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ICT SKILLS AMONG TEACHER EDUCATORS FOR PROFESSIONAL DEVELOPMENT

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ABSTRACT

Advancement of science and technology in 21st century, there is a paradigm shift in the modern day teaching and learning to cope with the current generation. The use of new technologies in teaching and learning process implies new teacher roles, new pedagogies and new approaches to education. Therefore this study aims to bring together the information regarding the professional knowledge and skills possessed by teacher educators in ICT and how they adopt if technology is made infused in teacher education. The main objective is to identify the professional knowledge and skills in ICT among teacher educators. For this a research survey has been conducted on teacher educators covering 14 B.Ed colleges of Gulbarga, and based upon the analysis, results have been reported and suggestions are made.

KEYWORDS: ICT, skill, Teacher educator, Professional development.

INTRODUCTION

In the 21st century, information and communication requires teacher educators for knowledge production, modification and application-rather than consumption. They should be educated to use ICT effectively and creatively as ICT is a new and powerful method for mediating teaching and learning. If teachereducators have minimal or no ICT skills, themselves and therefore cannot develop these in student teachers who in term need to integrate ICT into pedagogy. Teacher education is mainly concerned with the aspects such as, who (teacher educators) whom (student teacher), what (content), and how (teaching strategy).

Teacher education is dependent upon the quality of teacher educators. The quality of pedagogical inputs in the teacher education programme and their effective utilization for the purpose of preparing prospective teachers depends largely on the professional knowledge of teacher educators in ICT and the way in which it is utilized for strengthening the teacher education programme. Teacher education thus first deals with the preparation of effective teacher educators. The American Commission on Teacher Education rightly observes, "The quality of a nation depends upon the quality of its citizens, the quality of its citizens depends not exclusively, but in critical measures upon the quality of their education, the quality of their education depends more than upon any single factor, upon the quality of their teacher". As the school aims in incorporating ICT in curriculum, teacher education curriculum needs to update this knowledge and skills. Thus the aim of teacher training in this regard can be either teacher education in ICTs or teacher education through ICTs (Newhouse 2002). Unless teacher educators are able to use technology effectively in his classroom, it cannot be possible to prepare a new generation teachers. Therefore to teach student teacher either through ICTs or in ICTs teacher educator should first update his/ her knowledge and skills in ICTs.

NEED AND IMPORTANCE OF THE STUDY

For successful infusion of technology in teacher education and to make teacher education more relevant in the 21st century, an attempt is made to know how far teacher educators of Gulbarga, teaching different subjects and methods possess ICT knowledge and skills for their growth.

LITERATURE REVIEW

Wongel etal.(2006) pointed out that technology can play a part in supporting face to face teaching and learning in the classroom. Beggs (2000) found that one of the top three barriers to teachers' use of ICT in teaching students was the lack of training. Cox etal (1999) showed that after teacher had attended professional development course in ICT they still did not know how to use ICT in their classrooms, instead they just knew how to run a computer and set up a printer. They explained that this is because that course only focused on teachers acquiring basic ICT skills and did not often teach teachers how to develop the pedagogical aspects of ICT. Newhouse (2002) states that "teachers need not only be computer literate but they also need to develop skill in integrating computer use into their teaching – learning programmes." Schoepp (2005) claims that when new technologies need to be integrated, teachers have to be trained in the use of these particular ICTs. Similarly, Sicilia (2005) found that teachers want to learn how to use new technologies in their classrooms, but the lack of opportunities for professional development obstructed them from integrating technology in certain subjects such as science and maths. Balanskat etal (2006) indicated that in appropriate teacher training is not helping teachers to use ICT in their classrooms and in preparing lessons.Becta (2004) Where training is ineffective, teachers may not be able to access to ICT resources.Empirica (2006) teachers who are not using new technology such as computer in the classroom are still of the opinion that the use of ICT has no benefits.Goel (2006) conducted a study on the use of internet in teacher education and found that a sizeable number of teacher educators make use of internet for email, surfing and research. Koehler and Mishra (2009) teachers need knowledge about technology, pedagogy and content in order to successfully support students learning with ICT.

