

USE OF ICT IN TEACHER TRAINING COLLEGES: PROBLEMS AND PROSPECTS

Dimple Juneja*

ABSTRACT

ICT stands for Information and Communication Technologies. The research was carried out to find out the problems and prospects of use of ICT in teacher training colleges. The research was limited to 10 teacher training colleges of Udaipur city. Survey method was used. The research tools used were questionnaire, check list and interview schedule. Statistical technique used was percentage. Data was collected, analysis was done and research conclusions were drawn.

KEYWORDS: *ICT, Communication Technologies, Automated Technology, Standard Education.*

Introduction

Full form of ICT is "Information and Communication Technologies". Information and communication technologies are a broad concept that comprises all technologies in practice for controlling and interchanging of information. ICT acknowledges all the applications of automated technology that is in existence to cater to the needs of human beings, trade and corporations. It is tough to explain ICT as it is difficult to keep pace with the developments taking place at a brisk speed. ICT is associated with the repository, recovery, control, transmittal or acceptance of digital data. ICTs are the calculating and conversation amenities and virtues that diversely help teaching, learning and so many other things in education. The education plays a very important role in formation of the society. Education decides the level of society. The standard education plays an important role in empowering the nation in all areas by catering to new ideas, modern technologies and their implementation and lots of other similar tasks. The standard education is fundamental requirement of the society. There are lots of productive teaching & learning methods in use. Technology is a very productive means of enhancing the students' learning. This makes the role of ICT in education sector very important. Anybody associated with education today can't even think of education without employing ICT. ICT acts as a link between technology and education.

Study of Related Literature

Some of the literatures studied by the researcher during the course of the study are as follows:

- **Ayat Anju (April – June 2012)** had studied the points of adjustments of secondary school teachers at different levels and also made the comparative analysis of adjustments of the teachers in different schools.
- **Kulkarni Manisha (2012)** had studied the inclination of school teachers towards ICT and new innovations.
- **M Eddie Gillian (2001)** studied the impact of ICT in schools situated across Australia, America, England and Hong kong.

The Problem Statement

Use of Information and Communication Technology (ICT) in teacher training colleges:

* Mateshwari Teachers' Training College, Umarda, Udaipur, Rajasthan, India.

- **Research Questions**

- Are adequate resources available in the teacher training colleges for information and communication technology?
- How teacher training colleges are using information and communication technology?
- Teacher training colleges are employing information and communication technology in which of the fields?
- What are problems that the teacher training colleges face in the implementation of information and communication technology?
- What is the level of knowledge of technology in teacher training college lecturers?

- **Research Objectives**

The researcher has finalized the following objectives for the research:

- To find out status of information and communication technology (ICT) system in teacher training colleges
- To find out the problems associated with information and communication technology (ICT) in teacher training colleges
- To find out the scope of future applications of information and communication technology (ICT) in teacher training colleges

Justification of Research

- **For Lecturers**

Information and communication technology can help lecturers in fulfilling their teaching responsibilities. Lecturers require latest information, knowledge and figures for effective teaching. Information and communication technology can play a major role in arranging these. Lecturers can also direct students towards the sources of knowledge and information to manage their load. They can share the matter in concise with the students and students can carry out detailed study using information and communication technology.

- **For Teacher Training Colleges**

Information and communication technology can be effectively made a part of daily routine of the teacher training colleges. It can play an active role in learning and in making learning material more innovative. ICT moves us from lecturer centered approach to learner centered approach. It also promotes collaborative learning.

- **For Researchers**

Anybody who is interested in research in education, can make use of ICT for data collection and communication. ICT brings the national and international researches on the topic at the table of the researchers.

- **For Society**

For effective running of social programs and systems it is important that true facts and figures are available at all times. ICT can be of great help in collecting these facts and figures.

Delimitation

Only teacher training colleges of Udaipur city were selected.

Sample

The 10 teacher training colleges of Udaipur city were finalized using purposive sampling. A sample of 5 principals, 20 lecturers and 75 students were taken.

Research Methodology

Survey method was used.

Research Tools

Researcher used the self made tools for this research.

