ICT in 21st Century's Teacher Education

Somen Kr Majee

M.Phil. Student
Department of Education
University of Kalyani, Kalyani, Nadia, West Bengal.

Abstract: ICT, the term stands for Information Communication and Technology. ICT is widely used in handling information in the various fields and disciplines like Science, Engineering, Technology and Management (UNESCO, 2002). Modern science and technological societies require more knowledge of ICT trainees and the need to use ICT to provide teaching power; pre-service teachers also need during ICT's knowledge training program, as this integrated technical knowledge helps a prospective teacher get to know the world of technology better. Going Education Thidera can be applied to future development. Being broadly used and accepted in various spheres (Education, Technology, Communication etc) of life, it has become an important part of human life.

Keywords: **ICT, Technology, Pre-service, in –service, Student Teacher, Teacher Training.**

INTRODUCTION:

The term ICT is the abbreviation of three words namely as follow: I stand for 'Information'.C stands for 'Communication' and T stands for 'Technology'. The phrase "Information Communication and technology" is basically an extensional form of Information Technology i.e. IT that emphasizes the unified communication. The term came in existence in and around 1980 by academic researchers and became popular in 1997, after it was used in a report to the government of United Kingdom by the president of HBOS, Henry Dennistoun Stevenson. In the age of 21st century, the mankind has almost reached the optimum phase of Technology. Every sphere of life starting from the Sunrise to the Sunset has merged with the beneficial use of science and technology. Huge flow of information is arising throughout the world and it is the ICT only that enabled the mankind to sustain such massive information in user friendly comprehensive manner. 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. Teachers must have the knowledge and skills to use new digital tools to help all students achieve high academic standard. The quality of professional development of teacher education depends on the extent of ICT integration in teacher education program.

REVIEW OF RELATED LITERATURE:

Altaf (2012) studied "the effectiveness of an information and communication technology (ICT) based model of curriculum transaction for teacher educators".

Raman (2014) studied "Modeling diffusion of ICT as an innovation among inter-influencing potential-adopters in an educational system".

Rathnabai (2014) Studied "Effectiveness of ICT infused instructional design (IIID) in methodology of teaching mathematics at secondary level".

Dwivedi (2016) studied "teacher effectiveness of ICT-familiar and ICT-unfamiliar college teachers".

Muthukumar (2017) studied "Attitude towards ICT among biological science teachers of b.ed colleges".

Kaur (2018) studied "Computer phobia among prospective and in-service teachers of different academic streams in relation to ICT culture and introversion-extroversion".

Latha (2018) studied "Metacognition, ICT awareness and academic achievement of prospective teachers of physical science".

NEED AND SIGNIFICANCE OF THE STUDY:

Traditionally, teachers are regarded as the core of the development of the society. In present age of 21st century, development is direct reciprocates of efficient and comprehensive use technology. Hence, pre-service and in-service teachers are recommended to go through a comprehensive and hands-on ICT training program mandatorily. This ICT training program enable them to inspire and head the class and the students as well for use of several technological aspects and devices and help them to get enriched information and knowledge through Internet, E-books and many other digital sources. Lacking the proper and fair knowledge of ICT will obstruct the teaching competencies of a teacher and hence the teacher could not be accepted as a complete mentor for the purpose assigned. Though the extensively wide use and acceptance of technology has revolutionized the society, the schools and teaching institutions are still based on traditional method of teaching i.e. teacher centered teaching. This method of teaching failed to grave the attention and interest of the students towards teachers' instructions and teaching as well. Now-a-days the education has turned into student centric education and the students prefer to learn from various sources like Internet, E-books, You tube, and different learning app like BYJUS, DIKSHA, TOPPR and many others. Hence, the use of ICT & Multimedia is very much essential in educational field and simultaneously teacher's knowledge of ICT and Multimedia cannot be denied. So, the present study has great need and significance.

OBJECTIVE OF THE STUDY:

To find out the roles of ICT in 21st Century's Teacher Education.

METHODOLOGY:

This present study is based on the method 'Descriptive Analytic method' followed by secondary sources like books, Articles, Journals, Thesis, University News, Expert opinion and websites etc.

WHY DO WE USE ICT IN TEACHER EDUCATION?

Comprehensive use of ICT in the field of teacher education is recommended and appraised by many educationists and researchers for the following reasons:

[1] The classroom is now changing its look from the traditional one i.e. from one way to two way communications amongst the teacher and students.

[2] At present, there is a trend of child centric education for this the teachers get prepare to cope up with different technology to use in the classroom for making teaching learning interested.

[3] For effective implementation of certain student centric teaching strategies such as project-based learning which put the students in the role of active researchers and technology becomes the appropriate tool.

[4] ICT has benefited the mankind in terms of better and swifter communication, presentation of ideas in more effective and relevant way. It is an effective tool for encouraging students to look for information from multiple sources.

On the basis of above said four point ICT is very much necessary for Teacher Education.

