

**RESEARCH PAPER****The Impact of Information and Communication Technology on Teacher Education****Pramod Kumar Yadav**

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Email: [308861@gmail.com](mailto:308861@gmail.com)Received: 19<sup>th</sup> March 2019, Revised: 25<sup>th</sup> March 2019, Accepted: 30<sup>th</sup> March 2019**ABSTRACT**

*Information and Communication Technology (ICT) is the backbone of the Education system in today's world. All these years, education was Teacher-Centred, that is, the classrooms have been dominated by teachers. But today, education has taken a whole new meaning. The use of ICT can make substantial change in education and training in two ways. Firstly the rich representation of information changes learner's perception and understanding of the content. Secondly the vast distribution and easy access to information can change relationship between the teachers and the students. ICT can also provide powerful support for educational innovations. The use of ICT in Teachers' Training Institutions makes teaching more interesting. One of the most important uses of ICT is that makes it easy for instructors to incorporate multimedia into their teaching, while we use all of our senses to take in information we seem to have preferences in how we learn best. The use of ICT in the field of Teacher Education improves quality of training and brings about desirable change both qualitative and quantitative. Improving the quality of education and training is a critical issue, particularly at a time of educational expansion. ICTs can enhance the quality of education in several ways: by increasing learner motivation and engagement, by facilitating the acquisition of basic skills, and by enhancing teacher training. ICTs are also transformational tools which, when used appropriately, can promote the shift to a learner-centred environment.*

**Key words:** ICT, Teacher Education, NCF, Student Teacher, Micro-Teaching, Pedagogy

**INTRODUCTION**

The development of a nation depends on the education. The remark made by Kothari Commission (1964-1966) "The destiny of India is being shaped in the classrooms" Throws light on the importance of education in modern India. No Country can progress unless it focuses its attention on education. The education needs to be of high quality, because only quality education can bring desirable changes among the people. Teachers of today realise the need of presenting different learning experiences to suit the individual differences among pupil and make attempts to use media and method generated by ICT.

ICT represents one of the current applications of technology in Teacher Education. ICT is the scientific, technological and engineering discipline and management techniques used in information handling and processing their application, computers and their interaction with men and machines and associated social, economical and culture matters (UNESCO). By using ICT technologies such as a computer laptop, digital camera, video, Internet, websites CD ROMs, DVD application of the software's such as word processing, spreadsheet, E-mail, digital libraries, computer mediating conferencing, video conferencing, projections etc. When we can overcome all barriers in communication and instruction, ICT can be used as a tool of for training and support for teachers regardless of geographical dispersion. For first time in the Indian education NPE, (1986) has observed Educational Technology will be employed in the spread of the useful information in the training and retraining of teachers to improve the quality of education. Teacher training colleges cannot produce good teacher without the use of ICT. It is because the branch of education puts emphasis on the modification of teachers Behaviour. For example we can develop teaching skills in students with the help of micro teaching techniques with video recording.

**NEED OF THE STUDY**

ICT is a part of our education system. Without ICT we cannot think any skill related to training. In field of Teacher Education ICT play vital role. Student-teacher learns different skill, teaching method and strategy through ICT. ICT in Teacher Education has provided more employment opportunities within the education system directly and indirectly through academic and non-academic staff. New and emerging technologies challenge the traditional process of teaching and learning, and the way education is managed. Information technology, while an important area of study in its own right, is having a major impact across all curriculum areas. That why present study has great need because this study shows the impact of ICT on Teacher Education.

**OBJECTIVE OF THE STUDY**

1. The present study has one objective-
2. To find out the impact of ICT on Teacher Education

**RESEARCH QUESTION OF THE STUDY**

What is the impact of ICT on Teacher Education?

**MATERIAL AND METHOD**

This study is based on some Primary and Secondary sources like Teacher Education Institutions, Interview, Observation, Books, Articles, Journals, etc. The method used is Descriptive Analysis method

**DISCUSSION**

According to Tommy "ICT generally relates to those technologies that are used for assessing gathering manipulating and presenting for communicating information. It means ICT applied to the creation storage, selection, transformation and distribution of many kinds. So ICT is a comprehensive term that includes any communication device or applications such as radio, television, Smart phones, computer and network hardware and software of ICT, satellite systems, as well as various service and application associated with them such as video conferencing and distance learning." The National Curriculum Framework for Teacher Education (2009) speaks on ICT in schools and learning as "with the onest and proliferation of ICT, there is a growing demands that if be included in school education. Teacher Education needs to orient and sensitive in the teachers to distinguish between the developmentally appropriate and detrimental the uses of ICT. It needs to equip teachers with competence to use ICT for their own professional development. The use of ICT can make a substantial change in education and training in two ways. Firstly the rich representation of information changes learner's perception and understanding of the content. Secondly, the vast distribution and easy access to information can change relationship between teachers and students. ICT can also provide powerful support for educational innovations.

**USE OF ICT TO TEACHERS:**

ICT enhances the initial preparation by giving good teaching and training materials use of simulators, recording and feedback in teaching.

With the help of ICT teachers can access with colleagues, schools, Institutions and Universities expertise rich resources in cyberspace.

ICT enables interaction with students over a physical dista

ICT provides lifelong Professional development by providing course in the vital situation, training on demand, orientation and refresher courses through video conferencing and online.

