International Journal of Applied Research

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Implication of Information Communication Technology on Business Education

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Abstract
Information Communication Technologies are the power that has changed many aspects of the lives. The impact of the ICT on each sector of the life across the past two-three decades has been enormous. The way these fields act today is different as compare to their pasts. Across the past twenty years the use of ICT has basically changed all forms of endeavour within business, governance and off-course education. ICT has begun to have a presence but unfortunately we are lacking to achieve desired impact. The education is a socially oriented activity. It plays vital role in building the society. The quality education traditionally is associated with strong teachers having high degrees. Using ICTs in education it moved to more student – centered learning. As world is moving rapidly towards digital information, the role of ICTs in education becoming more and more important and this importance will continue to grow and develop in 21st century.

This paper highlights various impacts of ICT on contemporary Business education and also discusses potential future developments. The paper argues the role of ICT in transforming teacher-centered learning to competency based learning. It also explores some challenges in higher education like cognitive tutors, need for developing a model, collaborative authoring etc.

Keywords: Implications of ICT, Business Education.

1. Introduction
The education has vital role in building the society. Education determines standard of society. The quality education helps to empowering the nation in all aspects by providing new thoughts, the ways of implementation of various technologies and so many such things.

The quality education is basic need of the society. There are number of effective teaching & learning methodologies in practice. Technology is the most effective way to increase the student's knowledge. Here comes the role of ICT in the education sector! Being an academician I cannot imagine education without ICT. Nowadays ICT (specially an internet) plays imminent role in the process of integrating technology into the educational activities.

2. What is ICT?
ICT is an acronym that stands for "Information Communication Technologies". Information and communication technologies are an umbrella term that includes all technologies for the manipulation and communication of information. ICT considers all the uses of digital technology that already exists to help individuals, business and organization. It is difficult to define ICT because it is difficult to keep up the changes they happen so fast.

ICT is concern with the storage, retrieval, manipulation, transmission or receipt of digital data. The definition taken from the guidance in the QCA schemes of work for ICT is *"ICTs are the computing and communication facilities and features that variously support teaching, learning and a range of activities in education."*

3. Objectives of ICT Implementation in Management Education
1. Improvement in learning achievement.
2. Reduction of adult illiteracy rate, with sufficient emphasis on female literacy.
3. Expansion of provisions of basic education and training in other essential skills required by youth and adults.
4. Increased acquisition by individuals and families of the knowledge, skills and values required for better living and sound and sustainable development.

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4. Role of ICT in Education
1. To increase variety of educational services & medium
2. To promote equal opportunities to obtain education & information.
3. To develop a system of collecting & disseminating educational information.
4. To promote technology literacy.
5. To support "Distance Learning".
6. To support sharing experience & information with others.

5. Emerging Issues
A number of other issues have emerged from the uptake of technology whose impacts have yet to be fully explored. These include changes to the makeup of the teacher pool, changes to the profile of who are the learners in our courses and paramount in all of this, changes in the costing and economics of course delivery.

A. 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 didactic teaching roles (e.g. Littlejohn *et al.*, 2002).

B. Expanding the pool of students
In the past, education has been a privilege and an opportunity that often was unavailable to many students whose situation did not fit the mainstream. Through the flexibilities provided by technology, many students who previously were unable to participate in educational activities are now finding opportunities to do so. The pool of students is changing and will continue to change as more and more people who have a need for education and training are able to take advantage of the increased opportunities. Interesting opportunities are now being observed among, for example, school students studying university courses to overcome limitations in their school programs and workers undertaking courses from their desktops.

C. The cost of education
Traditional thinking has always been that technology-facilitated learning would provide economies and efficiencies that would see significant reductions in the costs associated with the delivery of educational programs. The costs would come from the ability to create courses with fixed establishment costs, for example technology-based courses, and for which there would be savings in delivery through large scale uptake. We have already seen a number of virtual universities built around technology delivery alone (e.g. Jones International University, www.jiu.edu). The reality is that few institutions have been able to realize these aims for economy. There appear to have been many underestimated costs in such areas as course development and course delivery.

The costs associated with the development of high quality technology-facilitated learning materials are quite high. It has found to be more than a matter of repackaging existing materials and large scale reengineering has been found to be necessary with large scale costs. Likewise costs associated with delivery have not been found to diminish as expected. The main reason for this has been the need to maintain a relatively stable student to staff ratio and the expectation of students that they will have access to teachers in their courses and programs. Compared to traditional forms of off-campus learning, technology-facilitated learning has proven to be quite expensive in all areas of consideration, infrastructure, course development and course delivery. We may have to brace ourselves for the advantages and affordances which will improve the quality of education in the near future to also increase components of the cost.

6. Stakeholders and influences
The ideas that have been discussed in this paper suggest that while ICTs may not have had a large impact to date, their use will grow to play a significant role in many aspects of the design, development and delivery of educational programs in the coming years. The various influences that have been discussed provide examples of an agent that has the capacity to influence education at all levels and hence to be an agent supporting and encouraging considerable change. When the future of education is considered in this way, it is interesting to speculate among the stakeholders, for whom the change will be the greatest. Table 1 lists the principal stakeholders and suggests how the various issues discussed in the paper might influence each. Clearly the stakeholders for whom technology would seem to proffer the most influence and change are the students. So while institutions are pondering how they will be influenced in years to come, whatever the outcomes, the beneficiaries of the activity and change will be the students. This would seem to be the outcome everyone would want to see.

