Importance of ICT for Prospective Teachers

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1. Abstract

Technology training has become an significant element of many teacher training programs to ensure that aspiring teachers are well prepared to use technology in their teaching .It is therefore important to establish whether these teachers do apply these skills once they get to the field or not. Teaching practice is the first platform that many prospective teachers get to put into practice the skills they obtained during coursework of their programs. This is where the aspiring teachers first establish their own teaching philosophies and practices. In light of the changing learning landscape that is becoming more technology oriented, it is worth finding out if technology forms part of the teachers' gamut right from the beginning. In the past, some studies suggested that the reason why most teachers were reluctant to use technology in their teaching was because it was neither part of their original training, nor part of their teaching when they first started to teach. The prospective teachers of today are in a better position to make technology part of their teaching because of the training. These new teachers do not have to unlearn teaching habits which have been established over a long time. They could start off with innovative teaching techniques that support the use of technology. This is why it is essential to focus at that point where new teachers begin their teaching to establish whether they get off to a good start that could set them on the path to revolutionary teaching.

Keywords: ICT**,** Technology, Prospective Teachers, Teacher Training.

2. Introduction

Today's era of 21st Century and it is also the age of information and technology (IT). Every facets of life are connected to science and technology. Enormous flow of information is embryonic in all stadiums throughout the world. Now information and technology is prevalently using in educational field for making teaching learning process successful and interesting for students and teacher both. In 1998, UNESCO "World Education report refers about student and teachers must have sufficient access to improve digital technology and the internet in their classroom, schools, and teacher educational institutions". Prospective Teachers must have the knowledge and skills to use new digital tools to help all students achieve high academic standard.

The eminence of professional development of teacher education depends on the extent of ICT amalgamation in Teacher Education Programme. According to UNESCO (2002) "ICT is a scientific, technological and engineering discipline and management technique used in handling information, its application and association with social, economic and cultural matters". Teachers are at the core of any living society. Technologies play an imperative role in training programme of prospective teachers. Students" admittances knowledge and information through TV, digital media, cable network, internet and social media i. e. Facebook, Twitter, Whatsapp, Linkedinn, Igo, Line, Wechat etc. ICT is very important for Prospective teacher education programme in the 21st Century. Deprived of proper knowledge of ICT prospective teacher cannot perform in his/her class room and it could not be said to be a complete one.

3. Need and Significance of the study

The picture of the classroom is changing. There is a technological gap between the progress of the society and instructional activities of the teacher in the classroom. If we see in our culture on the one hand technology has transfigured our society and on the other hand the teaching - learning activities at school level have endured so far away from technology. In our classroom the knowledge is imparted by the teacher in an early way, a teacher centric mode which is most of the time tedious and not to gain interest to the student. But existent 21st Century's education is student centric education. Students learn from multi sources and for this reason use of ICT & Multimedia are very much crucial in educational field and synchronously prospective teacher's knowledge of ICT and Multimedia also required.

4. Prospective Teachers

A *prospective teacher* is usually required to complete an accelerated university program, pass the state licensing test, and submit to a series of interviews. These prospective teachers noted the development of their own cultural awareness as a result of the programme and also appreciated the chance to communicate with peers from different cultures. Within general teacher education, prospective teachers spend more time in real teaching situations than is often the case in language teacher preparation programs, especially those housed outside of education departments. Teacher-education programs can also provide practical experiences that encourage prospective teachers to continue their professional development after leaving the program

5. INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) IN EDUCATION

 The emergence of technology has been further applied to information, which has revolutionized the process of the transmission of information. Sharing and interchanging information such as knowledge, mental skills, motor skills and attitudes through the use of mass media especially electronics. Achieving success in this sharing and interchanging through communication which consist of Receiving, i.e., hearing or seeing; Accepting as nothing can change unless information