ICT facilitates sharing of Ideas, experiences as well as collaborating on projects and exchange materials through the virtual communications.

For successful integration of ICT in teacher education, the teacher educators have to demonstrate their ICT competencies along with already identified competences. These competencies, which are developed based on the National Education Technology standard for the Teachers' published by international Society for technology in education are:

Demonstrative introductory knowledge, skills, and understanding of Concepts related to ICT.

Involve in Planning and implementing ICT professional development training.

Plan, design and demonstrate the use of multimedia application for instructional use.

Use technology to assess student learning in difficult subject matters.

Use technology resources to collect and analyse data interpretation result and communicate finding to improve instructional practices.

Practice and teach ethics related to technology use.

Provide equitable access technology resources for all students.

These competences need to be mastered by the teachers during their professional training.

Acquiring these competencies by the teachers already in-services is equally important to infuse ICT in schools.

#### **TEACHING EFFECTIVELY THROUGH ICT:**

Through ICT we can make teaching learning process interesting. In case of Training Institution a teacher can use various types of techniques which are based on ICT like Learning Design, Video recording of simulated teaching of student teacher. In most cases, ICT is used as a tool, for example while making assignments, collecting data and documentation, communicating and conducting research. Typically, ICT is used independently from the subject matter. In current higher learning institutions, coursework's, assignments and other work are no longer done the traditional way of paper work. They are done and submitted electronically. Through ICT in B.Ed level we can use different types of strategies which make teaching learning process more attractive and meaningful. Teacher motivates the student-teacher through motivational video. Ultimately we can say that ICT can play the role of catalyst for such educational reforms. ICT can promote effective instruction that is more engaging; learner centred, interdisciplinary and more closely related to real life events and processes and adaptive to individual learning styles and needs. It also encourages higher order thinking skills and help to construct knowledge socially. Thus teacher professional development in the use of interactive technology should embody and model the forms of pedagogy that teacher can use themselves in their classroom.

#### **ICT INTEGRATED APPROACH TO TEACH CURRICULAR SUBJECTS:**

The new curriculum set out how the use of ICT must be incorporated into the teaching of all subjects at all stages. The national curriculum states that pupils should be given the following opportunities-

To apply and develop their ICT capabilities through the use of ICT tools to support their learning in all subjects.

To find things out from a variety of sources, selection and synthesising the information to meet their needs and develop an ability to question its accuracy, bias and plausibility possibility.

To exchange and share information, both directly and through electronic media.

To review, modify and evaluate their work, reflecting critically on its quality as it progresses.

#### **PEDAGOGICAL PRACTICES USING ICT**

Mere learning ICT skills is not suffice, but using ICT to improve the teaching and learning is the key for pedagogy-technology integration. But the question is how we can combine these two. Consider a scenario of a young teacher who has just started to use ICT for his daily classroom activities of teaching and learning. To start with he needs to prepare lesson plans and compile lesson materials for the classroom lecture. To prepare such materials one has to go through the act of drafting phase, editing phase, revising phase and finally publishing the lesson plans and course contents. Word processor can be a great help to accomplish this task in a professional and productive way to avoid repetition, duplication of manual work and concentrate on quality of the course materials. While delivering the class lectures, any innovative teacher needs to draw diagrams, show pictures, animate some objects to explain critical concepts, even play some video clipping of real time operation. All these multimedia applications can assure very productive, interesting, motivating, interactive and quality delivery of classroom instruction. Presentation software like power point can be a good choice for teachers for performing such tasks.

**FINDING AND CONCLUSIONS**

In most Teacher Training Institutions in India, the actual situation is that most teachers and Training Institutions do not possess sufficient ICT educational skills and equipment at present. Although teachers consult each other more frequently, the teacher decides on the educational practise in his class room. He is responsible and has the opportunity to teach in the way he pleases. However, in practice (the classical teaching situation), the teaching method usually seems to be determinative and limits the teacher in his possibilities. Education and teacher are tied to a specific content of education, timetables, amount of face-to-face instruction, instruction time, class rooms etc. Even the teacher's status is laid down. Legal provisions also determine the educational practice in schools. Because of these constraints teachers are insufficiently challenged and stimulated to create powerful learning environments and guide students in their learning processes individually and therefore, the use of ICT does not take place.

When we talk about Positive Impact of ICT in real class room situation we can say that all teaching skills (introducing the lesson, questioning, reinforcement, use of black board, explaining etc) can be developed by ICT but in spite of the best efforts of teachers there will be a number of learners who will not be satisfied with the pace of instruction of the teachers. There may be a fast learner, average learner and slow learner. In a classroom environment it is impossible to satisfy all categories of learners with their specific learning styles. It is in these situations, teachers become helpless in a conventional teaching and learning environment. One way to solve such situations is to create interactive ICT based instructional materials where learner is given control to review the topic at their own pace and in accordance to their individual interests, needs and cognitive processes. As such, ICT courseware can be of great help to teachers to meet the challenges of such situation. With availability of user friendly authoring tools, it is now possible to develop ICT courseware by any young teachers to support drill and practice to master basic skills, simulate complicated situations, produce individualized instruction with ICT elements with built-in evaluation questions and scores. Such multimedia courseware can produce profound changes in the learning outcomes when it is being used along with face-to-face instruction.

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