

Integration of ICT in Teacher Education

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*Abstract

In the present scenario we can see the development in technology has changed the world outside the classroom. ICT has made learners afflicted this is because technological development has brought development in many ways- a first by enhancing learner's capabilities by helping people to participate actively in all ways like- socially , economically and political It life in a society at large. And another is by giving advantage to technological innovation as a means for human development due to economic progress and increased productivity. ICT is becoming an integral element for educational reform and innovations at all levels of education. In this situation We should have to enhance pre-service education on ICT for future teachers.

The present paper emphasizes the uses of integration of ICT Into pre-service to all levels of education, both trainees as well as for teacher educators and teachers .The present articlehighlighted the integration of ICT in teacher education.

*Keywords:-Integration, ICT, Teachers education

Introduction:

In the 21st century the entire world is changing in all areas and in the present scenario we can see the difference in every aspect in science and technology, economic, social, industry, and education. Now the time is shifting from national to global, the national education system is affected by global education in all aspects. Education is a lifelong process from beginning to till. Now every approach is changing in education from teacher centric education to children centric education. These challenges make new demands and pose new challenges to the established education system and Practices in the education of the country. The progress of any country depends upon the quality of education offered and its practices as we all know about the Indian Gurukul education system in the Vedic age. Education in India has experienced colorful phases and stages of development starting in the Vedic age to the post-independence period. The great Indian thinkers have emphasized on developing the inner potential of individuals by reflecting on the unique potential of individuals. This Century demands knowledge exploration, communication resolution, technology advancement, application of science to all aspects of life and above all rising aspirations of the society is the main center of this century at the same time the development of appropriate mindset of our young generation is the need of time. In the field of education and training the teachers have been playing a very important role in child's education that they have to be continuously trained in keeping their mind updated and keeping it realistic and pragmatic. They must value lifelong learning along with learning for life and learning through life. It is necessary that they continuously have training and retaining in order to enable them to play their role more meaningfully and effectively. as this is known as the integration of information and communication technologies with their teaching is it necessary for the teacher of Present times. Nevertheless the challenges to use technology into the teaching and learning process might not be as easy as it seems. This is not just a matter of finding new resources and trying to use them as part of traditional courses. but it involves encouraging learners to interact with ICT equipment tools to enable them to reconstruct their own learning.

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This makes them quite different from students of the previous Scenario . The knowledge of ICT is also required for pre-service teacher training programs because this integrated technology helps a prospective teacher to know the world of technology in a better way by applying in the future to a futuristic educational structure for the betterment of the students. Nowadays ICT transforms classrooms, school, student, teacher and education system also. The new curriculum is based on actual world problems, and provides new tools for enhancing learning providing learners and teachers more facilities or opportunities. Integration of ICT also helps teachers, students to come together and motivate them to make more use of technology for making teaching learning more attractive for the development of our young and futuristic generation. In teacher education, teacher educators must know the use of ICT in their pedagogical areas to help the pupil- teachers for learning more effectively so, in present scenario the knowledge and use of ICT is very much essential.

ICTs in Teacher Education

This is realized that a large number of teachers are unable to effectively handling of technology in their teaching and learning and classrooms. The reason behind this lack of success by teacher is that the use of technology in the classroom has not been encouraging and the teacher or not well trained in using ICT in teaching as a means of educational sustainability. IN the 21st century, the integration of ICT in teacher training programmes has been the topic of much discussion, because educational systems around the globe are under pressure to use the new information and communication technology to teach students knowledge and skills. This is the only need of the present scenario for reform of the teacher training programs. Teacher education institutes are faced with many challenges to prepare the new generation of teachers to productively use the education strategy in their teaching procedure . During the pandemic we all knew about the difficulties which were faced by the teachers in their teaching learning process, because a huge number of teachers are unable to use them effectively. AS a result, teacher education programs need to integrate

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information and communication technology .ICT has the potential to accelerate, enrich and deepen skills, motivate and engage students in learning, help to relate school experiences to work practice, help to create economic viability for tomorrow's contributions to radical change in school which strengthens teaching and provides opportunity for connection between the institutions and the world. ICT can make education more efficient and productive thereby engendering a variety of tools and enhancing the facilitation of teachers' professional activities. The use of ICT on student learning environments, teachers and pedagogy, school provision of ICT capacity, school and system organization and policy and practice.

We can make some guidelines to achieve the goal of integration of ICT in teacher education:-

- In teacher training institutes were culcate the ICT capacity and engagement of students.
- Teacher educators should develop their ICT capacities and try to develop their contribution in integration of ICT in teacher education.
- The learning environment of the teacher education institute should be a learner center, knowledge centered and assessment Centre.
- The environment of institutes should be cooperative and collaborative with reflective thinking.
- Teacher training institutes should give an intellectual environment by curriculum support, community connections, leadership and planning and curriculum organization.
- That teacher education institute should increase their ICT capacity in the ways of hardware, software, technical support and digital resource resource materials.

Importance of ICT in Teacher Education

Present scenario we do not need to go any further than our own home or even room, to see some form of ICT in our lives. It may be a computer, plasma TV, or mobile phone, we all have them in some part of our lives. ICT has influenced and changed many aspects of our lives to the extent that we live in an environment that is to be controlled by technology. No matter how we perceive its presence, there is no denying that it is an important part of our lives and that it is here to stay. Presently in the field of teacher education the use of ICT is very important to blend with the traditional, the teacher's traditional leadership skills and their use are still important. ICT in education improves engagement and knowledge retention in teacher education.

