey. The main findings of the study showed that (1)A number of teacher-trainees’ access technology for academic and non-academic activities (2) Use of the social media is popular among teacher-trainees’ however, using it to support learning is still a challenge (3) A number of teacher-trainees’ lack confidence in using technology tools, because of their low technology skills.

## **RATIONALE OF STUDY**

ICT plays an important role in the for the teacher trainees to use digital technology, communication tools, and network appropriately to solve information problems in order to function in an information society. ICT literacy is a bridge between information and communication literacy. The nature, value, and availability of

information have changed enormously and this change impacts the status of teacher trainees. ICT literacy awareness enhances active learning of teacher trainees.

The vision is not simply of ICT, but of better education facilitated through the adoption and promotion of ICT literacy awareness. The integration of ICT in teacher education must be a priority. Teacher trainees must learn to use the tools themselves and how much the tools applied in practice.

## RESEARCH QUESTION

After going through various related studies in the field of ICT in Education following research questions rise in the mind of the researcher to undertake the present study

1. How far the teacher trainees have the awareness of ICT literacy?
2. How far they one utilizing ICT in their study purpose?
3. Are they satisfied with the introduced ICT syllabus in training programme?

## STATEMENT OF THE PROBLEM

The present study entitled as, "STATUS OF ICT LITERACY AWARENESS AMONG TEACHER TRAINEES IN TRAINING COLLEGES OF BALESORE DISTRICT"

## OBJECTIVES

1. To investigate the extent of the knowledge of ICT literacy knowledge developed among teacher trainees in training colleges of Balsore district.
2. To explore the extent of the usage of the ICT literacy knowledge use by teacher trainees in their study in training college of Balasore district.
3. To find out level of satisfaction on ICT literacy knowledge among teacher trainees of Balasore district.

## OPERATIONAL DEFINITION OF THE TERMS

INFORMATION AND COMMUNICATION TECHNOLOGY(ICT):

ICT stands for "Information And Communication Technology". The term "information" refers to any communication or representation of knowledge such as facts, data or opinions in any medium or for, including textual, numerical, graphic cartographic, narrative or audio-visual forms."Technology" is the practical form of scientific knowledge or the science of application of knowledge to practical.

## ICT LITRACY AWARENESS

ICT literacy awareness is the ability to use digital technology, communication tools, and/or networks to define access, manage, integrate, evaluate, create, and communicate information ethically and legally in order to function in a knowledge society.

## TEACHER TRAINEES

“The meaning of trainees is a person who is being trained”- elisawany

A person who is being trained for teacher is called teacher trainees. That is the student who will be studied two year D.El.Ed. course, two year B.Ed. course, four year integrated B.A B.Ed. /B.Sc. B.Ed. course, integrated B.Ed.-M.Ed. course.

## TRAINING COLLEGES

Training colleges is a school, it is providing training for a special field or profession. it is giving teaching or developing in one self or other any skills and knowledge. Generally, whose is colleges provide teacher education program is called training colleges

## SCOPE & DELIMITATION OF THE STUDY

- This study will helpful to afford training through effective transaction of ICT Curriculum by means of organizing seminars, workshop, refresher courses, etc as well as ensure proper understanding by stakeholders responsible for its awareness and implementation.
- This study will facilitate to the teacher training colleges authorities to organize different orientation programmes, workshops and seminars for giving knowledge of provisions and develop ICT literacy skills to all teacher trainees.
- This study will very constructive and built ICT skills knowledge among the teacher trainees.

## DELIMITATION

- The present study is delimited to all type of teacher trainees in the training colleges/schools of BALASORE district.
- The present study is delimited to a sample of 75 teacher trainees of different training colleges/schools of Balasore District.

## METHOD

The descriptive survey method is used to conduct this study. In this study the researcher will make an in-depth survey to examine the current status of status of ICT literacy awareness among teacher trainees in training colleges of Balesore district.

## POPULATION

In the present study all the teacher trainees of Balasore district constitute the population of the study.

## SAMPLE SIZE

The sample for the present study will be constituted of 100 teacher trainees of teacher training colleges of Balasore district. Out of 100 teacher trainees, 25 are from IMED in FMU, 25 are from CTE in Balasore, 25 are from ETEI in Bagudi and 25 are from DIET in Remuna. This sample will be selected randomly from total teacher trainees admitted in various teachers training institutes of Balasore (IMED, CTE, ETEI, and DIET).

