

In 21st Century's Teacher Education Curriculum in Context of Information & Communication Technology (ICT)

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Abstract

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. Today's teachers need to update their knowledge and skills as the school curriculum and technologies are changing rapidly. Shift from Blackboard to Smart classroom and changed the facets of the modern classrooms. Information Communication Technologies (ICTs) can substantially support the education system if a teacher is enough competent to use the tools. For the curriculum of teacher education system should also contribute for preparing prospective teachers. In modern science and technological societies education demand 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. So, the knowledge of ICT is very much essential for the both prospective teachers as well as in-service teacher also. This will help teachers to know integrated technology with classroom teaching. The objectives of this paper are to discuss the importance of ICT in 21st century in education and their implication to the world of work and highlight the role of the teacher in the use of ICT in Indian classroom setting.

KEYWORDS: ICT, Teacher Education, Technology, Multimedia, Teaching-Learning Process, Teacher Training, Curriculum, Indian Classroom Setting.

Introduction:

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. Teachers must have the knowledge and skills to use new digital tools to help all students achieve high academic standard. In 1998, UNESCO World Education report refers about students and teacher must have sufficient access to improve digital technology and the internet in their classroom, schools, teacher educational institutions. The quality of professional development of teacher education depends on the extent of ICT integration in teacher education programme. Technologies play an important role in training programme of teachers. Students' accesses knowledge and 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 pre service teacher education programme in the 21st Century. Without proper knowledge of ICT teacher cannot perform in his/her classroom and it could not be said to be a complete one.

Now, ICT has been used in almost all fields of life, including in education. In education, computer technology has become so essential and used in all levels of education. The utilization of ICT in education has recently started to appeal the potential and significant progress in language learning. It has become a major issue in education world and has been used from schooling through to university that could facilitate students and teacher in teaching and learning process. ICT has been publicized as potentially powerful enabling tools for educational change and reform. The computers play significant role in the learning process especially in learning language.

Need of the study:

Presently there is a gap between modern teaching methodology and existing traditional teaching methodology. This gap is visible when the degree holders of teacher education enter into the school education system where they seem to be alienated in terms of ICT usage. 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 and Multimedia is very much essential in educational field and simultaneously teacher`s knowledge of ICT and Multimedia also required. But main barriers to technology implementation perceived by the teacher educators and teacher trainees in the study are the mismatch between ICT and the existing curriculum and the class-time frame. Thus, policy makers should provide additional planning time for teachers to experiment with new ICT based approaches. For this researcher planned to identify the gap in context of ICT between the curriculum and national documents, so that this gap can be filled by the universities by revising their curriculum.

Objective of the study:

To find out the roles of ICT in 21st Century`s curriculum of teacher education.

Methodology:

Descriptive analytic method is used in this study. This study is based on secondary sources like books, articles, journals, thesis, university news, expert opinion and websites etc.

Reasons of use ICT in teacher education:

Now teachers as well as students participate in classroom discussion. Today's our education system is child centric. So the teacher should prepare to cope up with different technology for using them in the classroom for making teaching learning interested. ICT has enabled better and swifter communication; presentation of ideas more effective and relevant way. So for this reason ICT is very much necessary for Teacher Education.

Role of ICT in curriculum and teacher development:

Technological development and the changing competencies required in the present scenario for both students and their teachers, it is necessary to design a state-of-the-art curriculum and appropriate teacher development.

Teachers need to be adequately prepared to implement a state-of-the-art ICT curriculum. Indeed, introducing any new curriculum calls for careful preparation,

management, resourcing, and continuing support. In the case of an ICT curriculum, even more concerns have to be considered. Education research studies show that programmes of professional development for teachers are most effective if directed to the stage of ICT development reached by professional students.

In any educational system, the level of available resources places a restriction on the degree to which any new subject can be introduced into the college curriculum, especially where only the most basic facilities have so far been provided. But ICT is to such importance of the future industrial and commercial health of a country that investment in the equipment, teacher education, and support services necessary for the effective delivery of an ICT-based curriculum should rank high in any set of government priorities. ICT, is defined as the combination of informatics technology with other, related technologies, specifically communication technology.

Different strategies for applying ICT in teacher education:

- Applying ICT in all subjects.
- Applying new pre-service teacher education curriculum.
- Providing adequate infrastructure and technical support.
- By using application software, using multimedia, internet, e-mail, communities, understanding system software.

The role of the teacher in the use of ICT:

The effective use of ICT has great impact on teaching and is definitely changing the role of the teacher in the classroom. According to Jenkins (1999) ICT changes teaching and learning through its potential as a source of knowledge, a medium to transmit content, a means of interaction and dialogue. The role played by these technologies in the classroom provides a challenge to teachers because they make them change the way they have been doing things. Teachers are now becoming facilitators of learning and also organizing teamwork and managing classroom activities.

Jenkins highlights some of the changes in the teacher's role as,

- Change in the role to facilitators and managers who support learning.
- Change in relationship with students.
- Change in the content and scope of teaching.

Role of ICT in 21st Century's teacher education:

- ICT helps teacher to identify creative child in educational institute.
- ICT helps teacher to design educational environment.
- ICT helps teacher to pass information to students within a little time.
- 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 can learn. It appears in many different forms, such as drill and practice exercises, in simulations and educational networks.
- It also helps in improving professional development and educational management as well as enhances active learning of teacher trainees.
- It helps in effectiveness of classroom.
- It helps in improve teaching skill, helps in innovative teaching.

- 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.
- ICT helps teachers to access with institutions and universities, NCERT, NAAC, NCTE AND UGC etc.
- It helps teachers in preparation their teaching, provide feedback.
- ICT helps teachers to interact with students.
- ICT helps teachers in both pre-service and in-service teachers training.
- Teachers learn most from their own networks (learning from others) with the help of ICT.
- With the help of ICT teacher training institutes can develop communication network.
- Teacher training institutes can develop their curriculum using ICT.
- ICT helps teacher to motivate students and growing interest in learning.

Suggestions:

- Technological aspects which are responsible for social education in this era of 21st century which has offered social networking should be focussed.
- Ethics and values related to technology should be studied by the students.
- Curriculum for pedagogical subjects should involve the content knowledge through web base content like videos, OER, game learning, simulation, evaluation so that they can use it for teaching.
- Smart classroom training should be mentioned in policies.

Limitations of this study:

- Curriculum of only B. Ed. Course has been analyzed for this study.
- Only aspect of Information and Communication Technology (ICT) has been analyzed from the curriculum.

Conclusion:

This study has so far look at a very important, current and concern issue of curriculum development with the use of ICT for the achievement of education for sustainable development. This study has explored the discussion of importance of ICT in the present scenario and how it will improve the quality of education in designing curriculum to fetch for learners. And even the teacher should know how to use the ICT technology in order to give training in relevance to the field of the students.

Teacher in India now started using technology in the classroom. Laptops, LCD projector, desktop, EDUCOM, smart classes, memory sticks are becoming the common media for teacher education institutions. So we should use ICT in teacher education in 21st century as because now teachers only can create a bright future for students.

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