- ICT in E-learning or online Learning.
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- ICT use motivates learning in teacher education..
- ICT integration is a key part of the national curriculum in Teacher education.

Approaches to ICT integration in teacher education:-

Integration and use of ICT in teacher education programmes is a hot topic everywhere in the field of education. These approaches will be beneficial for development of integration of ICT in pre-service level which will be helpful to reconstruct the paradigm of these are the approaches:-

- **ICT skills development approach:-**

During the teacher training program the use of ICT for their daily activity and develop the knowledge about technology and their use in the field of education.

- **ICT pedagogy approach:-**

Focus on integrating ICT skills in respective subjects. This approach is beneficial to extend the skill of enhancing ICT knowledge to the underlying pedagogy, allowing students to further develop and maintain the skill in the context of Designing classroom based resources.

- **Subject-specific approach:**

By this method, teachers and experts are not only exhibit learners to new or innovative ways of learning and teaching but are providing them with a practical understanding of what will be learned and teaching with ICT also .

- **Practice driven approach:**

providing and boosting the use of ICT in empirical aspects of teacher training. Emphasis on developing lessons plans and assignments. Using ICT and implementing it in their work experience at different levels. Provides learners opportunity to assess the facilities available at their institutes effectively using their own skills.

ICTs and Pre-Service Teacher Education: The present scenario

In the Present scenario it is observed that most of the teachers are unable to find effective ways to use technology in their classrooms or any other aspect of their teaching and learning life. The less use of ICT in the field of education and the teachers are not skilled

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in the technology. They have not been uplifting and the teachers are not well trained in using ICTs in teaching as a means for educational sustainability.

Disadvantages of present pre-service teacher practices on ICT are:-

1. Only the fundamentals of computers are taught to student teachers.
2. Only technical issues are focused and nothing is done with pedagogical uses of technology.
3. The B.Ed. curriculum does not cover sufficient areas of ICTs content.
4. In the present teacher education is based on traditional ways of the content of educational technology They do not show evidence of using new technology to support instructional innovations.
5. The pupil-teachers have no knowledge about the use of new technology in their classroom instruction.
6. The current B.Ed. syllabus doesn't provide adequate practices to pupil-teachers to apply ICT into the curriculum.
7. ICTs and their educational uses are not well introduced to the pupil-teachers.
8. Structure of innovative instruction with the support of ICT is extremely weak.
9. The competence of student teachers on ICT application in teaching subjects is limited only to Computer literacy.
10. Old curricula and pedagogical approaches are implemented on the present teachers.

Need of ICT in Teacher Education:-

- ICT helps to develop the pre-service and in-Service teachers training in the 21st Century.
- ICT helps teachers to interact with students and helps them in preparation for their teaching e-contents.

- ICT helps in better use of ICT software and hardware for teaching the learning process.
- ICT helps in improving Teaching skills, and helps in innovative Teaching.
- It helps in the effectiveness of the classroom by using Animated videos, H5P, YouTube, etc..
- It also helps to increase professional Development and Educational management as well as enhances Active Learning of Pupil-Teachers.
- It is now replacing ancient technology. As we know now-a day's students always have a competitive mind. So the teacher must have knowledge and command over their subject. This can be done through ICT.
- ICT helps teachers in preparation for teaching. To introduce ICT in pre-service teacher education, strategies and various methods are applied. Numbers of tools are used such as word processing, Database, Spreadsheet, Kahoot, Google classroom, etc. Different technologies are used to help the teachers for their practice teaching.
- ICT can prepare teachers for the use of their skills in the real classroom situation and also prepares pupil-teachers for their futuristic occupation and social life.
- ICT can be used as an excellent tool for example while making assignments, communicating, collecting data & documentation, and conducting research.
- Teachers must provide technological support like:-videos , animation, simulation training which can help pupil-teachers to give model presentations.
- ICT removes the traditional method of teaching and prepares teachers to apply modern methods of teaching.
- ICT plays an important role in student assessment . We can prepare student teachers for online assessment by using Quizzes, testmoz, Google classroom etc..
- ICT helps teachers to communicate with their students, ICT plays a role of bridging the gap between teacher and students.
- ICT helps teachers to convey information to students within a very less time.

- During COVID-19 we all realized that ICT was the only option for everyone to do everything.
- ICT helps teachers to design new educational environments for development in all fields of education.

Need which can upgrade the ICT in teacher education

- Policy and vision
- curriculum assessment.
- Pedagogy
- ICT
- organization and administration
- Teacher professional development

Conclusion

Teaching occupies an honorable position in society. ICT helps the teacher to improve the new knowledge, skills to use the new digital tools in the education field. Through the using and acquiring the knowledge of ICT, student teachers will become effective and skilled teachers. ICT is only one of the dominant elements for constructing the rapid changes in our education system. It can change the nature of education and roles of students and teachers in the teaching learning process. After the pandemic the Teachers in India started using technology in the classroom effectively and everybody has realized that without ICT we couldn't succeed in the field of education, we used Laptops, TV, Desktop, EDUCOM, Smart classes, Memory sticks are getting the common media for school teacher education institutions. So we

should use information & communication Technology in Teacher Education in the 21st Century because now teachers only can create a bright future for students. Therefore, it is very necessary that we acknowledge that teachers are very important for successful learning about ICTs and learning and teaching through ICTs to upgrade quality education in India

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