### Structure of sample

**TABLE -1**

SL. NO	Name of the institution	No. of teacher trainees sample
1	IMED,FMU	25
2	CTE,BALASORE	25
3	ETEI,BAGUDI	13
4	DIET,REMUNA,BALASORE	12

## TOOL

Self developed questionnaire based on different aspects of ICT literacy awareness and its uses will be used for collection of data. This questionnaire is intended to assess the status of ICT literacy awareness and process of use by the teacher trainees.

### Techniques of data collection procedure:

The investigators personally visited teacher training colleges for collecting data. After permission from the principal, the purpose of the study and process of responding the tool will be explained to the teacher trainees. Teacher trainees will be asked to respond independently and provide frank option. The collected data will be coded numerically and entered in MS Excel for analysis.

## DATA ANALYSIS AND INTERPRETATION

My research study is "STATUS OF ICT LITRACY AWARENESS OF TEACHER TRAINEES IN TRAINING COLLEGES OF BALASORE DISTRICT." The sample for present study consists of 75 teacher trainees of training colleges in Balasore district. Out of 75 teacher trainees, 25 are from IMED in FMU, 25 are from CTE in Balasore, 13 are from ETEI in

Bagudi and 12 are from DIET in Remuna. The collected data are analysed as per the objective of the study by using frequency and percentage and qualitative description. The detailed analysis and interpretation is presented in the following pages.

#### ANALYSIS AND INTERPRETATION OF QUESTIONNAIRES OF TEACHER TRAINEES

**TABLE -1: GENERAL AWARENESS ON ICT**

SL No.	ITEMS	YES (FREQUENCY AND %)
1	What is the main brain of the computer?	55 (73.3)
2	Which one is the communicative tool?	57 (76.0)
3	Which one is not an input device?	52 (69.3)
4	Which one is not a Web search engine?	31 (41.3)
5	Which one is not an output device?	49 (65.3)
6	What is a folder?	48 (64.0)
7	Which of the following is an example of ICT hardware?	53 (70.6)
8	What kind of program is used to edit a GIF file or a JPEG file	47 (62.6)
9	Which of the following is an example of ICT software?	53 (70.6)
01	Which device do you need to install on your computer in Oder to have a video conference with your friends?	60 (80.0)
11	Where does a digital Camera Store its Picture?	65 (86.6)
12	What is Bluetooth?	62 (82.6)
13	What is term for junk email or unsolicited message sent over the internet?	45 (60.0)
14	What is the process of confirming your user name and password on the computer?	40 (53.3)
15	Which of the following is not considered to be safe password practice?	50 (66.6)

The table-1 indicates that 73.3% of teacher trainees correctly responded about the main brain of the computer, 76% of teacher trainees correctly responded about communicative tool, 69.3% of teacher trainees correctly responded about particular input device, 41.3% of teacher trainees correctly responded about particular web search engine, 65.3% of teacher trainees correctly responded about particular output device, 64% of teacher trainees correctly responded about a folder, 70.6% of teacher trainees correctly responded about an example of ICT hardware,

62.6% of teacher trainees correctly responded about program is used to edit a GIF file or a JPEG file and 70.6% of teacher trainees correctly responded about an example of ICT software.

The table also shows that 80% of teacher trainees correctly responded about the device need to install on the computer in order to have a video conference with friends, 86.6% of teacher trainees correctly responded about picture storage in digital camera, 82.6% of teacher trainees correctly responded about Bluetooth, 60% of teacher trainees correctly responded about junk email or unsolicited message sent over the internet, 53% of teacher trainees correctly responded about the process of confirming your user name and password on the computer and 66.6% of teacher trainees correctly responded about safe password practices.

