INTERNET IN THE CHANGING EDUCATIONAL SCENARIO

By

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<u>ABSTRACT</u>

This paper gives an overview of the changing educational scenario and the impact of Internet. Higher education is facing formidable challenges caused by changing student demographics. The changing IT environment and growing institutional demands with increased emphasis on new technologies and better training for employment for increased productivity makes the educational institutions to rethink and revise their programs. A brief account of the efforts made in India by IGNOU is mentioned. Emphasizes the need for Internet Technology mastering and concludes that the situation in India is not that attractive in using the Internet for education. Hopes that the IT Task Force may improve the situation in the near future.

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0. Introduction :

The advent of computers and communication technology have brought in radical changes in the pedagogical nature of teachers work. The increasing use of IT coupled with the growing access to electronic educational resources over Internet are making educators to rethink and readjust to the changing environment of teaching, learning and research. It is most important that the teachers must be educated and trained more thoroughly about technology, its impact on the society as a whole and about how it can be used in teaching. Most of the teachers are not adequately prepared yet to make use of exciting new educational technologies because neither their teacher education programs nor the schools have provided sufficient exposure, training, time or incentives for them to learn (Lawrance L Smith, 1999). To be able to help students in gaining required technological skills, teachers will have to learn how to employ educational technologies like multimedia, hypertext, graphics, IT and Internet in the classroom teaching. Every University should strive to create a centre for teaching Technology for training the teachers of all subject fields under the University.

As technology advances, learning in future will be increasingly based on collaboration and first hand experience. And technology is at its best when it is interactive in the technology driven world where a majority of and increasing numbers of jobs require proficiencies in a broad range of information technologies. The quality of education must meet the demand and supply situation. This only can reduce the gap between technology haves and have nots and help bridging the digital divide.

In the near future, most of the higher education institutions will increasingly use Internet to improve administrative processes, on-campus instruction and distance learning. It will become a preferred medium to reach off-campus students. It is expected that in future distributed, student-oriented learning with an increasing use of Internet-based courseware , discussion groups and links to other online educational resources would occur in continuing education, job-related training etc., Internet based virtual universities would provide cost effective education. Ready availability of courses over Internet will encourage more off-campus learning and an increased competition among students. This, albeit, will not deter a major portion of students who will prefer traditional face-to-face instruction and social interaction.

1. Changing Educational Scenario

These days there are profound changes taking place in the educational system. This is because society itself is changing into one in which knowledge work becomes ever more important along with information and communication technologies effecting the economies. The trends and technological developments have envisioned 'global learning infrastructure' in which educational institutions have changed drastically paving the way for radical transformation of the educational system.

The main trends envisaged may be listed as follows;

? ? Increasing growth of students

? ? Different types of students – Women, older students, ethnic minority etc.,

? ? Flexible learning arrangements in which campus, building is no longer central to the educational process.

? ? Inclination towards life long learning.

? ? Learning to learn-fast, obsolescence of knowledge emphasises the need to refresh on regular basis.

? ? The monopoly of educational institutions forced the organizations to offer external market to higher - education.

? ? Changing behaviors of students in their choices about how and where to be educated.

The developments in the communication technologies have become handy to solve very critical problems of education;

? ? Through Internet where the course material can be offered independently of time and place. Modularisation makes it to offer different and flexible learning routes.

? ? Ever increasing number of students have access to Internet, either at home or at the institution.

? ? Costs of Internet is slowly coming down

? ? More and more information is made available through the WEB.

So, it can be envisaged that the future learning environment would be ;

> ?? student - centered
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> ?? interactive and dynamic
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> ?? enabling group work on real world problems
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> ?? enabling students to determine their own learning routes
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> ?? emphasising competencies like information literacy to support life long learning.

Therefore learning through Internet is a active learning, which implies that students don't limit themselves to resources supplied by their instructors, but also that the students search for new materials themselves in order to solve problems at hand and to develop their competencies continuously.

2. Internet and Education

Late in 1990's educators around the world are faced with unprecedented reality of birth of cyber campuses. Now educator's campus is no more the school building and related physical infrastructure, but the entire world. Emerging Internet Technology has provided the global access to information resources in a reasonably negligible cost. This out performs even the Sun. The Sun can only shine on half of the globle at a time, while Internet delivered education can cover entire globe and around the clock with knowledge.(Kostopoulos 1998)

Despite the shortcomings like quality, integrity, authenticity, volatility and non-refereed nature of information, Internet is a dominant medium for information transmission. Everything that is needed for teaching and learning, viz, text books, catalogues, encyclopedias, magazines, newspapers, scholarly journals, databases, photos, and all made available on Internet.

