THE ROLE OF INFORMATION AND COMMUNICATION TECHNOLOGY IN HIGHER EDUCATION TO FACE GLOBAL COMPETITION

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ABSTRACT

This paper attempts to highlight the role of ICT in higher education for the 21st century in particular the paper has argued that ICT have impacted on educational practice in education to date, in quite a small ways but the impact will give grow considerably in years to come and that ICT will become a strong agent for change among many educational practices. It is evident from the study that use of ICT in education is increasing very rapidly in various state of India. One of the most common problems of using information and communication technologies ICT in education is to base choices on technological possibilities rather than educational needs. In developing countries where higher education is fought with challenged at multiple levels, there is increase in pressure to ensure that technology possibilities are viewed in the context of educational needs. The use of ICT in education, lends itself to more student learning settings and often this create some tensions for few 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 will continue to grow and develop in the 21st century. Thus,the paper suggest that in higher education is not a technique for educational development but also a way of socio economic development of the nation.

Keywords: ICT, Education, Socio-economic Development.

Introduction

Ensuring universal service and access to information and communication technology is a top National objective in many countries, often enshrined in laws that govern the sector one of the distinctive features of human beings is their ability to acquire knowledge, and what makes this knowledge an ever thriving entity is man's ability to 'impact' this knowledge to others. Transfer of knowledge,

which is one of the foundations of learning, is among the most fundamental social achievements of human beings. Building strong relationships with students is something that frequently explains why faculty takes pleasure in the challenge of working at the small University.

The concept of moving the traditional classroom of desk, notebooks, pencils and blackboards to online forum of computers, software and the internet intermediate many teachers who are accustomed to face to face interaction of the traditional classroom. In the past 10 years online instruction has become extremely popular as is evident in the rise of online University, such as University of Phoenix, Athabasca University (Canada) and on campus University offering online courses and degrees , such as Harward University and University of Toronto. For many students find it difficult to come to campus due to employment, family responsibilities,

health issues and other time constraints. Online education is the only option attachments, standards, specification and subsequent adoptions have led to major growth in the extensibility and scalability of e - learning technology, is fast becoming the major form of learning. Computer multimedia offers ideal opportunities for creating and presenting visually enriched learning environment. The latest technology associated with virtual reality will also play an important role is not so distant future .Management institute and educators have attempted an increase incorporation of collaborative group work, problem solving and decision making through technology as an integral component of pedagogy. There is no doubt that technology based tools can enhance students cognitive performance and achievements if used in accordance with knowledge learning and as part of coherent educational approach. Computer based systems have great potential for delivering teaching and learning material.

The rapid development of information and communication technology ICT particularly the internet is one of the most fascinating phenomena characterizing the information age. ICT powers our access to information, enables new forms of communication and serves many online services in the Spears of commerce culture entertainment and education over the last decade in United Kingdom there has been growth in support for the use of technology within teaching and learning in higher education in particular since 1993 the teaching and learning technology program has promoted the creation of technology materials for use across the HE Sector.

Historical background

Global scenario

 In the past decades of the 21st century , there has been considerable international attention given to the role that ICT can play in economic, social and educational change .It has been asserted that ICT in education has become an engine of growth for the global economy. ICT in education has the potential to contribute significantly to sustainable economic development ,to enhance public welfare to strengthen democracy, to increase transparency in governance to Nourish cultural diversity ,and to faster international peace and stability through educating the children ,youth and adults. It is necessary that the use of ICT in education is Central to the Higher education agenda or any international agenda because of the severe needs to develop human resource capable of responding to the demands of the information age and to nurture ICT literacy and skills through education training and lifelong learning, ICT has played an instrumental role towards achieving education of all and millennium development goals and shall continue to do the same in the Global International agenda if given proper attention and policy.

India Scenario

 Rapid Technological Advancement and Introduction of ICT in education has benefitted India greatly especially at Primary and Secondary Education levels. Various Modes of e-learning, use of ICTs in classrooms and distant education programs have significantly improved the education, access and achievement in India.

India has witnessed a few milestones to promote ICT driven-education,imparting literacy to the adult masses has been a part of the mandate for the government of India for a long time. The national literacy mission launched in 1988 was based on the 1986 National Policy on education, after which many literacy initiatives followed. India launched a dedicated satellite EDUSAT in 2004 with the purpose to bring both quantitative and qualitative revolution in education and help in e-learning. Recently the Indian Government proposed the use of ICTs in education in its eleventh five-year plan(2007-2012) and set-up a national mission in education through ICT.

