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Relevance and importance of ICT in teacher education

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Abstract
Information and Communications Technologies (ICT) education is basically our society's efforts to teach its current and emerging citizens valuable knowledge and skills around computing and communications devices, software that operates them, applications that run on them and systems that are built with them. ICT has fundamentally changed the practices and procedures of nearly all forms of endeavour within business and governance. Within education, ICT has begun to have a presence but the impact has not been as extensive as in other fields. Education is a very socially oriented activity and quality education has traditionally been associated with strong teachers having high degrees of personal contact with learners. The use of ICT in education lends itself to more student-centred learning settings and often this creates some tensions for some teachers and students. But with the world moving rapidly into digital media and information, the role of ICT in education is becoming more and more important and this importance will continue to grow and develop in the 21st century. The role of ICT in transforming teaching and learning and seeks to explore how this will impact on the way programs will be offered and delivered in the universities and colleges of the future.

Keywords: higher education, ICT, learning, technology

Introduction
India has a large number of teachers and needs many more. All processes of teacher recruitment, training, motivation, incentives, retention and feedback therefore have to be planned on a large scale. Further the ultimate goal of in-service teacher development should be to ensure that optimal learning takes place in the classrooms.

The need of a generation of teachers who aim to develop learners instead of teaching them, who help their pupils to become independent (learning to learn), who provide students with motivation and interest for life-long learning and urge them to become autonomous learners, is essential in the education of the future. The responsibility of governments, higher education institutions, and mostly teacher educators both in pre-and in-service education, is huge and play a major role in building a better society.

Information and communication technology (ICT) is a force that has changed many aspects of the way we live. If one was to compare such fields as medicine, tourism, travel, business, law, banking, engineering and architecture, the impact of ICT across the past two or three decades has been enormous. The way these fields operate today is vastly different from the ways they operated in the past. Now it's have emerged which have strengthened and encouraged moves to adopt ICTs into classrooms and learning settings. These have included a growing need to explore efficiencies in terms of program delivery, the opportunities for flexible delivery provided by ICTs. The capacity of technology to provide support for customized educational programs to meet the needs of individual learners and the growing use of the Internet and WWW as tools for information access and communication. In the 21st century, these factors and many others are bringing strong forces to bear on the adoption of ICTs in education and contemporary trends suggest we will soon see large scale changes in the way education is planned and delivered as a consequence of the opportunities and affordances of ICT. This paper seeks to explore the likely changes we will see in education as ICT acts as a powerful agent to change many of the educational practices to which we have become accustomed. In particular, the paper will explore the impact both current and emerging information and communication technologies will be likely to have in coming years on *what* is learned, *when* and *where* learning will take place and *how* the learning will occur.

The impact of ICT on what is learned
Conventional teaching has emphasised content. For many years course have been written around textbooks. Teachers have taught through lectures and presentations interspersed with tutorials and learning activities designed to consolidate and rehearse the content. Contemporary settings are now favouring curricula that promote competency and performance. Curricula are starting to emphasise capabilities and to be concerned more with how the information will be used than with *what* the information is.

Information literacy: ICT
Another way in which emerging ICTs are impacting on the content of education curricula stems from the ways in which ICTs are dominating so much of contemporary life and work. The drives to promote such development from general moves among institutions to ensure their graduates demonstrate not only skills and knowledge in their subject domains but also general attributes and generic skills. Traditionally generic skills have involved such capabilities as ability to reason formally, to solve problems, to communicate effectively, to be

able to negotiate outcomes, to manage time, project management, and collaboration and teamwork skills. The growing use of ICTs as tools of every day life have seen the pool of generic skills expanded in recent years to include information literacy and it is highly probable that future developments and technology applications will see this set of skills growing even more.

Technology in use: ICT

Just as technology is influencing and supporting what is being learned in schools and universities, so too is it supporting changes to the way students are learning. Moves from content-centred curricula to competency-based curricula are associated with moves away from teacher-centred forms of delivery to student-centred forms. Through technology-facilitated approaches, contemporary learning settings now encourage students to take responsibility for their own learning .In the past students have become very comfortable to learning through transmission modes. Students have been trained to let others present to them the information that forms the curriculum. The growing use of ICT as an instructional medium is changing and will likely continue to change many of the strategies employed by both teachers and students in the learning process. The following sections describe particular forms of learning that are gaining prominence in universities and schools worldwide.

Flexible learning

The concept of flexibility in the delivery place of educational programs is not new Educational institutions have been offering programs at a distance for many years and there has been a vast amount of research and development associated with establishing effective practices and procedures in off-campus teaching and learning. Use of the technology, however, has extended the scope of this activity and whereas previously off-campus delivery was an option for students who were unable to attend campuses, today, and many more students are able to make this choice through technology-facilitated learning settings. In many instances traditional classroom learning has given way to learning in work-based settings with students able to access courses and programs from their workplace. The advantages of education and training at the point of need relate not only to convenience but include cost savings associated with travel and time away from work, and also situation and application of the learning activities within relevant and meaningful contexts. The communications capabilities of modern technologies provide opportunities for many these opportunities provide such advantages as extended course offerings and eclectic class cohorts comprised of students of differing backgrounds, cultures and perspectives. The freedoms of choice provided by programs that can be accessed at any place are also supporting the delivery of programs with units and courses from a variety of institutions. There are now countless ways for students completing undergraduate degrees for example, to study units for a single degree, through a number of different institutions, an activity that provides considerable diversity and choice for students in the programs they complete.

In concert with geographical flexibility, technology-facilitated educational programs also remove many of the temporal constraints that face learners with special needs. Students are starting to appreciate the capability to undertake education anywhere, anytime and any place. This flexibility has heightened the availability of just-in-time learning and provided learning opportunities for many more learners who previously were constrained by other commitments. Through online technologies learning has become an activity that is no longer set within Programmed schedules and slots. Learners are free to participate in learning activities when time permits and these freedoms have greatly increased the opportunities for many students to participate in formal programs. The wide variety of technologies that support learning are able to provide asynchronous supports for learning so that the need for real-time participation can be avoided while the advantages of communication and collaboration with other learners is retained. The continued and increased use of ICTs in education in years to come, will serve to increase the temporal and geographical opportunities that are currently experienced. Advancements in learning opportunities tend to be held back by the ICT capabilities of the lowest common denominator, namely the students with the least access to ICT. As ICT access increases among students so too will these opportunities.

Expanding the pool of teachers

In the past, the role of teacher in an educational institution was a role given to only highly qualified people. With technology-facilitated learning, there are now opportunities to extend the teaching pool beyond this specialist set to include many more people. The changing role of the teacher has seen increased opportunities for others to participate in the process including workplace trainers, mentors, specialists from the workplace and others. Through the affordances and capabilities of technology, today we have a much expanded pool of teachers with varying roles able to provide support for learners in a variety of flexible settings. This trend seems set to continue and to grow with new ICT developments and applications. And within this changed pool of teachers will come changed responsibilities and skill sets for future teaching involving high levels of ICT and the need for more facilitative than dictating teaching roles

Conclusion

Most software for online learning is interactive and easy to customize both on the administrative and user end. Students can choose what notifications they want to get and instructors or administrators are given step by step instructions on what fields to integrate into the learning experience. Instructors can receive announcements in the system when students have contacted them, turned in assignments or completed tests and quizzes. ICTs have impacted on educational practice in education to date in quite small ways but that impact will grow considerably large in years to come and ICT will become a strong agent for change among many educational practices.

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