It offers wonderful environment for enriching, improving, and even revolutionising education through interactive hypertext, collaboration and communication, dynamic content, and much more than one can dream of.. Internet will make breathtaking amounts of information easily accessible and virtually free(Taylor, 1997)

Internet has been viewed as a valuable source of information that can assist students in the pursuance of knowledge, learning, research, and increasing their capacity for social interaction. Internet is seen to promote inquiry and creativity through interaction of various forms of knowledge such as text, multimedia, graphics, photos, music, video, sound, animation etc.

A number of studies have been carried out on the socio-psychological effects of Internet on teaching and education. The deleterious effect the Internet can have on the interpersonal dynamics involved in teaching and learning process; disruption of ability to distinguish

between reputable and disreputable sources of information; the easy access to information provided by Internet does not lead to better research as students often seek information in the easiest way; over-extended exposure, online access to full text documents and digital images may lead people to acquire material of marginal interest; and the role of computers in reducing the emphasis that students place on generation of ideas based on their own personal experience; etc are a few of such findings. The distinction between ideas and information becomes blurred {Scott Thomas J(2000), Sullivan(2000)}.

Although, the potential power of Internet for teaching methods, curriculum development, and learning, has serious limitations. Researchers found that greater use of Internet led to decline in social involvement and psychological well being (Krant R, et.al. 1998).

3. Internet Delivered Education

The growing role of the Internet as the main communication and information delivery channel in society at large will make web-based learning environments an important vehicle for delivering educational programmes to more students at a lower cost. Several Pioneering academic institutions are benefiting from this trend already.

An experiment conducted during late 1960's at Stanford University, used computers for the first time as learning tools for science teaching(Hunter B, 1992). During 1970's computer conferencing systems appeared to be helping to create a permanent transcript of group learning activities and discussions. The early 1980's computer networks appeared as part of the new academic computerized learning environment(Harasim. et.al. 1995).

The early 1990's witnessed the onset of the web revolution, and its impact on computerized learning environments was dramatic(Berners Lee 1996; Quellette 1998). By the mid-1990's the first World Wide Web(WWW) based learning environment appeared and facilitated Internet use in academic learning environments.

A small university in Hong Kong has become a large scale, web-based course operator hosting thousands of students worldwide, thus gaining a competitive edge above and beyond more famous and established universities. In recent years Internet University and Western Governors University in USA has witnessed tremendous growth(Blumenstyk, 1988, Kaplan, 1997).

The issues associated with Internet delivered education can be identified as academic , administrative, instructional and behavioral. These issues are addressed in the context of strengthening the traditional delivery of education and not necessarily to replace with an Internet delivered education.

The objective of Internet delivered education is to provide tele-education for the place or time constrained students and also to maximise the utilization of instructional technology in an effort to enhance the absorption of knowledge

Considering the impact of Internet tele-education, it can be said that it is bringing the issue of off-campus/off-classroom course-work to the foreground and into an unavoidable recognition emphasising more education to more people in more places. Courses offered over the Internet can be full courses, with sole Internet interaction or may be supplementary

to an in campus course, in which case the student, faculty interaction remains on a face-to-face basis. Properly designed, structured and offered Internet courses may result in significant competitive advantage for an educational institution. Much of the Internet power as a learning medium lies both in integrating relevant visual, oral and textual materials and in providing access to these materials.

4. Virtual Classroom Education:

The current progress in the development of Internet infrastructure and associated technologies can potentially be used in the developing countries to enhance the delivery of high quality education. The delivery of educational materials over the Internet is now almost a common phenomenon in some of the affluent, developed countries. The mechanism range from the sophisticated Virtual Classroom (VC) in which students in cyberspace interact in near real-time with instructors of remote sites, to the more basic non-real-time delivery of lecture contents to the remote students.

Virtual classroom essentially consists of

i)   educational materials on the internet via the world wide web that are accessible by students who have access to the Internet; and

ii)   Mechanisms that support interactions between instructors and remote students.

The main motivating factor for considering virtual classrooms is the capability to provide consistent quality educational materials to students across a wide geographical area, in a timely manner and with minimum manpower.

In recent years there has been a phenomenal interest in the growth of what some are calling 'digital', 'online' or 'virtual' Universities. Indeed today, it is common place to read that information and communication technologies are radically reconfiguring the landscape of higher education, changing the very nature of the university.(Cunningham, S et.al. 1998).

This clearly indicates that there is a decrease in importance of the campus, a students 'login' from a distance to access 'courseware', new media technologies replacing traditional lectures, courses being delivered and assessed over the internet, promising to make higher education available anywhere and at anytime.   Looking at the way in which the campus-independent educational programmes are evolving with the support of Internet delivered education, the celebrated management consultant and social commentator Peter Drucker remarked: "Thirty years from now the big University Campuses will be relics. The college won't survive as a residential institution.