What is ICT?Information and Communication Technologies are referred to as the varied collection of technological gear and resources which are made use to communicate, to generate, distribute, collect and administer information. ICT is a force that has changed many aspects of the way we live. Information and Communication Technologies consist of the hardware, software, network and media for correction, storage, processing, transmission and presentation of information as well as related services. ICTs can be divided into two components information and communication infrastructure which refers to physical Telecommunication systems and Network and the services that utilize those information technology that refers to the hardware and software of information collection, storage, processing and presentation the concept of "Digital Divide" has come to mean division in society, based on socio economic factors, that does not paint the entire picture.

The potential of ICT for knowledge dissemination, effective learning and the development of more efficient education services. When looking at the Integration of ICT to support the achievement of education objectives, it can be found that after almost decade of using ICT to stimulate development, it is not fully integrate in development activities and awareness raising is still required.

Objectives

The main goal of the paper is to evaluate the importance of ICT in higher education and to analyze the government initiatives for development of ICT in higher education.

ICT and Higher Education

The major teaching and learning challenges facing higher education revolves around students diversity, which includes amongst others Diversity in the students' academic preparedness, language and schooling background ,education is perhaps the most strategic area of intervention for the empowerment of girls and women in any society and the use of information and communication technology as an educational tool in the promotion of women's advancement has immense potential.

The application of ICT as a tool for effective enhancement of learning, teaching and education management covers the entire spectrum of education from early childhood development in primary, secondary and territory education and training.

Integrating ICT in teaching and learning is high in the educational reform agenda, often ICT is seen as indispensable tool to fully participate in the knowledge society. ICT need to be seen as "An essential aspect of teachings Cultural Toolkit in the 21st century" affording new and transformative models of development of teacher learning wherever it takes place(Leach 2005). For developing countries like Vietnam, ICT can be seen as a way too much into a globalizing world. It is assumed that ICT brings revolutionary change in teaching methodologies. The innovation lies not per se in the introduction and use of ICT but in its role as a contribution towards a student centered form of teaching and learning.

The information and communication technology curriculum provides a broad perspective on the nature of technology, how to use and apply a variety of technologies and the impact of ICT on self and society. Technology is all about the way things are done. The process, tools and techniques that alter human activity. ICT is about the new ways in which people can communicate, inquire, make decisions and solve problems . It is the process, tools and techniques for-

- gathering and identifying information

- classifying and organizing

- summerising and synthesizing

- analysing and evaluating

- speculating and predicting

Enhancing and upgrading the quality of education and instruction is a vital concern, predominantly at the time of the spreading out and development of education. ICTs can improve the quality of education in a number of ways by enhancing student enthusiasm and commitment by making possible the acquirement of fundamental skills and by improving teacher training. ICT is also a tool which enable and bring about transformation when ,where it is used properly, can encourage a shift in environment which is learner centric.

ICT which can be in the form of videos, television and also computer multimedia software, that merges sound ,transcripts and multi-coloured moving images, can be made use of, so as to make available stimulating ,thought -provoking and reliable content that will keep the student interest in the learning process. The radio on the hand through its interactive programs utilizes songs, sound effects and adaptations, and supplementary collections of performances so as to include the students to listen and get into the training that is being provided.

The use of online pedagogy within universities and management institutes is increasing. The introduction of the wifi system to the growth of high tech education system, where accessibility and accountability of subject matter is made readily available to the students. The students can now study and comprehend the related information at the own convenient time.

ICT in Research

Applications of ICT are particularly powerful and controversial in higher education research functions and the following areas are particularly important.

The steady increases in bandwidth and computing power available , have made it possible to conduct complex calculations on large data sets.

Communication links make it possible for research teams to be spread across the world instead of concentrated in a single institution.

The application of ICT in academic research has grown steadily in the past 10 to 15 years in both developing and developed countries and there are wide variations in usage both within and between countries and region

The most straight forward use of ICT in a research in data processing the unprecedented growth in bandwidth and computing power point presentations for analyzing huge amounts of data and performing complex computations in a manner that is extremely fast, accurate and reliable.

ICT in a teaching

Academician are using computer in teaching much more readily than they adopted earlier audio visual media. This is because the strength of computers in their power to manipulate words and symbols -which is at the heart of the academic Endeavour

there is a trend to introduce E learning or online learning both in courses taught on campus and in a distance learning. Distance education and learning or not necessarily the same thing and can have very different cost structures whether e-Learning improve quality or reduce cost, depends on the particular circumstances. Countries those aspiring to create new HEIs can learn from the failures of a number of virtual Universities. They reveal that ICT should be introduced in a systematic manner that brings clarity to the business model through cost benefit analysis.

