

**USE OF ICT BY TEACHER TRAINEES: A CASE STUDY OF IGNOU
B.ED. LEARNERS**

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Abstract

Teachers have always played a crucial role in preparing communities and societies towards exploring new horizons and achieving higher levels of progress and development. Hence effective combination of Educational Technology and teaching skills contribute solutions to the problems of the country by developing desirable understanding of attitudes, skills and abilities of the students. The role of teachers and teacher educators is complex to meet the individual needs of the learners. The teachers face innumerable challenges in their daily classroom teaching. They are to be equipped with the most relevant research works and progress taking place in the technology of teaching; this also enhances the quality of teaching. Teachers need to upgrade their skills and knowledge in the field of ICT to use it in the classroom as well as in other subject fields; teachers trainees are would be teachers so it is necessary to know about their knowledge skills and use of ICT so that they can teach in a better way. ICT helps the students to augment their knowledge skills as well as to improve their learning skills.

The main objectives of the study are to explore the use of ICT among teacher trainees of IGNOU B.Ed. programme, to study the problems faced by B.Ed. teacher trainees of IGNOU in using ICT; and to suggest measures to improve the use of ICT among teacher trainees of IGNOU B.Ed. programme.

Key words: B.Ed., ICT, IGNOU, teacher trainees

Introduction

The potential of information and communication technology (ICT) to facilitate students' learning, improve teaching and enhance institutional administration had been established in literature (Moore & Kearsley, 1996; Paperny, 2000; Pelgrum, 2001; Vaishampayan, 2008). For enhancing student's learning, use of information and communication technology should be used as a tool wherein teachers' instructions act as catalyst for improving access to quality education in formal settings. Use of ICT has become a necessity for enhanced teaching-learning experience and helps in recognizing the impact of new technologies on the work place and everyday life.

Teacher education institutions try to restructure education programmes and classroom facilities in order to manage the potentials of ICT in improving the contents of teacher education. Information and communication technology, as a tool within the school environment, includes the use for school administration and management, teaching and learning of ICT related skills for enhancing the presentation of classroom work, teaching/ learning receptive tasks, teaching/ learning intellectual thinking and problem solving skills, stimulating creativity and imagination for research by teachers and students and as communication tool. Information and communication technologies are computer based tools used by people to work with information and communication processing needs of an organization (Bransford *et al*, 1999; Cox *et al*, 2003). Its preview covers computer hardware and software, the network and other digital device like audio-video camera and so on, which convert information (text, sound, motion etc) into digital form. Successful integration of ICT in the education system depends largely on the competence and on the attitude of teachers towards the role of modern technologies in teaching and learning. Thus, experienced as well as newly appointed teachers need to be confident to use ICT tools in effective manner in their teaching.

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taking place in the technology of teaching; this also enhances the quality of teaching. Teachers need to upgrade their skills and knowledge in the field of ICT to use it in the classroom as well as in other subject fields; teachers trainees are would be teachers so it is necessary to know about their knowledge skills and use of ICT so that they can teach in a better way. ICT helps the students to augment their knowledge skills as well as to improve their learning skills.

The Objectives of the study are to study the use of ICT among teacher trainees of IGNOU B.Ed.Programme, to study the problems faced by B.Ed. teacher trainees of IGNOU in the use of ICT and to suggest measures to improve the use of ICT among teacher trainees of IGNOU B.Ed.programme. The findings of this study will be useful for experienced as well as newly appointed teachers to overcome from the different problems faced in the use of ICT in learning and educational settings.

Methodology:

A validated questionnaire comprising of 20 questions was used to examine the use of ICT among teacher trainees of IGNOU B.Ed Programme. A total of two hundred B.Ed. trainee teachers of Indira Gandhi National Open University were selected from IGNOU Programme Study Centre (1622P), Barrister S. K. Wankhede College of Education, and Nagpur, out of which a total of 165 B.Ed. trainee teachers responded. The trainee teachers were having familiarity with of ICT use as most of them were well aware of using internet for gathering information, sending e-mail, and browsing social networking sites. The questionnaire was designed and created in English as per requirement of the study. However, to achieve the specific objectives of the paper the first part of questionnaire consisted of questions regarding use and availability of computers, internet and educational software also the questions related to teachers familiarity with the ICT. The other part of the questionnaire consisted with the factors that discourage the teachers to use ICT in classrooms.