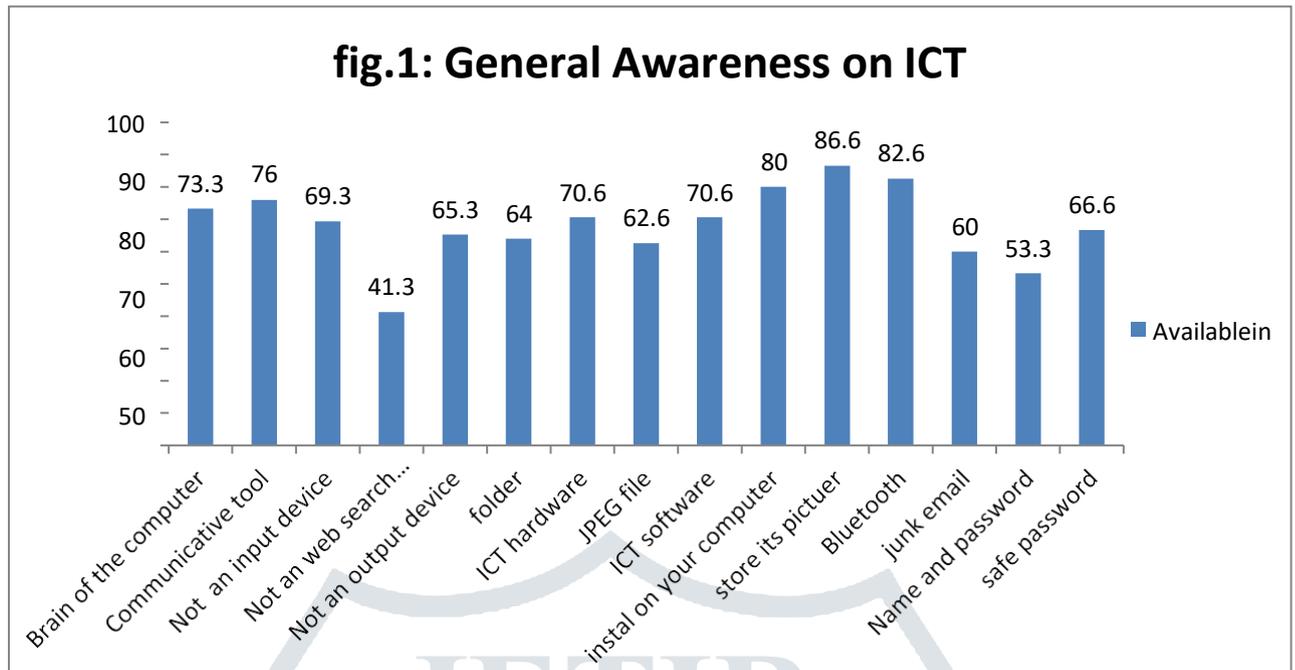
It can be concluded that majority of teacher trainees are aware about picture storage activity while least teacher trainees are aware about web search engines.

Here total respondents has shown positive indication towards using ICT literacy awareness is their day -to-day study purpose in teacher training program. They have 68.1% uses ICT with regarded to general awareness.

The teacher trainees are completely aware of brain of computer, about communicative tool, input device, web-search engine, output device and hardware. Due to this knowledge and awareness, teacher trainees are performing and accessing different software program (folder making, JPEG formatting and software installation) effectively and efficiently. This may be a prominent source and good way of transacting lesson to their future students.

Due to regular organisation of seminar and work shop regarding ICT education program, teacher trainees are up-dating and refreshing their knowledge, attitude and outlook about the use of ICT into their professional life.

The practical sense of ICT that is use of webcam, use of memory card are enhanced by the guidance teacher educators , due to most important skills for effective use of ICT device and services are safe practices. All the teacher trainees must be oriented and educated in safe practices in using online services like banking , email, face book etc. Specially how to create password for different accounts.

**TABLE -2: USES OF ICT FOR TEACHING AND LEARNING**

SL NO.	ITEM	YES (FREQUENCY AND %)
1	Do you have a common email- id of your class?	32 (42.6)
2	Do you have group Whatsapp for your class?	60 (80.0)
3	Are you regularly using that group for discussion related to teaching or any academic work?	50 (66.6)
4	Are you using a common email-id/group with your batchmates and teachers?	32 (42.6)
5	Have you shared any study materials with your class on that group email/whatsapp?	55 (73.3)
6	Have you ever created any teaching material digitally? (Audio/Video/Image/Documentary movie)	43 (57.3)
7	Have you done any online course?	27 (36.0)
8	Have you attended any seminar online?	15 (20.0)

The table-2 indicates that 42.6% of teacher trainees reported that they have a common email- id of class, 80% of teacher trainees have group Whatsapp for your class, 66.6% of teacher trainees regularly using that group for discussion related to teaching or any academic work and 73.3% of teacher trainees using a common email-id/group with your batchmates and teachers. The table also points out that 73.3% of teacher trainees shared any study materials