5. Internet Technology Mastering:

Internet technology, besides being most fascinating, is evolving very fast. Mastering it is more than one specialists full time job. It requires dedicated multi-member staff who not only follows technology's evolution, but also practices the various technological offerings in a real world environment.

For an academic institution mastering internet technology is not a luxury, but a necessity, because without thorough knowledge and expertise of this technology every effort will end

up in vain. Success in education, business or life in general relies on collaboration and team work. The traditional education system, being more evolutionary than revolutionary, is unlikely to transform itself any time soon into an environment that teaches and encourages collaboration as a part of learning; emerging technologies however, can catalyse this change much sooner than it would happen otherwise.

6. Internet Delivered Education in India:

Increased Internet access has transformed computers from mere computing machines to drivers of the Information age. India has rightly recognized the access to Internet or lack of it will create tomorrow's divide between haves have-nots. Government of India visualizing the role of Information Technology in the contemporary world setup a high power 'IT Task Force' to break India's shackles and make her "a Global IT Superpower and front runner in the age of Information Revolution". The first report brought out by the Task Force has a section on 'Operation Knowledge', consisting of 29 recommendations. Recognizing that IT is a "frontier area of knowledge and a critical tool for assimilating, processing and productivising all other spheres of knowledge", it calls for a national campaign for universal computer literacy. It talks about the schemes that will help students, teachers and schools purchase computers and promises to have computers and Internet in every school by 2003. The report talks about strengthening IT programmes in various universities and about starting SMART schools in each state.

Online education is the most existing segment in the Indian IT application programmes. University Grants Commission's Country Wide Classroom popularity and the programmes of AVRC and EMRC have created a sensation amongst the students community. A host of e-education sites continue to enter the market with focused offerings linking up student and teachers almost on a daily basis. The emerging new medium is acting as a effective supplement to the traditional teaching –learning programmes. The country with it IT super strength is in the midst of a 'dotcom' wave. The initiation taken by IGNOU in introducing on-line education programmes is laudable. IGNOU which was established in 1985 with an Act of Parliament hailed as a landmark in the history of education in India. It started with 2 programmes and 4,528 students in 1987 is now having over 600,000 students taking 60 programmes and 600 courses via the network of 44 regional and 630 study centers all over India. Communication technologies play a pivotal role in IGNOU's instructional system. Multimedia packages prepared for learners incorporate a range of technologies – print, audiotapes, video tapes, interactive radio counseling, one way video/two way audio teleconferencing, television lessons, CD-ROMs and web-based content delivery and so forth.(Sharma, 2001).

IGNOU has taken initiative in launching online in January 2000. It launched 2 of its web-based educational programmes viz. The Bachelor of Information Technology(BIT) and Advanced Diploma in Information Technology(ADIT). School of Management Studies offered MBA degree programmes, PG Diploma and Capsule courses with on-line support through a project called Management Education through Interactive Delivery Systems(MEIDS). Now many more programmes are planned, designed and awaiting launching.

In addition to IGNOU there are many more new educational provider who have recently entered the Indian Scene. They include the (i) training organizations in the private

sector(IT) (ii) professional areas such as Management (iii) development of on-the-job training establishments and (iv) some institutions sponsored by foreign agencies.

7. All is not well in India and needs strong of Support:

The Internet has been in existence for almost two and a half decades and began to extend into schools about 15 years ago. First it entered universities and then moved to schools. Internet has not made any miracle as such, but it did provide an opportunity to expand learning options for teachers and students who were fortunate enough to have Internet access, a few computers, and appropriate guidance on usage. In the Indian context this is seen only in few cases which may be either in the school or in the college. There are many factors affecting this slow implementation of computing and communication technology in schools, including administrations with no knowledge of its value or no willingness to realign school budgets to include computational technology, insufficient in-service professional development programmes for teachers, lack of specific curriculum benefits or of resources for teachers to use in their courses and deficient preservice preparation of teachers in technologies or computation.

8. Conclusion:

The Internet is now available in almost all territories of the world, and it not only offers a medium for academia to communicate and collaborate on research matter but has also become the backbone for many commercial and legal ventures. The birth of Commerce over Internet has spawned a new type of Multinational Corporation whose business is e-commerce centric. This 'new business focus' need for electronic connectivity across geographical boundaries is so intense, it is pushing governments, ISP's and telecommunication companies into reshaping the conduct of international business. There fore a society whose workforce has been schooled in the use of this 'new business' is better able to survive in the emerging Global Information Society.

Today information seeking is directly identified with Internet tomorrow, education seeking will similarly identify with the Internet. As a network coupled with streamed audio technology it provides the needed infrastructure for global educational delivery. With time, via Internet, education will shine at the global level as solar energy shines everyday, which indicates that no one should be deprived of education because of location or time inconvenience.

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