OBJECTIVES OF THE STUDY

The present study sought to investigate the ICT knowledge and skills possessed by teacher educators of Gulbarga for professional development.

METHOD

A survey was conducted.

SAMPLE

For collecting the requisite data from 50 teacher educator, teaching different subjects and methods in B.Ed College, out of 19 B.Ed colleges of Gulbarga city, 14 colleges were selected.

TOOL

The data was collected from teacher educators by administering questionnaire on "Information and Communication Technology-Teacher Educator Survey."

PROCEDURE

For the present study the researcher visited selected 14 B.Ed colleges out of 19 B.Ed colleges of Gulbarga. Standardized questionnaire covering 10questions regarding ICT knowledge and skills was given and next day it was collected back and based on the response analysis was carried by applying percentage for the total responses.

ANALYSIS AND INTERPRETATION

Table-01. How often do you use computers at work?

OPTIONS	FREQUENCIES	PERCENTAGE
01. On most days.	20	40%
02. At least once a week.	15	30%
03. At least once a month.	11	22%
04. Never.	04	04%

Above table reveals that 40% of the teacher educator on most of the days use computer at work, 30% of them use at least once a week,22% of them use at least once a month while 04% of them never use computer at work.

Table-02. Do you have access to a computer at home?

OPTIONS	FREQUENCIES	PERCENTAGE
01YES	38	76%
02 NO	12	24%

Above table reveals that 76% of the teacher educators have access to computer at home while 24% of them do not have access to computer at home.

Table-03. Do you have an email address?

OPTIONS	FREQUENCIES	PERCENTAGE
01YES	38	76%
02 NO	12	24%

Above table reveals that 76% of the teacher educators have email address while24% of them do not have.

Table-04. How often do you use e-mail?

OPTIONS	FREQUENCIES	PERCENTAGE
01. On most days.	15	30%
02. At least once a week.	11	22%
03. At least once every two weeks.	04	08%
04. At least once a month.	09	18%
05. Never.	11	22%

Above table reveals that 30% of the teacher educator on most of the days use e-mail, 22% of them use at least once a week,08% of them use once every two weeks, 18% of them use at least once a month while 22% of teacher educators never use e-mail.

Table-05. For which of the following purpose do you use (Information Communication Technologies –ICT) either at work or using your personal computer at home

OPTIONS	FREQUENCIES	PERCENTAGE
01. Personal, non-professional use.	20	40%
02. Recording marks using a spread sheet.	07	14%
03. Typing exam papers.	13	26%
04. Finding information and resources on the internet.	37	74%
05. None of the above.	05	10%

Above table reveals 74% of the teacher educators use computer at work and home for finding information and resources on the internet, while 40% of them use for personal, non-professional use, , 26% of them use for typing exam papers,14% of them use for recording marks using spread sheet, while 10% of them never use computer for following purpose.

Table-06. Which of the following applications do you like to use with student teachers while completing teacher training curriculum activities.

OPTIONS	FREQUENCIES	PERCENTAGE
01. Using e-mail.	11	22%
02. Using social network.	10	20%
03. Using the internet.	32	64%
04. I do not like to use ICT with my learners.	12	24%

Above table reveals 64% of the teacher educators use internet to teach student teacher while completing teacher training curriculum activities. 22% using e-mail, 20% use social networks while 24% do not use ICT with their learner while completing teacher training curriculum activities.

Table-07. Do you feel confident to use a computer?

OPTIONS	FREQUENCIES	PERCENTAGE
01. If someone is there to support you.	12	24%
02. On your own.	23	46%
03. To teach students.	18	36%
04. To help colleagues.	13	26%
05. Not at all.	05	10%

Above table reveals 46% of teacher educator are confident in using computer on their own, 36% of teacher educators are confident in using computer to teach their student teachers, 26% in helping colleagues. 24% can use computer confidently if someone is there to support them. 10% of the teacher educators do not feel confident in using computer.