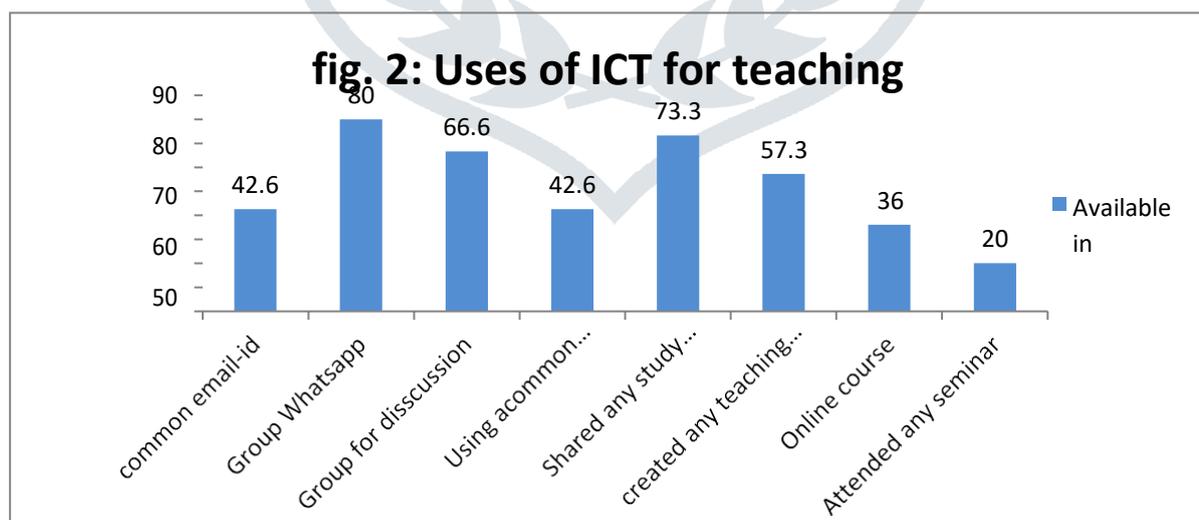
with your class on that group email/whatsapp, 57.3% of teacher trainees have created any teaching material digitally (audio/video/ image/documentary movie), 36% of teacher trainees have done any online course and 20% of teacher trainees have attended any seminar online.

It can be concluded that majority of teacher trainees used group Whatsapp for class but minimum teacher trainees attended any seminar online for teaching and learning.

Here total respondents has shown positive indication towards using ICT literacy awareness is their day -to-day study purpose in teacher training program. They have 52.3% uses ICT with regarded to teaching and learning.

Teacher education have play role in motivation and engaging teacher trainees in creating common email-id, using group whatsapp, sharing information through whatsapp and creating teaching learning material for teaching and learning. Hence training of all teacher educators must be organised so that they can use ICT application in teaching and assessing. They must demonstrate the uses of different ICT application in the field of school education and teacher education.

Present day education focuses on collaboration in learning. The ICT can be utilized for collaboration among teacher trainees and teacher educators. Hence different social networking apps like Whatsapp and online course can be utilised for sharing and commenting in educational problems and issues so that teacher trainee will develop skills competencies of using for learning and teaching.



**TABLE-3: USEING ICT DURING INTERSHIP IN TEACHING**

Sl No	Item	Never (FREQUENCY AND %)	Sometimes (FREQUENCY AND%)	Always (FREQUENCY AND%)
1	Search internet to collect information to prepare lesson plan	11 (14.6)	44 (44.6)	20 (26.6)
2	Search internet to collect resources to be used in teaching	8 (10.6)	43 (57.3)	24 (32.0)
3	Use PPT for teaching	25 (33.3)	35 (46.6)	15 (20.0)
4	Create ICT learning materials (audio/video) for students	11 (14.6)	45 (60.0)	19 (25.3)
5	Prepare exercise and task for students	15 (20.0)	27 (36.0)	33 (44.0)
6	Use ICT provide feedback to students regarding lessons	23 (30.6)	37 (49.3)	15 (20.0)
7	Use different online library for subject related information	26 (34.6)	34 (45.3)	15 (20.0)
8	Use video clips for teaching	18 (24.0)	41 (54.6)	16 (21.3)
9	Share notes clips with students online	30 (40.0)	36 (48.0)	9 (12.0)

The table -3 shows that 14.6% of teacher trainees always search internet to collect information to prepare lesson plan, 10.6% of teacher trainees always search internet to collect resources to be used in teaching, 33.3% of teacher trainees always use PPT for teaching, 14.6% of teacher trainees always create digital learning materials for students, 20% of teacher trainees always prepare exercise & tasks for students, 30.6% of teacher trainees always use ICT to provide feedback to students, 34.6% of teacher trainees always use different online library for subject related information, 24% of always use video clips for teaching and 40% of teacher trainees always use share notes with students online