- Check list for the college
- Questionnaire for lecturers
- Questionnaire for students
- Interview schedule for the principals

Statistical Technique Used

Percentage

Data Analysis and Interpretation

In the following paragraph, the mid value and standard deviation was calculated of the data collected through the questionnaire on problems related to the use of ICT. Percentage was calculated of the data collected through interview sheet on future prospects of ICT and analysis was carried out.

Table 1: Check List

The use of information communication technology (ICT) in teacher training colleges – Problems and prospects (The verification and comparative study of physical resources)

S. No.	Statement	Percentage	
		Teacher Training Colleges	
		Yes	No
(I)	Hardware		
1.	Laptop	20	80
2.	Storage medium	100	0
3.	Scanner	100	0
4.	Printer	100	0
5.	Monitor	100	0
6.	Projector	100	0
7.	Visualiser	0	100
8.	Fax Machine	20	80
(II)	Communication Equipments		
1.	CCTV camera	40	60
2.	Landline telephone	100	0
3.	Wireless telephone	0	100
(III)	Internet and Video conferencing equipments		
1.	Video camera	40	60
2.	Digital camera	40	60
3.	UPS	100	0
4.	Inverter/Generator	20	80
5.	Modem	100	0
(IV)	Software		
1.	Licensed software	30	70
2.	Operating system	100	0
3.	Windows XP	100	0
4.	Windows 7	100	0
5.	Windows 8	100	0

The researcher carried out the physical verification equipments related to ICT with the help of checklist. The checklist was divided into four parts as follows : Hardware, communication equipments , internet and video conferencing equipments and software. The researcher analysed all the equipments and the analysis is as follows:

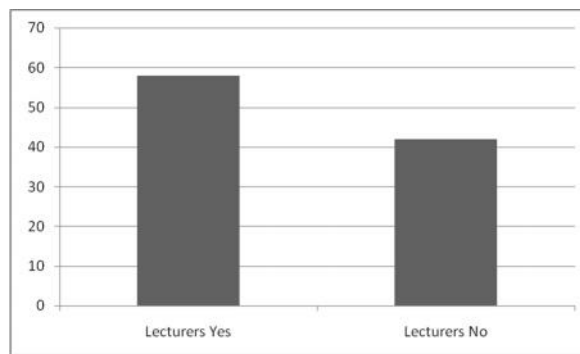
The researcher prepared a check list to find out the exact status of ICT in teacher training colleges. The physical equipments related to ICT present in teacher training colleges were analysed and the analysis reveals that in teacher education colleges, equipments like landline telephones, keyboard, mouse and storage medium etc are available but there is less availability of inverter/generator, laptop, CCTV camera etc. Due to frequent power cuts, teacher training colleges face problems in any work related to ICT.

Objective 1: To find out Status of ICT Arrangements in Teacher Training Colleges

The researcher prepared the interview schedule for principals to find out the status of ICT arrangements in teacher training colleges and data was collected by interviewing teacher training college principals and the same has been tabulated below:

Table 2: Data based on Interview Schedule Presented to the principals of Teacher Training Colleges to Find Out the Status of ICT

S. No.	Statement	Principal	
		Yes	No
1.	Is your college having computers?	100	0
2.	Are the lecturers of your college trained in computers?	50	50
3.	Do all the lecturers of your college use ICT while delivering lectures?	40	60
4.	Do all lecturers show interest in using PPT while delivering lectures?	30	70
5.	Is computer class conducted on daily basis in your college?	20	80
6.	Does ICT play important role in improving the quality of the college?	90	10
7.	Are all lecturers of your college having the knowledge of computer hardware?	50	50
8.	Is internet facility for computers available in your college?	70	30
9.	Are various software's required for computer work available?	60	40
10.	Are all the lecturers of your college having basic knowledge about computer?	80	20
Total		59	41