Table 1: The Influence of ICT on Education and its Stakeholders

Bases	What is learned And how much	How it is learned	When it is learned	From whom it is learned	Who is learning	What is cost
Students	*	*	*	*	*	*
Employers	*		*	*		
Teachers	*	*	*	*		
Institutions	*		*	*		*
Government	*	*	*	*	*	*

Overview of Pedagogy in the Traditional versus Information Society

Aspect	Traditional pedagogy	Emerging pedagogy for the information Society
Active learning	Activities prescribed by teacher	Activities determined by learners
	Whole class instruction	Small group
	Little variation activities	Many different activities
	Pace determined by the programme	Pace determined by learners
Collaborative	Individual	Working in teams
	Homogenous groups	Heterogeneous groups
	Every one for him/herself	Supporting each other
Creative	Reproductive learning	Productive learning
	Apply known solutions to problems	Find new solutions to problems
Integrative	No link between theory and practice	Integrating theory and practice
	Separate subjects	integration between subjects
	Discipline based	Thematic
	Individual teachers	Teams of teachers
Evaluative	Traditional pedagogy	Emerging pedagogy for the information society

Active learning
ICT-enhanced learning mobilizes tools for examination, calculation and analysis of information in order to provide a platform for student inquiry, analysis and construction of new information. The learners therefore, learn as they do and, whenever appropriate work on real-life problems in-depth. Moreover, ICT makes the learning less abstract and more relevant to their life situations. In contrast to memorization-based or rote learning, that is the feature of traditional pedagogy; ICT-enhanced learning promotes increased learner engagement. ICT-enhanced learning can also be 'just-in-time' learning that the learners choose what to learn when they need.

Collaborative learning
ICT-supported learning encourages interaction and cooperation among students, teachers, and experts regardless of where they are. Apart from modelling real world interactions, ICT-supported learning provides opportunity to work with students from different cultures, thereby helping to enhance learners teaming and communication skills as well as their global awareness. It models learning done throughout the learner's lifetime by expanding the learning pace to include not just peers but also mentors and experts from different fields.

Creative learning
ICT-supported learning promotes the manipulation of existing information and the creation of real-world products rather than the duplication of received information.

Integrative learning
ICT-enhanced learning promotes a thematic integrative approach to teaching and learning. This approach eliminates the artificial separation between the different disciplines and between theory and practice, which characterizes the traditional approach.

Evaluative learning
ICT-enhanced learning is student-directed and diagnostic. Unlike static, text, or print-based education. ICT-enhanced learning recognizes the presence of different learning pathways to explore and discover rather than merely listen and remember.

7. Examples of ICT use in Education System of Developed Countries
Most of the developed countries have applied ICT in the 1980 to the level of k-12 education for variety reasons, which are still valid. Some of the reasons as discussed by Pedro and *et al.* (2004), are as follows:

A newly society requires new skills
ICT increasingly pervade every aspect of life (work, learning, leisure& health). Because ICT are excellent tools for information processing, the new generation needs to become competent in their use, should acquire the necessary skills and therefore must have access to computers and networks while at school (Kok, 2007). ICT should be fundamental information management tool at all levels of an educational system from classroom to ministries.

A Quest for Quality learning
Schools should profoundly revise present teaching practices and resources to create effective learning environments and improve life-long learning skills and habits in their students. ICT are versatile and powerful tools that can help in this purpose and should therefore present in every classroom library and teacher room.
As the Uk Minister For Education and Employment States, using digital technology for improving the delivery of education has enormous potential to raise standards and increase employability. To realize this, number of computers in schools increased time after time. In 1980 an initiative placed one computer in every secondary school, two years later there were 16.In1990, the average number of pupils per computer in secondary schools was 18, by1998, it was eight. The Minister refers to this "Moving Schools into an information age." AsWatson (2001) puts it: We are world leaders in ICT at schools, recognizing its vital importance to the future of all pupils. The figure show clearly the advances we have made in the field. It is an investment, not only in our children and in their lives in the 21st century, but in our country future as well.

8. Conclusion
The role of ICT in the education is recurring and unavoidable. Rapid changes in the technologies and indicating that role of ICT in future will grow tremendously

in the education.

1. By observing current activities and practices in the education, we can say the development of ICT within education has strongly affected on
   (a) What is learned?
   (b) How it is learned?
   (c) When &where learning takes place?
   (d) Who is learning and who is teaching?
2. ICT also focuses modification of the role of teachers. In addition to classroom teaching, they will have other skills and responsibilities. Teachers will act as virtual guides for students who use electronic media.
3. Ultimately, the use of ICT will enhance the learning experiences of students. It also helps them to think independently and communicate creatively. It also helps students for building successful careers and lives, in an increasingly technological world.

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