The table also reveals that 26.6% of teacher trainees never use search internet to collect information to prepare lesson plan, 32% of teacher trainees never use search internet to collect resources to be used in teaching, 20% of teacher trainees never use PPT for teaching, 25.3% of teacher trainees never use create digital learning materials for students, 44% of teacher trainees never use prepare exercise & tasks for students, 20% of teacher trainees never use ICT to

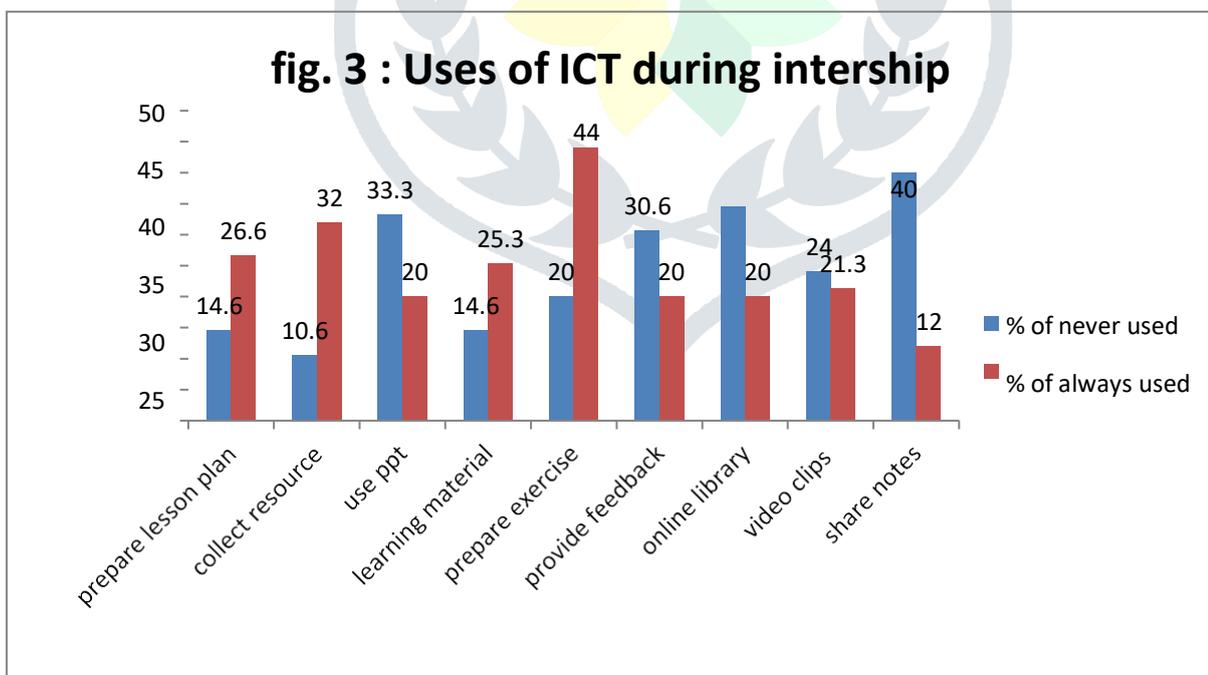
provide feedback to students and different online library for subject related information, 221.3% of teacher trainees never use video clips for teaching and 12% of teacher trainees never use share notes with students online

It can be concluded that majority of teacher trainees always used Prepare exercise and task for students during internship in teaching but minimum teacher trainees Search internet to collect resources to be used in teaching.

Here total respondents has shown positive indication towards using ICT awareness is their day-to-day study purpose in teacher training program. They have 33.3% uses ICT with regarded to internship in teaching.

Due to effective illustrations and effective delivery of lesson, the teacher education institute must make it compulsory for trainees to deliver specific number of lessons by using ICT. Maximum Trainees can use ICT for preparing lesson plan, preparing new teaching resources, video and audio clips. It can be utilised during teaching in internship program.

But the maximum teacher trainees are always using ICT mediated material and power point presentation. Teacher trainees are using on-line library due to collection of vast area information and trust worthy the learning support. Internship is one of the significant elements of teacher training programme where is the scope for utilisation digital devices and apps. Trainees must motivated to use digital devices and apps for teaching and learning.