RECENT TRENDS IN TEACHER EDUCATION:

Based on various changing needs and demands of our society, it is obvious that The Teacher Education must undergo requisite modifications and include new technology. Teachers should also know the right attitudes and values, besides being proficient in skills related to teaching. As we know the minimum requirement of any training program is that it should help the 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. Action Research is 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 growth of the teachers and the society consequently.

DIFFERENT STRATEGIES FOR APPLYING ICT IN TEACHER EDUCATION:

[1] Providing adequate infrastructure and technical support to bring essential modification.

[2] Applying ICT in all subjects to acquire a hand on learning.

[3] Applying new Pre-service teacher Education curriculum for improved teaching strategy.

[4] Delivery of the things like lectures, demonstrations, presentation has become easier by using application software, Internet and other digital sources.

ROLE OF ICT IN 21ST CENTURY'S TEACHER EDUCATION:

[1] ICT helps teachers to acquire latest change in teaching strategies.

[2] ICT helps teachers to interact with students more confidently.

[3] It helps them in planning their teaching in a presentable manner.

[4] ICT helps teachers to access with institutions and Universities, NCERT, NAAC, NCTE and UGC etc through online mode without spending money.

[5] It promotes innovative teaching.

[6] It provides deep insight of the subject matter.

[7] Different tools are used such as word processing, Database, Spreadsheet etc for introduction of ICT programmes to the teachers.

[8] ICT can be used independent of subjects and disciplines.

[9] ICT has been founded as a popular tool for institutions. Teachers must provide technological support to learn using different options like 2D or 3D picture, animation that can help student teachers to give model presentation. Potentiality of students is taken as dependent variable taking the potentiality of teacher as dependent variable.

[10] ICT has become store house of educational institution as all educational information are safely stored in air through ICT.

[11] With growing technology, ICT acts as a bridge that gap between teachers and students.

[12] ICT helps Teacher to design educational environment by presenting their views in a attractive ways.

CONCLUSION:

The teachers & the profession of teaching occupies an honorable status in the society. ICT helps the teacher to acquire new knowledge, skills to use the new digital tools and resources. By using and acquiring the knowledge of ICT, student teacher will become effective teachers. ICT is one of the major factors for upbringing the rapid changes in our society. It can change the nature of education and roles of students and teachers in teaching learning process.

Teaching institutions in India are on progressive path of accepting and using technology in the class room after going through proper ICT training program. The olden traditional method of delivering learning orally through black boards has now been replaced by using digital devices like Laptops, LCD projector, Desktop, EDUCOM, Smart classes, Memory sticks etc. resulting the students learning as fruitful outcomes. Since "Teachers are the only source of the upliftment of the society".

Hence, it can be concluded that, "Information, communication and Technology should be used in Teacher Education in 21st Century."

REFERENCES:

[1]   Agarwal, J. C. (1996). Essential of Educational Technology. Vikas Publishing House, New Delhi.

[2]   Agarwal, J. P. (2013). Modern Educational Technology. Black Prints, Delhi.

[3]   Angle, S.R. (2014).Effectiveness of ICT infused instructional design (IIID) in methodology of teaching mathematics at secondary level. Unpublished Doctoral Thesis, Regional Institute OF Education.

[4]   Dipali, D. (2016). A study of teacher effectiveness of ICT-familiar and ICT-unfamiliar college teachers. Unpublished Doctoral Thesis,C.S.J.M. University.

[5]   Goel, D. R. (2003). ICT in Education, Changes and Challenges in ICT in Education. M. S. University, Baroda.

[6]   Harpreet, K. (2018). A study of Computer phobia among prospective and in-service teachers of different academic streams in relation to ICT culture and introversion-extroversion.Unpublished Doctoral Thesis, Panjab University.

[7]   ICT in Education (2006). Information and communication technologies in teacher education:A planning guide.

[8]   Kirwadkar, A & Karanam, P. (2010). E-learning Methodology. Sarup Book Publishers Pvt Ltd. New Delhi.

[9]   Latha, P. (2018). Metacognition, ICT awareness and academic achievement of prospective teachers of physical science. Unpublished Doctoral Thesis, Manonmaniam Sundaranar University.

[10] Muthukumar, P. (2017). Attitude towards ICT among biological science teachers of b.ed colleges. Unpublished Doctoral Thesis, Manonmaniam Sundaranar University.

[11] Raman, R.R. (2014). Modeling diffusion of ICT as an innovation among interinfluencing potential-adopters in an educational system. Unpublished Doctoral Thesis, Amrita Vishwa Vidyapeetham.

[12] Shaheen, S.A. (2012). Study of the effectiveness of an information and communication technology (ICT) based model of curriculum transaction for teacher educators. Unpublished Doctoral Thesis, University of Pune.

[13] Vanaja, M. & Rajasekhar, S. (2009). Educational Technology and Computer Education, Neelkamal Publications Pvt. Ltd., Hyderabad.

[14] Venkataiah, N. (1995). Educational Technology. Atul Publishers, daryaGanj, New Delhi.

[15] www. google. com

[16] www. wikipedia. com