is accepted and Getting some Action, i.e., changing performance or behavior. Data Processors which are a key component in Information Technology in the processing of data. In the Communication Technology, at present, the wealth of information that is being transferred across the Internet is impressive. Various mechanisms, the World Wide Web (www) browsers, email and news groups have been established to allow people to access, send or retrieve information across the world. The Internet browsers like Netscape and MS Internet Explorer enable - searching, viewing and displaying the information to any person interested in anything. Pre-service training for secondary stage is all the more important because secondary education is a link between elementary and higher secondary stage of education and occupies a crucial position in the system of education, as general education terminates here and the students at this level prepare for making choices through appropriate diversification of courses like professional, arts and science courses. At this stage, we need a vision to equip our students to meet the emerging trends. The survival of this category of students in the present high-tech and competitive society will only be through the knowledge of ICT. It has influenced all aspects of Teacher Education. It provides the capacity to store, to retrieve and to process e-content both fast as well as accurate. ICT is the scientific and technological discipline, which deals with collection, storing, dissemination of information to the individual or group. ICT involves primarily the storage and communication of information. The world is converted into minute global capsule and anyone desirous of information would find it only a click way. ICT is a technology that aids in storage of data, retrieval as and when required, telecommunication, browsing for information and saves time, effort, paper, money and resources. ICT represents one of the current applications of technology in Teacher Education. "Information and Communication Technology (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 cultural matters" (UNESCO). According to Tomy, "ICT generally relates to those technologies that are used for accessing, gathering, manipulating and presenting or communicating information" It means ICT applied to the creation, storage, selection, transformation and distribution of information of many kinds. So ICT is a comprehensive term that includes any communication device or application such as radio, television, cellular phones, computer and network, hardware and software of ICT, satellite systems as well as the various services and applications associated with them, such as videoconferencing and distance learning. The application of ICT is mainly purposed on the teaching-learning process. The application of ICT provides vast array of powerful tools that may help in transforming the present isolated, teacher-centered and text-bound classroom into rich In 1998, the UNESCO in its World Education Report "Teachers and Teaching in a Changing World" described the radical implications of ICT in the conventional teaching-learning pm. Now in the present situation, ICT has become an important integral part of the curriculum of Teacher Education. The following essential conditions must be met for the effective use of 101' in the teaching-learning process. Student and teachers must have sufficient access "to digital technologies and the Internet in their classrooms, schools and Teacher Education institutes; High

quality, meaningful and culturally responsive digital content must be available for teachers and learners. Teachers must have knowledge and skills to use the new digital tools and resources to help all students achieve high academic standards. The use of ICT can make substantial change in education and training mainly 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. By using ICT technologies such as Computer, Laptop, Digital Camera, Video, Internet, Websites, CD-ROMs, DVDs, application of software such as word-processing, spreadsheet, e-mail, digital libraries, computer mediating conferencing, videoconferencing, projectors etc. we can overcome all barriers in communication and instruction. ICT can be used as a tool for training and support of teachers, regardless of geographical dispersion. Therefore, the challenge for teachers and Teacher Education institutions has been to create a new generation of teachers capable of employing a variety of technology and tools in all.

5.1.   Why do we use ICT in teacher Education?

The teaching space is now changing its look from the traditional one i. e. from one way to two way communication. Now teachers as well as students participate in classroom discussion. Now education is based on child centric education. So, the prospective teacher should prepare to cope up with different technology for using them in the classroom for making teaching learning interested. For effective implementation of certain student - centric methodologies such as project-based learning which puts the students in the role of active researches and technology becomes the appropriate tool. ICT has enabled better and swifter communication; presentation of ideas more operative and pertinent way. It is an effective tool for information acquiring-thus students are encouraged to look for information from multiple sources and they are now more informed then before. So for this reason ICT is very much necessary for Teacher Education.

5.2.   Recent Trends in Teacher Education

Based on various changing needs of our society now emphasis is also given to the various educational theory and educational practices. According to these theories and practices changes are also experience in teacher education also. It is natural that teacher education must include new technology. Prospective Teachers should also know the right attitudes and values, besides being skillful in skills related to teaching. As we know the minutest prerequisite of any training programme is that it should help the student - trainee to acquire the basic skills and competencies of a good teacher. Now-a-days new trends in teacher education are Inter-disciplinary Approach, Correspondence courses, orientation courses etc. Simulated Teaching, Micro Teaching, Programmed Instruction, Team Teaching are also used in teacher education. Now-a-day Action Research also implemented in Teacher Education. ICT acts as the gateway to the world of information and helps teachers to be updated. It creates awareness of innovative trends in instructional methodologies, evaluation mechanism etc. for professional development.