Analysis

Computers are available in all teacher training colleges. As the use of ICT has been increased, the teacher training colleges have arranged the computers but there is a deficiency of trained computer lecturers. The administration has arranged for free of cost course RS-CIT which has resulted into maximum lecturers getting trained in computer. However, due to lack of facilities, the use of ICT in delivering lectures is very limited in teacher training colleges. There is shortage of projectors in the teacher training colleges and lecturers are also reluctant to use PPT. Weekly computer lecturer is not included in the time table of teacher training colleges. Teacher training college lecturers don't have knowledge about computer hardware. The lecturers have the basic knowledge of computer. The internet facility is available on computers in teacher training colleges. There is a scarcity of different software's required on computers. On interviewing the principals, the researcher has concluded that computers are available in teacher training colleges but there is a shortage of physical equipments. PPT is seldom used in teacher training colleges. Lecturers are less interested in using ICT in teacher training colleges.

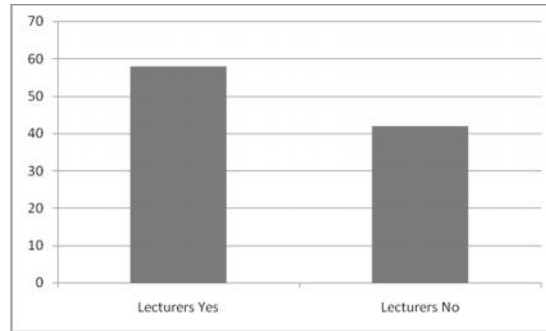
Objective 2: To find the problems of ICT in teacher training colleges (through lecturers)

To find out the problems of ICT in colleges, the researcher prepared a questionnaire to collect the data from lecturers and students. On analysis of the data, the following conclusions were drawn.

Area 1: The responses of lecturers on the availability of the equipments

Table 3

S. No.	Statement	Lecturers	
		Yes	No
1	Is Computer available in the college?	100	0
2	Is Internet connection available for computers?	90	10
3	Is latest version of windows installed on computers?	75	25
4	Is the CD of the curriculum of the your subject is available in the college?	25	75
5	IS LED projector available in the college?	60	40
Total		70	30



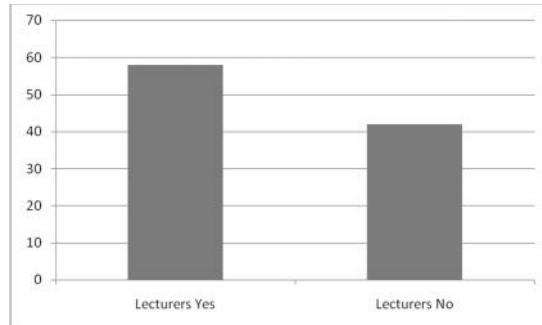
Analysis

As per the lecturers, the problems related to ICT are encountered in their colleges. In teacher training colleges, computers have been made available but there is shortage of CDs and LCD projectors required for teaching. This makes using ICT difficult for the lecturers.

Area 2: The responses of lecturers on knowledge of computer

Table 4

S. No.	Statement	Lecturers	
		Yes	No
1	Have you attained the computer training?	90	10
2	Do you have the knowledge of operating the computer hardware equipments?	40	60
3	Do you know how to use the basic functions of the computer?	80	20
4	Do you prepare PPT slides?	30	70
5	Do you have the knowledge of operating LCD projector?	40	60
6	Can you give presentation using LCD projector?	65	35
Total		58	42



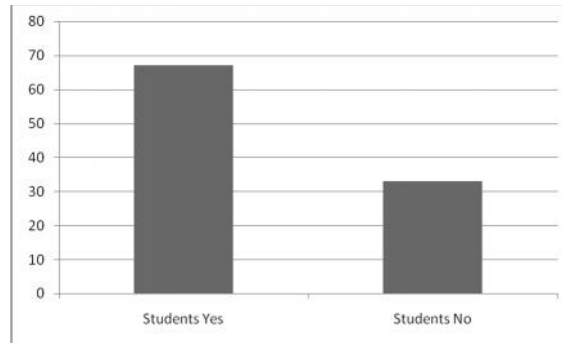
Analysis

Some teacher training college lecturers had done RS-CIT course prior to their joining job. Teacher training college lecturers have received on the job training in computers. Teacher training college lecturers are not capable of generating the PPT slides because of lack of interest in ICT.