The study relies on qualitative and quantitative data gathered through questionnaire. The analysis has been done according to objectives and results and finding are given accordingly.

Tool:

- A questionnaire tool based on rating scale has been used to carry research.
- This questionnaire seeks personal information covering name address, family status, income, teaching experience etc.
- This questionnaire also seeks survey specific information regarding the frequency of interviewee's usage of computer in recent 3 months.
- Interviewee's access to internet via mobile device and other hand held device has been assessed.
- The questionnaire also seeks information regarding the activities for which the interviewee uses the hand held device in last 3 months.
- Questionnaire also covers the research for not accessing the internet, the type of internet connection used, the type of broadband used and the reason for not having an access to internet.
- The interviewees are also questioned about their view on use of A/V programmes.
- The survey is also based on data collected by 4 point rating scale asking the choice of A/V aid they find useful for learning process.

Data collection:

The data was collected personally from teacher trainees pursuing IGNOU B.Ed. programme and enrolled at IGNOU Programme Study Centre (1622P), Barrister S. K. Wankhede College of Education, Nagpur during the workshop.

Statistical procedure:

The collected data from IGNOU B.Ed.teacher trainees towards ICT were organized, classified and tabulated.

Results and Analysis:

It is pertinent to mention here that some of the teacher trainees did not respond to some of the questions of the questionnaire therefore the sum of percentages presented in the Figures/ Tables is less than 100%.

Use of ICT among teacher trainees of IGNOU B.Ed. programme:

On the basis of analysis of questionnaire the findings are represented in the Fig. 1-3.