5.3.   Approaches for applying ICT in Teacher Education

i)   Providing sufficient infrastructure and technical support.

ii)   Applying ICT in all subjects.

iii)   Applying new Pre-service teacher Education curriculum.

iv)   By using application software, using multimedia, Internet e-mail, communities, understanding system software.

v)   ICT helps teachers in both pre-service and in-Service teachers training.

vi)   ICT helps teachers to interact with students. It helps them in preparation their teaching, provide feedback. ICT also helps teachers to access with institutions and Universities, NCERT, NAAC NCTE and UGC etc.

vii)   It also helps in effective use of ICT software and hardware for teaching – learning process.

viii)   It helps in improve Teaching skill, helps in innovative Teaching. It helps in effectiveness of classroom. It also helps in improving professional Development and Educational management as well as enhances Active Learning of teacher Trainees.

ix)   It is now replacing the ancient technology. As we know now-a day's students are always have competitive mind. So, prospective teacher must have the knowledge of the subject. This can be done through ICT.

x)   ICT helps prospective teachers in preparation for teaching. In order to introduce ICT in pre-service teacher education different methods and strategies are applied. Different tools are used such as word processing, Database, Spreadsheet etc.

xi)   Numerous technology based plans are used to help the prospective teachers for their practice teaching. ICT prepares prospective teacher for the use of their skills in the real classroom situation and also make students for their future occupation and social life.

xii)   ICT used as an assisting tool for example while making assignments, communicating, collecting data & documentation, and conducting research.

xiii)   ICT as a popular tool for organisation and management in Institutions. Teachers must provide technological support to learn using motion picture, animation, simulation training which helped student teachers to give model presentation. If the teacher is highly equipped with technology, the student will also be equipped with technology. It removes the traditional method of teaching and prepare teacher to apply modern method of teaching. ICT is plays an important role in student evaluation.

xiv)   ICT is store house of educational institution because all educational information can safely store through ICT.

xv)   ICT helps Teacher to identify creative child in educational institute.

xvi)   ICT helps Teacher to motivate students and growing interest in learning. ICT helps Teacher for organizational preconditions (vision, policy and culture). It is also helps Teacher for their personnel support (knowledge, attitude, skills).

xvii)   ICT helpful for designed learning situations which are needed for both vocational education and the training of prospective teachers (in the teacher training institutes). Teacher training institutes can develop their curriculum using ICT.

xviii)   With the help of ICT Teacher training institutes can develop communication network. Prospective Teachers learn most from their own networks (learning from others) with the help of ICT.

6. Information Technology in effect has the following advantages

Information Technology enables grater imaginative understanding through increased access to information and new ways of accessing and communication information. It gives the individual the power to take risks and make mistakes that are costly in terms of time/material. It provides new forms and structure for representing knowledge and individuals' relationship with it. It increases the opportunity for interrelation and application of data. It provides opportunity to develop clear logical thinking, sequential understanding and study skills. It changes the nature of composition and authorship because the forms of composition are more numerous than they have been and the facility to combine original and second hand material and integrate different media. It enables the recording process to take place while it is being used. It enhances the learner's capacity to reflect upon and the teachers' opportunity to intervene in the learning

7. Conclusion

Teaching subjugates a worthy position in the society. ICT helps the prospective teacher to update the new knowledge, skills to use the new digital tools and resources. By using and acquire the knowledge of ICT, student - teacher will become effective teachers. ICT is one of the major factors for producing the rapid changes in our society. It can change the nature of education and roles of students and teacher in teaching learning process. Teachers in India now started using technology in the class room. Laptops, LCD projector, Desktop, EDUCOM, Smart classes, Memory sticks are becoming the common media for teacher education institutions. So we should use information & communication Technology in Teacher Education in 21st Century as because now teachers only can create a bright future for students.

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