Area 3: Responses of lecturers on use of ICT during lectures

Table 5

S. No.	Statement	Lecturers	
		Yes	No
1	Do you have sufficient time to develop audio – visual teaching material of your subject?	25	75
2	Do you feel excited about using modern techniques for delivering lectures?	35	65
3	Do you encounter any discipline related issue while using ICT during lecture delivery?	15	85
4	Do you feel that ICT reduces the emotional bond between lecturer and students?	75	25
5	Does this technique help in emotional, intellectual and practical development of the students?	70	30
6	Does use of this technique increase the workload of the lecturers?	20	80
Total		40	60



Analysis

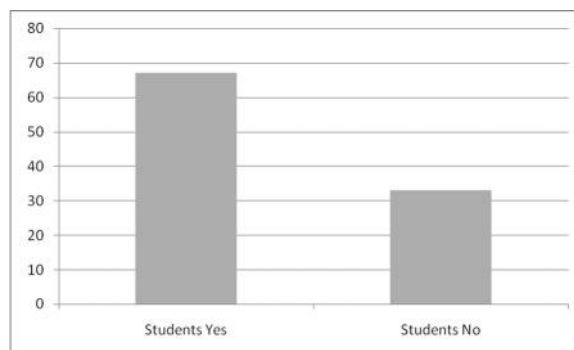
Use of ICT in lecture delivery in teacher training colleges is not satisfactory in spite of ICT equipments made available by the administration.

Objective 3: Responses of students to problems with ICT in teacher training colleges

Area 1: Responses related to availability of the equipments

Table 6

S. No.	Statement	Students	
		Yes	No
1	Is your college having a computer room?	70	30
2	Is a regular computer class included in the syllabus in your college?	50	50
3	Is computer lecturer available in your college?	30	70
4	Are the computers in the computer room in working condition?	70	30
5	Are the computers available in the colleges running on advanced technology?	90	10
Total		62	38



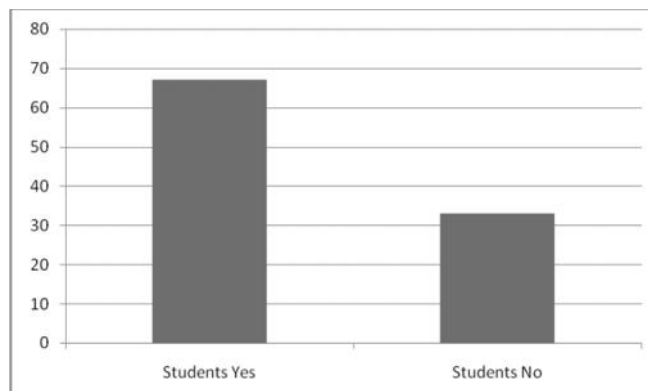
Analysis

In teacher training colleges, provision for weekly computer lecture is there. In most of the teacher training colleges, lecturers with certification in RS-CIT are there who take the computer lecture.

Area 2: Responses on Knowledge of Computer

Table 7

S. No.	Statement	Students	
		Yes	No
1	Have you acquired the basic knowledge of computer?	90	10
2	Are you made to do experimental work on computer?	70	30
3	Have you acquired the hardware and software knowledge during the computer studies?	40	60
4	Have You acquired the knowledge of internet?	70	30
5	Have you acquired the knowledge of email and website?	60	40
Total		66	34



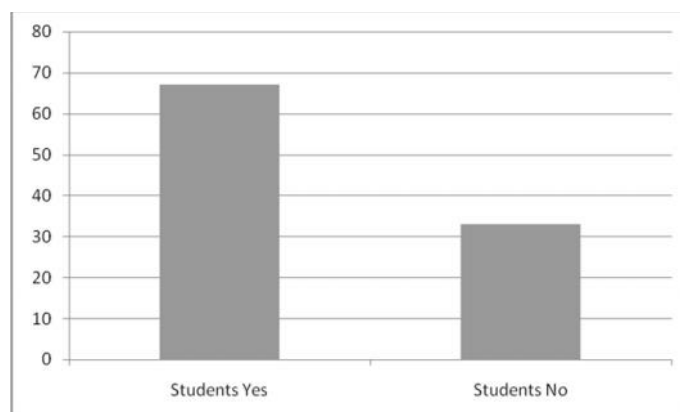
Analysis

Teacher training college students have the basic knowledge about computers. Most of the students in both teacher training colleges have knowledge of e-mail, website and internet. With the rising popularity of android phones, students are well versed with email id creation and internet. Internet also allows students to go for fact finding and deeper studies. Some students of teacher training colleges have knowledge of computer hardware and software.