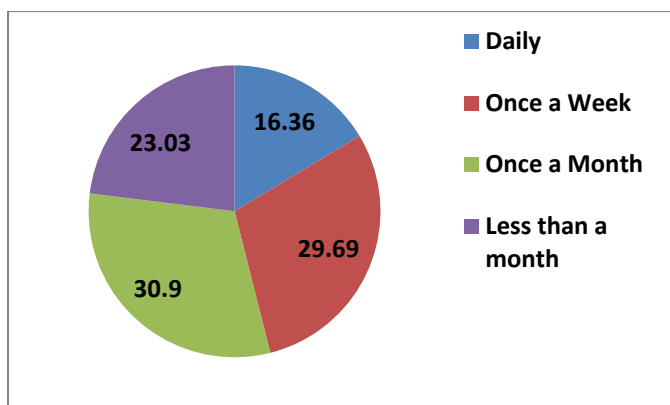


Figure 1: Frequency of Use of ICT by B.Ed. Teacher Trainees

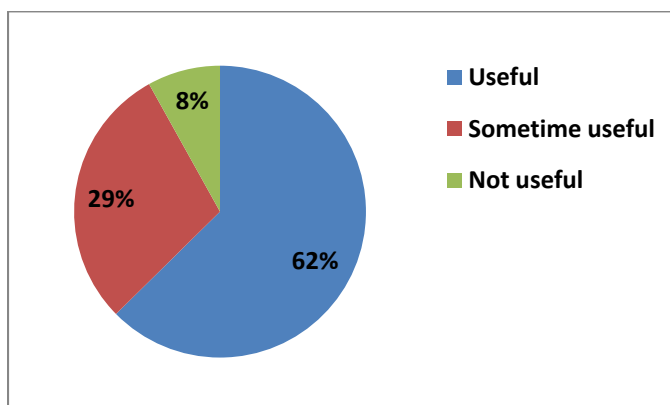


Figure 2: Attitude of B.Ed. Teacher Trainees towards ICT

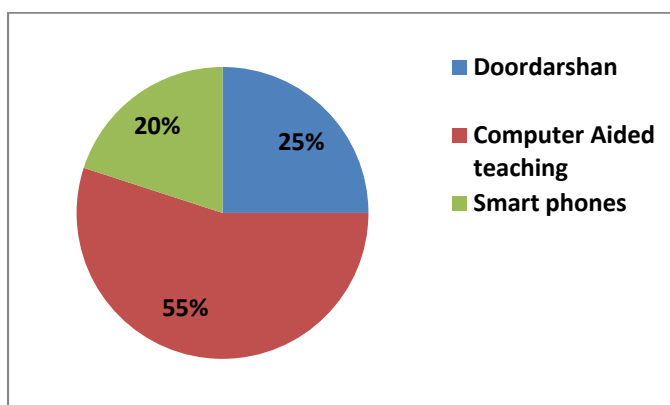


Figure 3: Tools of ICT used by B.Ed. Teacher Trainees

Interpretation

Data in the Fig. 1-3 shows that 16.36 percent of teachers use ICT daily in teaching learning, 29.69 percent uses ICT in teaching learning atleast in a week and 30.90 percent trainee teachers uses teaching learning in a month. It is also noticed that 62% teachers trainee find use of ICT in teaching useful and have positive attitude towards use of ICT, 29% have found out somewhat useful and 8% useful not at all and 25% trainee teachers uses Doordarshan as tool of ICT in teaching learning, whereas 55% trainee teachers prefer computers as a tool of teaching and 20% use smart phones.

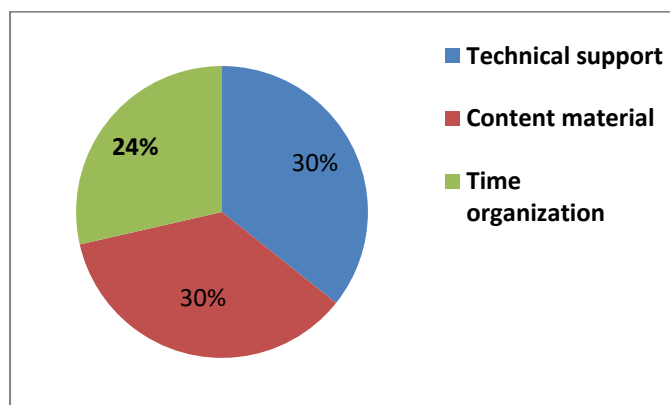


Figure 4: Type of support provided by ICT to teacher trainee

A total of 30% trainee teachers find support in terms of technical support, 30% in terms of content material and 24% in terms of time organization.

Findings:

Majority of the trainee teachers of IGNOU B.Ed. utilize ICT. It is also found that they have positive attitude towards utilizations of ICT but the use of ICT not frequent and has supporting features as well as barriers in the use of ICT.

The study reveals that most of the teacher use ICT for teaching, realizing that it would enhance the quality of teaching learning process will be more effective. Majority of the teachers are using computer and internet along with Doordarshan to develop students interest since using the computer provide real time experience to them.

Problems faced by B.Ed. teachers trainees of IGNOU in the use of ICT:

On the basis of analysis of Questionnaire problems identified faced by B.Ed. trainee teachers in the use of ICT were listed in Table 1.

Table 1: Problems faced by B.Ed. trainee teachers in use of ICT

S.No.	Dimensions	A lot	Partially	A little	Not at all
a.	No of computers Laptops/notepad	44%	23%	10%	15%
b.	Internet connection and speed	41%	24%	8%	14%
c.	Utility of content	24%	38%	9%	15%
d.	Knowledge of ICT	23%	28%	19%	13%
e.	Technical support	30%	31%	14%	12%

Interpretation:

From the data in Table 1, it is noticed that 44% of the trainee teachers felt that the number of computers, laptops available are insufficient, where as 23% said they are partially insufficient, 10% of learners considered the number of computers/ laptops etc. a little problem and 15% consider this dimension to be not at all problematic.

Regarding internet connection and speed:

A total of 41% learners werenot satisfied with the internet connection and its speeds where 24% find it partially satisfactory, 8% a little and it was not problematic for 14% learners.

Utility of content:

A total of 24% trainee teachers were not satisfied with its usefulness, 38% find it partially useful, 9% a little useful, and it was not problematic for 15% trainee teachers.

Knowledge of ICT:

A total of 23% trainee teachers find that knowledge of ICT is insufficient, 28% trainee teachers felt that its partially insufficient, 19% of trainee teachers a little insufficient, and 13% considered it not at all a problem.

