Role of ICT in 21st Century's Teacher Education

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Abstract

One of the greatest challenges facing teacher education today is preparing good quality teachers for an ever-changing world. Teacher trainees are the key components in any system of teacher education. 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 (UNESCO, 2002). ICT stands for Information and Communication Technologies. ICT is a part of our lives for the last few decades affecting our society as well as individual life. ICT which is now broadly used in educational world. Teacher, Student, administrator and every people related to education are popularly used ICT. In modern science and technological societies education demands more knowledge of teacher regarding ICT and skills to use ICT in teaching –learning process. The knowledge of ICT also required for pre-service teacher during their training programme, because this integrated technological knowledge helps a prospective teacher to know the world of technology in a better way by which it can be applied in future for the betterment of the students. Now – adays ICT"s are transforming schools and classrooms a new look by bringing in new curriculum based on real world problems, projects, providing tools for enhancing learning, providing teachers and students more facilities and opportunities for feedback.

Keywords: *ICT, IT, technology, teacher education, objective and strategies.*

Introduction :-

Today's age of 21st Century and it is also the age of information and technology (IT). Every aspects of life are related to science and technology. Huge flow of information is emerging in all fields throughout the world. Now information and technology is popularly 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, 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 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. Teacher education has also been influenced by the ICT. Now ICT has become an integral part of our lives. Over the past twenty five years, the use of ICT has fundamentally changed the practices and procedures in the field of banking, tourism, share market, engineering, business, and post office. ICT is one of the major contemporary factors shaping the global economy and producing rapid changes in society. ICT

is a powerful tool for problem solving, conceptual development and critical thinking that helps to make the learning process much easier for the teacher trainees. Owing to knowledge explosion and tremendously fast changing ICT, the teachers sometimes find it rather difficult to cope with thenew intellectual challenges being thrown up by the changed global and local context. Therefore, updating the knowledge of ICT is the need of the hour. Teachers are at the core of any living society. Technologies play an important role in training programme of teachers. Students‟ accesses 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 Preservice teacher education programme in the 21st Century. Without proper knowledge of ICT teacher cannot perform in his/her class room and it could not be said to be a complete one.

Need and Significance of the study:-

The scenario 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 society on the one hand technology has revolutionized our society and on the other hand the teaching learning activities at school level have remained so far away from technology. In our classroom the knowledge is imparted by the teacher in an ancient way, a teacher centric mode which is most of the time boring and not to gain interest to the student. But present 21st Century‟s education is student centric education. Students learn from multi sources and for this reason use of ICT & Multimedia is very much essential in educational field and simultaneously teacher‟s knowledge of ICT and Multimedia also required. So present study has great need and significance because this study shows roles of ICT teachers‟ education.

Objective of the study:-

The objective of the present study is –

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

Methodology:-

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

Why do we use ICT in teacher Education?

The classroom 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 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 studentcentric 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 effective and relevant 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.

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 undergo in teacher education also. It is natural that teacher education must 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 programme 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. 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.

Different Strategies for applying ICT in Teacher Education:-

i) Providing adequate infrastructure and technical support.
ii) Applying ICT in all subjects.
iii) Applying new Pre-service teacher Education curriculum.
iv) By using applicationsoftware , using multimedia, Internet e-mail, communities, understanding system software.

Role of ICT in 21st Century's Teacher Education:-

- ICT helps teachers in both pre-service and in-Service teachers training.
- 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.
- It also helps in effective use of ICT software and hardware for teaching –learning process.
- 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.
- It is now replacing the ancient technology. As we know now-a day‟s students are always have competitive mind. So teacher must have the knowledge of the subject. This can be done through ICT.
- ICT helps 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. Various technology based plans are used to help the teachers for their practice teaching.

- ICT prepares teacher for the use of their skills in the real classroom situation and also make students for their future occupation and social life.
- ICT used as an „assisting tool" for example while making assignments, communicating, collecting data & documentation, and conducting research. Typically, ICT is used independently from the subject matter.
- ICT as a medium for teaching and learning. It is a tool for teaching and learning itself, the medium through which teachers can teach and learners cannlearn. It appears in many different forms, such as drill and practice exercises, in simulations and educational networks.
- 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.
- ICT is store house of educational institution because all educational information can safely store through ICT.
- ICT helps Teacher to communicate properly with their students. So ICT bridge the gap between teacher and students.
- ICT helps Teacher to pass information to students within a very little time.
- ICT helps Teacher to design educational environment.
- ICT helps Teacher to identify creative child in educational institute.
- 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).
- ICT helpful for technical preconditions (infrastructure).
- ICT helpful for designed learning situations which are needed for bothmvocational education and the training of future teachers (in the teacher training institutes). Teacher training institutes can develop their curriculum using ICT. With the help of ICT Teacher training institutes can develop communication network.

Conclusion:-

Teaching occupies an honorable position in the society. ICT helps the 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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How to cite reference of this paper-

Yadav, P., & Yadav, P. K. (2022). Role of ICT in 21st century's teacher education. *Educational Metamorphosis, 1*(2), 34-38.