Area 3: Responses to the Questions on use of ICT in the Lecture Rooms

Table 8

S. No.	Statement	Students	
		Yes	No
1	Are you being taught through PPT?	30	70
2	Are audios and videos being used to teach you?	60	40
3	Are you made to write notes during computer lecture?	60	40
4	Do you like attending the computer lecture?	90	10
5	Does curriculum become simpler on use of ICT?	80	20
6	Does teaching through PPT increase your interest?	80	20
Total		67	33



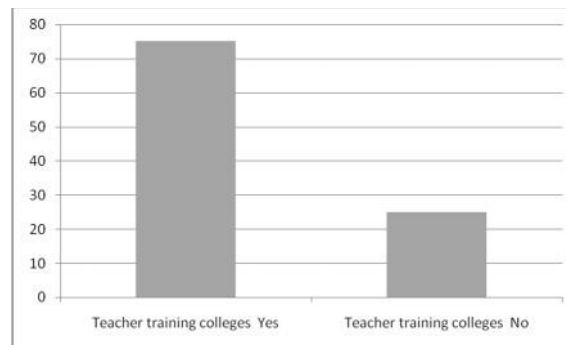
Analysis

Computers are available in teacher training colleges but due to shortage of trained lecturers especially in rural areas, use of PPT is very limited. Audio – visual aids are also seldom used in the teacher training colleges. However in most of the urban teacher training colleges, certified computer lecturers are available and they do employ PPT while delivering which arouse students' interests.

Objective 4: To find out the Future Prospects of ICT in Teacher Training Colleges (Through Lecturers)

Area 1: Responses for Future Prospects of ICT in Context of its Impact on Colleges**Table 9**

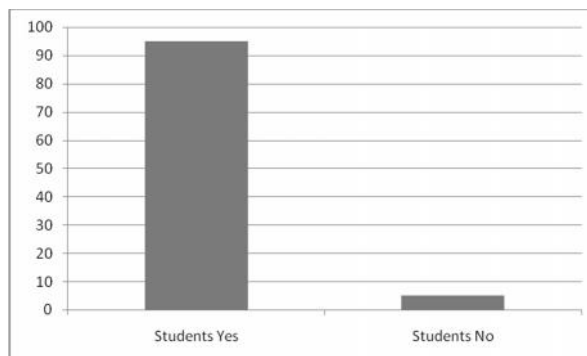
S. No.	Statement	Teacher Education Colleges	
		Yes	No
1	Does ICT play an important role in raising the standard of the college?	90	10
2	Do students get attracted to those colleges who employ ICT?	95	5
3	Doesn't ICT allow the atmosphere of the lecture room become one sided and boring?	55	45
4	Can use of ICT reduce the scarcity of able lecturers in the college?	60	40
5	Can students enrollment in the college be enhanced by employing ICT?	75	25
Total		75	25

**Analysis**

Teacher training college lecturers agree to this that using ICT raises the standard of education. Students too like to take admission in those colleges only where ICT is used for lecture delivery. The use of ICT has not risen to considerable extent in teacher training colleges.