**TABLE- 4: USING ICT TECHNOLOGY IN THE COURSE**

SL No.	Item	Frequently (FREQUENCY AND%)	Occasionally (FREQUENCY AND%)	Rarely (FREQUENCY AND%)	Never used (FREQUENCY AND %)
1	Personal computers	8 (10.6)	34 (45.3)	16 (21.3)	17 (22.6)
2	Interactive whiteboards	9 (12.0)	21 (28.0)	22 (29.3)	23 (30.6)
3	Video conferencing systems	8 (10.6)	20 (26.6)	20 (26.6)	27 (36.0)
4	Mobile phones	26 (34.6)	27 (36.0)	7 (9.3)	15 (20.0)
5	Projection system	12 (16.0)	21 (28.0)	29 (38.6)	13 (17.3)

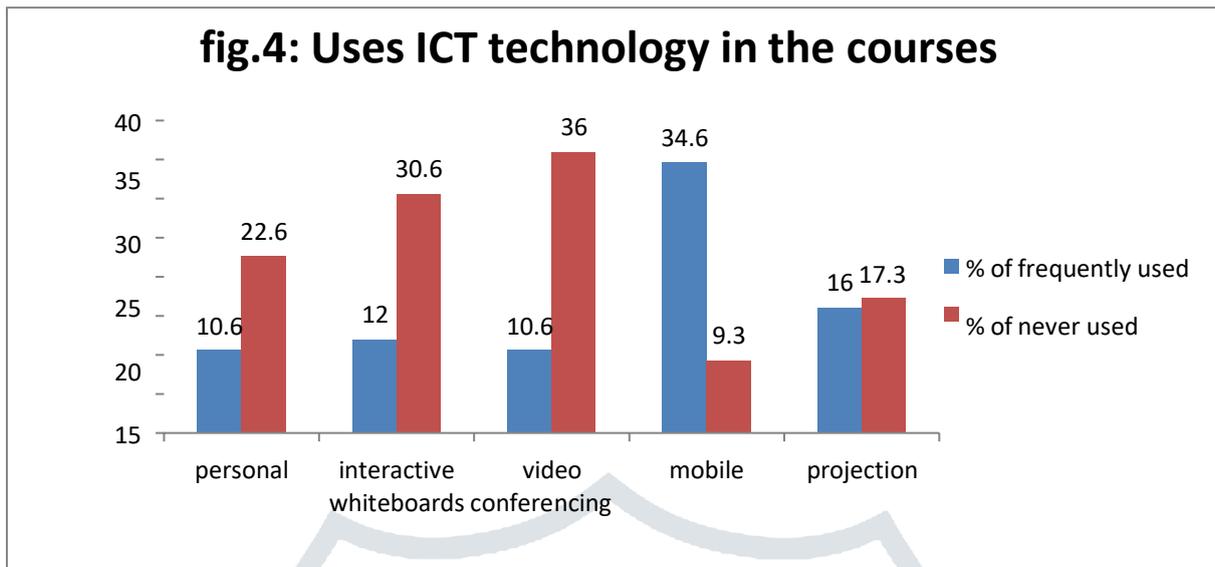
The table-4 reveals that 10.6% of teacher trainees use personal computers, 12% of teacher trainees use interactive whiteboard, 10% of teacher trainees use video conferencing systems, 34.6% of teacher trainees use mobile phones and 16% of teacher trainees use Projector system frequently.

The table also points out that 22.6% of teacher trainees never use personal computers, 30.6% of teacher trainees never use Interactive whiteboard, 36% of teacher trainees never use Video conferencing systems, 20% of teacher trainees never use mobile phones and 17.3% of teacher educators never use Projector system.

It can be concluded that majority of teacher trainees frequently use mobile phones in the course but projector system is never used in their course.

Here total respondents have shown positive indication towards using ICT awareness in their day-to-day study purpose in teacher training program. They have 17.2% frequently use and 25.3% never use ICT technology with regard to course.

The competency of using ICT technology is enhanced in the course due to the support of personal computers, interactive whiteboard, video conferencing systems, mobile phone and projection system. ICT must be integrated in pre-service teacher education programmes. It must not be taught as a separate paper but be given emphasis in all the papers. It may be maximum teacher trainees must realize and understand the scope of using ICT in each paper. The potential of ICT must be utilized in learning of each perspective, pedagogy and field engagement courses.