Technical support:

A total of 30% opined that they are not getting enough technical support in the use of ICT, 31% felt that not getting partially enough support, 14% a little agreed with the statement and 12% not at all agreed.

Findings:

On the basis of qualitative data collected from the teacher trainees it has come out that the access to computers is inadequate because of number of computers available at school is comparatively less, erratic electric supply and technical issues.

Majority of the teachers opined that various software and computer application were not well versed to them. Teachers also felt that they are not getting enough technical support in terms of repairing the computer and laptop on time. Many teachers opined that content should be made more useful more emphasis should be given on making it more easy and accessible at all level and in native language.

Measures to improve the use of ICT among teachers trainees of IGNOU B.Ed. programme:

Based on the data analysis it is inferred that the following ways will be helpful to improve the use of ICT among teacher trainees of IGNOU B.Ed.:

- 1) Promoting use of ICT: Ensure that all teachers have the knowledge, tools and enthusiasm to fully integrate quality learning activities with the use of ICT.
- 2) Guidelines: Keeping best practice guidelines for all ICT hardware and software. They should function more as an integrated part of the class room and lesson plan.
- 3) Thinking home and school effectively: ICT can do this by increased communications and transparency, as well as creating a positive environment. Engaging parents will also increase student's motivation and these raise standards. One of the crucial factors is the ICT infrastructure available for instruction.
- 4) The government may use a range of method to encourage teachers to use ICT in their teaching to ensure equal learning opportunity for all students.
- 5) The teachers should be offered schools training courses which are specially tailored to meet the needs of the school and the teachers.
- 6) The additional time can be generated from decreasing the managerial workload of teachers to provide more time for learning, training and planning ICT using teaching.
- 7) The course components need to update in computer education and motivate faculty of all subject teachers at every level to upgrade their knowledge and skills of using computers in schools.
- 8) School ICT resources should be enriched with specifically designed software that suits the local culture and identify. The software should be in standard language.
- 9) The government should give schools more freedom in managing academic and administrative matters.
- 10) Schools need to provide teaching courses for teachers to make them competent in dealing with modern technologies and new pedagogical approaches.
- 11) Digital learning environment in the form of model ICT leaning platform should be offered to teachers to distinguish difficult components of learning environment & their interdependency.
- 12) Information and communication technology should be introduced as one of the core subjects in the curriculum of B.Ed. & M.Ed. The course designers may blend ICT as an utility in each subject, which will encourage teachers to develop effective and interesting learning material in each subject.

Conclusion

Incorporation of information and communications technology in teaching and learning is not only important but is also necessity at present. However; it is observed that teachers face numerous challenges and barriers which hamper in introducing ICT in the classrooms. This study concluded that the trainee teachers are well aware of ICT and its use. But inadequate infrastructure, non availability of frequent and uninterrupted internet access, lack of technical support and other ICT related facilities at schools impede teachers to use ICT in the classrooms. Short duration of class time and other engagements apart from teaching were reported as two other key barriers for teachers to introduce ICT in the curriculum. In order to integrate ICT into the curriculum, on the one hand, teacher training institutions should provide appropriate and sufficient support for the teachers. On the other hand, teachers should be aware of use of ICT. Therefore, possible effective uses ICT can be applied in teaching and learning, which will eventually lead to the improvement of educational program.

Recommendation

Recommendation for teachers

- 1) To focus on training and should develop their own teaching support material.
- 2) Teachers should work together in support for effective use of ICT.
- 3) Online knowledge sharing network can be established to facilitate the process at all levels.
- 4) School teachers should show willingness to accept and adopt information and communication technology in their professional activities.
- 5) Teachers should be well aware of benefit of ICTs.

Recommendation for schools

- 1) Provide suggestion box and recommendation to be read by principal and proper follow up should be taken.
- 2) Discussions should be done through school website and social media.
- 3) Teachers who integrate ICT in their subject should be supported and incentive be given.
- 4) Every classroom should be equipped with a computer with internet facility and a projector.
- 5) In order to gain more benefits of ICT course content should be redesigned.
- 6) Conduct monthly meeting on discussions regarding ICT use.
- 7) ICT related courses should be integrated in teaching of practical courses.

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