Area 2: Responses to Questions on Impact of ICT on Lecturers' Effectiveness**Table 10**

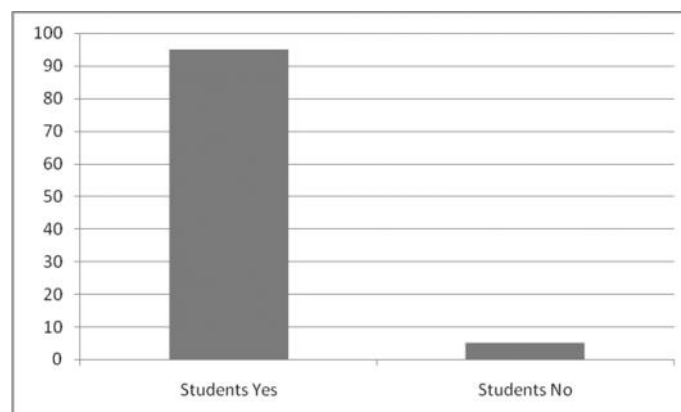
S. No.	Statement	Lecturers	
		Yes	No
1	Does ICT help in making education process more effective?	100	0
2	Is ICT the best bet to develop top class teaching skills in lecturers?	100	0
3	Does ICT make lecturers' lectures interesting?	90	10
Total		97	3

**Analysis**

As per the teacher training college lecturers, ICT is being used as a helping tool in delivering lectures. ICT has made lecturers aware of the latest techniques of delivering lectures and it has helped in making lectures interesting. This in turn has raised the students' interest in attending lectures.

Area 3: Responses on Prospects of ICT for Students**Table 11**

S. No.	Statement	Students	
		Yes	No
1	Will use of ICT raise the level of students' educational achievements?	100	0
2	Does ICT help in raising the level of weak students' educational achievements?	80	20
3	Can the educational evaluations of the students be done in more effective way using ICT?	100	0
4	Can the use of ICT increase the creative and constructive thinking in the students?	100	0
Total		95	5

**Analysis**

As per teacher training college lecturers, use of ICT has improved their educational achievements. Moreover use of ICT makes students explore the latest developments. The evaluation too has been become easier with the use of ICT and students can check their marks online as well.

Research Conclusions and Suggestions**Objective 1**

To find out status of information communication technology (ICT) system in teacher training colleges.

Conclusion

- Computers are available in all teacher training colleges.
- As use of ICT has been increased in recent times so computers have been arranged in teacher training colleges. Administration is organizing free of cost RS-CIT course for this so teacher training college lecturers are trained in computers.
- Lecturers trained in computer are available in teacher training colleges but because of shortage of other facilities like hardware, software, projector, internet etc. ICT is not used while delivering lectures.
- There is a shortage of hardware and software in teacher training colleges that is why lecturers are reluctant to use ICT while delivering lectures.
- There is no provision for computer class in the timetable of teacher training colleges.
- Teacher education colleges have internet facility but there is shortage of various software's required for teaching work.

Objective 2

To find out the problems associated with information communication technology (ICT) in teacher training colleges

- Computers are available in teacher training colleges but there is shortage of computer lecturers.
- Internet facility for ICT is available in government colleges but generator facility is not available. This makes lecturers reluctant to use PPT while delivering lectures.

- The lecturers of teacher training colleges have basic knowledge of computer but they don't know how to prepare a PPT slide. This is the reason for their reluctance in using PPT while delivering lectures.
- Enrollments in teacher training colleges have been reduced due to less use of ICT.

Objective 3

To find out the scope of future applications of information communication technology (ICT) in teacher training colleges.

- Lecturers of teacher training colleges believe that ICT is being used as helping tool in delivering lectures. Use of ICT has brought in new innovations in lecture delivery which has made the lecture delivery interesting and has also made students more attentive.
- As per lecturers of teacher training colleges, application of ICT has raised the level of academic achievements of the students and students are also exploring new information using ICT.
- The evaluation too has been become easier with the use of ICT and students can themselves check their academic marks online.

Suggestions for Further Research

- Ñ This research is limited to Udaipur city only. Future researchers can be done the same on wider scale.
- Ñ This research is only done at teacher training colleges level. The same may be expanded to include all types of colleges.
- Ñ Rural colleges may also be included to make the research more comparative.
- Ñ Retired and prospective lecturers may also be included in the research.
- Ñ The present research is based on three objectives only. More objectives may be included.
- Ñ Survey method has been used in the present research. The research may be done using other methods as well.

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