Table-08. Can you do the following?

OPTIONS	FREQUENCIES	PERCENTAGE
01. Install a printer.	17	34%
02. Login to a network.	25	50%
03. Install new software on a computer.	20	40%
04. Solve technical problems (e.g. computer that does not start)	10	20%
05. None of the above.	12	24%

Above table reveals 50% of the teacher educator knows to login to a network, 40% of teacher educators can install new software on computer, 34% is able to install printer , 24% of the teacher educators cannot do the things listed in the table. 20% can solve technical problems.

Table-09. Have you received ICT- related training covering the following topics?

OPTIONS	FREQUENCIES	PERCENTAGE
01. Computer literacy.	20	40%
02. Finding and using resources from the internet.	21	42%
03. Teaching ICT as a subject.	13	26%
04. Planning lessons or projects that integrate ICT.	16	32%
05. None of the above.	12	24%

Above table reveals 42% of the teacher educators have received training in finding and using resources from the internet, 40% has received literacy in computer,32% of them has received training in planning lessons or projects that integrate ICT. 26% received training in teaching ICT as a subject. Table clearly reveals 24%% of the teacher educators have not received ICT training in the topic covered in the table.

Table-10. How many hours of ICT related training have you received?

OPTIONS	FREQUENCIES	PERCENTAGE
01. 0 – 4 hours.	20	40%
02. 5 -15 hours.	09	18%
03. 16 -40 hours.	01	02%
04. More than 40 hours.	04	08%

Above table reveals only 40% of the teacher educators have received 0-4 hours of ICT training, while 18% 5-15 hours, 08% of them have received more than 40 hours of training while 02% has received training in ICT for 16-40 hours.

SUGGESTION AND CONCLUSION

The result analyzed above indicates that the professional knowledge and skills in ICT among teacher educator is moderate. Following suggestion is recommended for their development.

- Every teacher educators should develop urge toward learning ICT skills, how to apply ICT in teaching and learning methods, in specific subjects and advanced use of ICT to develop teaching –learning methods, including knowledge of computer and networking.
- Teacher educator should be trained to install software and freely installing it on multiple computers serves as a significant and encourages teacher educators to begin a journey of learning in digital world. As in study only 40% of them are able to do.
- Analysis shows only 40% of teacher educator have received training in computer literacy, thus teacher educator should make themselves literate in computer and the goal of ICT literacy must be to expose themselves to a wide variety of ICT resources-hardware, software as well as digital learning resource.
- Government and Management should support teacher education institution by giving financial assistance to buy ICT equipment. (Jaiswal 2011) the teacher education system empowered by ICT driven infrastructure can have a great opportunity to come up to the center stage and ensure academic excellence, quality instruction and leadership in knowledge –based society.
- Teacher educators need to be trained in three types of knowledge for their professional growth

(a) New Content Knowledge- For a teacher educator delivering same lesson by rote for 25 years.

(b) Pedagogical Knowledge- To impart 21st century skills to students.

(c) Technology Knowledge- To integrate technology in teaching and learning to make them facilitators of learning rather than gate keeper of information.

When these three types of training is given to teacher educator in combine they can make the transition from traditional practice to 21st century educational delivery. (Newhouse 2002) teachers need training in technology education (focusing on the study of technologies themselves) and educational technology (support for teaching in classroom).

- Teacher education institutions should employ variety of ICT training ranging from face to face workshops to online self-study program depending on teacher education curriculum. (Newhouse 2002) some initial training is needed for teacher educators to develop appropriate skills, knowledge and attitude regarding the effective use of computers.
- Teacher educators themselves should try to update with ICT knowledge and skills by using self study software's and hardware's.

Thus successful integration of technology and to make teacher education more relevant in 21st century requires teacher educators with right competencies, values and attitudes towards ICT and their roles need to be redefined. Teacher educators should think they are no longer dispenser of knowledge but proactive facilitators.

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