



ROLE OF ADVANCED ICT FOR FUTURE TEACHER EDUCATION

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Introduction

We are living in a constantly evolving digital world. ICT has an impact on nearly every aspect of our lives. The digital age has transformed the way young people communicate, network, seek help, access information and learn. We must recognize that young people are now an online population and access is through a variety of means such as computers, TV and mobile phones.

As technology becomes more and more embedded in our culture, we must provide our learners with them for life after relevant and contemporary experiences that allow them to successfully engage with technology and prepare school.

It is widely recognized that learners are motivated and purposefully engaged in the learning process when concepts and skills are underpinned with technology and sound pedagogy.

Use of ICT in teacher Education

In recent years, many surveys which have been conducted on education system say that Information and Communication Technologies (ICT) help enhance learning outcomes and improve access to education. ICT literacy is the ability to use digital technology, communication tools and/or networks to define, access, manage, integrate, evaluate, create and communicate information ethically and legally in order to function in a knowledge society. "To succeed, it is not enough to master technical skills: we must also know how to apply them within an information society", theme behind ICT literacy. Here, I'd like to discuss few important things about role of ICT in education.

As we know, with the help of Internet, we're now able to access any information right in front of our monitor and also explore the whole world just at our finger tips. Some great people initiated the mission of improving the areas that were away from the developed regions. The first thing that needs to be focused in order to develop an area is the education of the people over there. So, ICT can be a great tool to enhance education in such areas where it's difficult for those people to study in technology focused schools.

ICTs are often associated with the most expensive and complex computer based technologies, however, they also include conventional technologies such as radio, television and telephone technology. Once after the invention of internet, the transfer and exchange of information has become the easiest task. The following are the benefits of ICT tools in education:

Challenges of Teacher Education

Traditional model of Teacher Education

- Centralized design and spoke model
- Delivery of training : teacher acts as receiver
- Budgetary norms rigid (one-size-fits all)
- Quality of Teacher Education curricular resources needs improvement and contextualization
- Does not create community of learners (community requires continuity of interactions)
- Workshop based (point of time)
- Inadequate monitoring and on-site support
- Inadequate linkage between theory/research and practice
- Isolation of teacher and school

Need for a new model

- Create a learning community – social constructivism
- Providing opportunities for peer learning and mentoring
- Providing continuous support beyond workshops to teachers to address issues from practice as well as receive feedback and learnings from experiences
- Space for individual and collective reflection
- Move teachers to co-constructors of learning
- Individual need based
- Self directed / self paced
- Peer support and sharing/learning
- Co-creation of learning resources on a large scale and contextual

This is possible only with use of ICT programs in education, which are designed by educationists, based on education philosophy/policy and contexts to meet aims of education

Advantages of Use of ICT in teacher education

Distance and Climate incentive:

It doesn't matter where you're or how the weather is, you can still access and learn with ICTs.

Cost Effective:

To conduct professional development training for teachers in the rural areas, we need a huge amount of investment to buy ICT tools, once we've bought these tech devices, we can provide an awesome learning experience at very low cost. Near-zero maintained devices like Chromebooks are available at a very low cost to teach educators effectively using technology.

Interactivity:

ICT tools are interactive and engage educators easily in their own learning.

In addition, they offer multiple functions of teaching and learning, train teachers to integrate ICT tools in their teaching so that they can easily enhance student achievement and also improve technical skills.

The following is a real life examples of how ICT impacts education in rural areas:

Using distance education and ICT to improve access, equity and the quality in rural teachers' professional development in western China:

As we know quality teaching is a key factor for any educational institution to enhance student achievement, but it's so difficult to have well trained teachers everywhere. It's even more difficult in remote places which are geographically and critically distant from the fast paced world. The same challenge occurred in a province of western China. I'd like to share with you how ICT improved access, equity, and quality in professional development for rural teachers over there.

The European Union (EU)-China Gansu Basic Education Project, funded by both EU and Chinese government, dedicated to improving the professional development of teachers, was implemented by Gansu Provincial Government from October 2001 until March 2007. The Chinese government provided special funding and projects for western and rural China, using distance education and ICT as strategies for achieving development goals. The main emphasis in the project was human resource development for teachers, head-teachers, and administrators, focusing on the new national curriculum, new teaching methods, the use of ICT, and educational management.

Game based learning

The vibrant and dynamic world of the computer game and its impacts on learning and teaching.

Research is beginning to suggest that computer games can help to stimulate a successful learning environment and provide motivational learning contexts that suit many learners. They also provide an opportunity to develop communities in which learners have a sense of ownership over what they do.

Computer games encourage self-reliance and self-determination in terms of a learner's ability to make progress within a demanding but incrementally staged environment. They also help them to appreciate that the skills necessary for success in games, such as problem solving and critical thinking, can have relevance in other curricular areas and other social contexts such as study or work. They also create an implicit and explicit understanding that as a learner on our own we can be good but as a learner in a connected team we can be much better.

Conclusion

ICT has an impact on nearly every aspect of our lives. ICT can be a great tool to enhance education in such areas where it is difficult for those people to study in technology focused schools. In teacher education there is a need for a new model. This is possible only with use of ICT programs in education. Use of ICT in teacher education is the only way. Train teachers to integrate ICT tools in their teaching so that they can easily enhance student achievement and also improve technical skills.