**TABLE- 5: FREQUENCY OF USING APPLICATION**

SI No.	Workingwith	Frequently (FREQUENCY AND%)	Occasionally (FREQUENCY AND%)	Rarely (FREQUENCY AND%)	Never used (FREQUENCY AND %)
1	Word processor	13 (17.3)	37 (49.3)	16 (21.3)	9 (12.0)
2	E-mail	37 (49.3)	16 (21.3)	16 (21.3)	6 (8.0)
3	World Wide Web	39 (52.0)	21 (28.0)	10 (13.3)	5 (6.6)
4	Database	21 (28.0)	18 (24.0)	20 (26.6)	16 (21.3)
5	Spreadsheet	8 (10.6)	32 (42.6)	24 (32.0)	11 (14.6)
6	Multimedia (audio & video)	19 (25.3)	27 (36.0)	19 (25.3)	10 (13.3)
7	Leaning website	31 (41.3)	26 (34.6)	10 (13.3)	8 (10.6)
8	Wiki	28 (37.3)	21 (28.0)	19 (25.3)	7 (9.3)
9	Online discussion group	18 (24.0)	11 (32.0)	23 (30.6)	23 (30.6)
10	Video conferencing	8 (10.6)	24 (32.0)	17 (22.6)	26 (34.6)
11	Slide share	18 (24.0)	30 (40.0)	13 (17.3)	14 (18.6)
12	You Tube	40 (53.3)	17 (22.6)	13 (17.3)	5 (6.6)
13	Face book	35 (46.6)	16 (21.3)	14 (18.6)	10 (13.3)

The table-5 reveals that 17.3% of teacher trainees uses word processors, 49.3% of teacher trainees uses in E-mail, 52% of teacher trainees uses in world wide web, 28% of teacher trainees uses database, 10.6% of teacher trainees uses spreadsheet, 25.3% of teacher trainees uses multimedia(audio and video), 41.3% of teacher trainees uses learning website, 37.3% of

teacher trainees uses wiki, 24% of teacher trainees uses online discussion group, 10.6% of teacher trainees uses video conferencing, 24% of teacher trainees uses slide share, 53.3% of teacher trainees uses you tube and 46.6% of teacher trainees uses face book frequently.

The table also points out that 12% of teacher trainees never uses word processor, 8% of teacher trainees uses E-mail, 6.6% of teacher trainees never uses world wide web, 21.3% of teacher trainees never uses database, 14.6% of teacher trainees never uses spreadsheet, 13.3% of teacher trainees never uses multimedia, 10.6% of teacher trainees never uses learning website, 9.3% of teacher trainees never uses wiki, 30.6% of teacher trainees never uses online discussion group and 34.6% of teacher trainees never uses video conferencing. 18.6% of teacher trainees never uses slide share, 6.6% of teacher trainees never uses you tube and 13.3% of teacher trainees never uses face book.

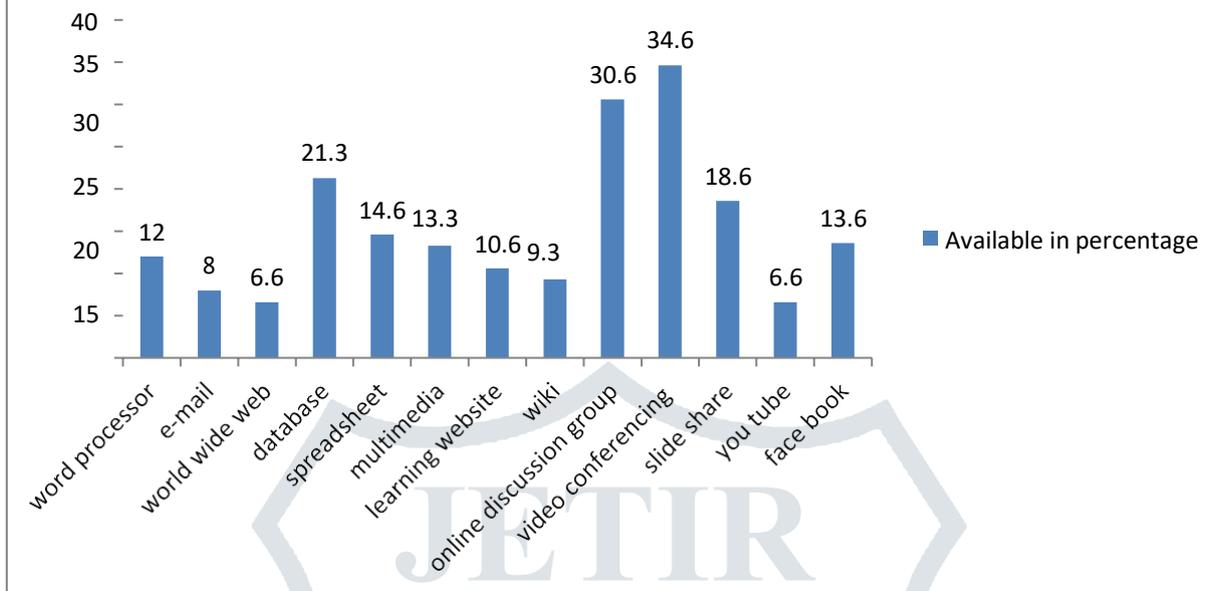
It can be concluded that majority of teacher trainees are frequently using you tube application but least number of teacher trainees never used you tube and world wide web application.