ICT according to a number of commentators enhance teaching, learning and research both from the constructivist and instructive theories of learning. Behind this increasing faith in the role of technology in higher education institutions.In many countries demand for higher education is higher than supply and governments and institutions are turning more and more to the use of ICT to bridge the existing gap. It is too early to say whether the role of ICT in the teaching function of higher education is truly transformative or whether it is simply a repackaging of previous pedagogy.

ICT are a potentially powerful tool for extending educational opportunities both formal and informal to previously undeserved constituencies- scattered and ruler populations, groups traditionally excluded from education due to cultural or social reasons such as ethnic minorities, girls and women, persons with disabilities and elderly as well as all others for reasons of cost and time constraints are unable to enroll on campus.

The constitution of the United Nations educational , scientific and cultural organisation (UNESCO)was adopted by 20 countries at the London conference in November 1945 and entered into effect on 4th November 1946. The main objective of UNESCO is to contribute peace and security in the world by promoting collaborations among nations through education, science ,culture and communication in order to faster universal respect for justice, the rule of law and the human rights and fundamental freedoms that are affirmed for the people of the world without distinction of race ,sex ,language or religion by the character of the United Nations . UNESCO's principles on ICT in education can be summarised as follows:-

1. Old and new technology is need to be used in a balanced way on air and off air radio. Radio cassette, television and offline video assistant technology is still considered valid and cost effective modes of education delivery and online distance learning.

2. Meeting the international education goals will require huge investments in teacher training institutions.

3. The demand for higher education cannot be met in both the developed and developing world without distance or virtual modes of learning

4. Vocational training needs cannot be met without virtual classes, virtual laboratories etc.

Benefits and challenges of ICT.

ICT Tools are now available on the Internet to assist both teachers and students to manage writing assignments to detect and avoid the pitfalls of plagiarism and copyright violations, one of the great benefits of ICT in teaching is that they can improve the quality and quantity of educational provision ,for this to happen ICT must be used appropriately.

While using ICT in teaching has some obvious benefits ICT and challenges First the high cost of acquiring ,installing ,operating, maintaining and replacing ICT is potentially of great importance and the integration of ICT into teaching is still in its infancy. Introducing ICT systems for teaching in developing countries has high opportunity cost because installing them is usually more expensive in absolute terms than in industrialized countries.The four most common mistakes in introducing ICT into teaching are:

1. Installing learning technology without reviewing students needs and content availability.

2. Imposing technological systems from the top down without involving faculty and students.

3. Using inappropriate content from other regions of the world without customizing it appropriately and

4. Producing low quality content that has poor instructional design and is not adapted to the technology in use.

The other challenge faced is that in many developing nations the basic requirements of electricity and telephone networks is not available ,also many colleges do not have rooms or buildings so as to accommodate the technology. The other challenges is that the teachers need to develop their own capacity so as to efficiently make use of the different ICT in a different situations and employees should not be scared that ICT would replace teachers and English being the dominant language most of the online content is in English ,this causes problems in many nations ,the people are not comfortable with English. Skill development is another important area in which ICT could be used effectively. Attempts are being made to strengthen the ICT framework for technical and vocational education .The emerging discourse on the role of skill development in addressing poverty and developmental issues indicates the potential role of ICT which can play a major role in integrating skill development as a component of a poverty alleviation strategy.

Conclusion

As move into the 21st century many factors are responsible for adoption of ICT in education and contemporary trends suggest will soon see large scale changes in the way education is planned and delivered as a consequence of the opportunities and affordability of ICT.It is believe that the use of ICT in education can increase access to E-learning opportunities ,it can help to enhance the quality of education with advanced teaching methods ,improve learning outcomes and enable to reform or better management of education systems .Extrapolating current activities and practices ,the continued use and development of ICTs within education will have a strong impact on: what is learned ,how it is learned, when and where learning takes place and who is learning and who is teaching .The continued and increased use of ICTs in education will serve to increase the temporal and geographical opportunities that are currently experienced.

The integration of ICT in higher education is inevitable, the very high demand for higher education has stimulated significant growth in both private and public provision . ICT in the form of Management Information Systems are increasingly universal .

The strength of computers in teaching is their power to manipulate words and symbols -which is at the heart of the academic endeavour.ICT has also led to the emergence of Open Educational Resources(OERs). The use of ICT creates an open environment which enables the storage and the reuse of information materials and also it enables the interface among the teachers as well as students

Apart from having telecommunications and ICT policies, governments and higher education institutions will need to develop strategies for effective ICT and media deployment and sustainability.

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