Here total respondents has shown positive indication towards using ICT awareness is their day-to-day study purpose in teacher training program. There is 32.30% frequently uses and 15.3% never used ICT application with regarded to frequency.

Different MS applications such as word processor, spreadsheet, data base etc has important role in education context. All the teacher trainees must develop skills and competencies in using all these MS application which can help them in creating learning resource and other activities due to increase of level offrequency.

ICT can be utilized for providing open educational resources to teacher trainees and teacher educators. The maximum teacher trainees must be familiar with MOOC, e- pathasala and other online resources/ libraries created by national and international agencies. Teacher Trainees must utilize these open educational resources for learning and teaching due to increase of level frequency.

Online discussion group and video conferencing have great potential for the quality for the quality improvement of teacher trainees and school education. Most of trainees must be familiar with different mobiles apps such time table, goggle classroom, calculator, dictionary apps, general knowledge apps, slide share, you tube etc. So that they can use it for educational purpose.

**fig. 5: Frequently used ICT application by****fig. 6: Never used ICT application by teacher**

### **MAJOR FINDING OF THE STUDY**

- ❖ Majority of teacher trainees are aware about picture storage activity while least teacher trainees are aware about web search engines.
- ❖ Majority of teacher trainees used group Whatsapp for class but minimum teacher trainees attended any seminar online for teaching and learning.
- ❖ Majority of teacher trainees frequently used to mobile phone in the course but projector system never used in their course.
- ❖ majority of teacher trainees are frequently using you tube application but least number of teacher trainees never used you tube and world wide web application.

## CONCLUSION

Some Efforts The University of Goa lies established an intranet in 2001 with 25 of its affiliated colleges on an experimental basis to realize one way video and two way audio communication through TV satellite network, computer network, email, fax and STD for administration, management, instruction and evaluation. The IGNOU has been providing support to its various certificate, diploma and degree programmes with two way communication through extended C band. The Laxmibai National Institute of Physical Education, Gwalior (a deemed university) has full networking of the campus - administrative block, academic departments, fields, libraries, laboratories and residence. The M.S. University of Baroda has undertaken a project to have intranet and internet facility in the entire university, networking the university administration and all other departments.

The School of Education, DAV, Indore has initiated a project on computer literacy for rural communities. A mobile van with computer goes to the rural areas for computer literacy. Also the interested and motivated learners come periodically to the school of education for hands on experiences on computers to learn on MS office etc. The School of Educate) has also been offering Bachelor of Computer Education (B.C.Ed) and Master of Computer Education (M.C.Ed) programmes. The Institute of Advanced Studies in Education, Rohilkhand University, Bareilly has well developed video studio, multi media lab and computer laboratory. The National Open School, New Delhi has initiated a project at the experimental level for on demand examination. But the overall scenario with respect to ICT in education is far from satisfactory. It seems more than the question of cost and material resources; it is a question of attitude and management. There is a need to increase the information efficiency of the educational institutions through ICT.

1. Education is one of the major sector which has undergone the influence of innovations in ICT. ICTs can be used in various practices of education including teaching and learning, assessment, administration and teachers professional development. Different types of ICTs and tools are used to enhance and improve the system of education.
2. To stimulate interest and motivation in learning process
3. To change the traditional way of teaching implementing the use of multimedia technologies such as video, images, animation visual effects, etc.
4. New opportunities for authentic tasks and materials.
5. To develops and practice learners skills (reading, writing, listening and speaking).
6. Teaching-learning interaction between teachers and students.

Through ICT images can easily be used in technology and improving the retentive memory of the students. The teachers can easily explain complex instructions and ensure students comprehension. By the help of ICT teachers are able to create interactive classes and make the lessons more enjoyable which could improve student's attendance and concentration

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