

MITLINC INTERNATIONAL CONFERENCE THEME

“With Today’s Computer and Telecommunications, technologies, Every young person can have a Quality Education Regardless of his or her place of Birth or Wealth of his parents”

Title of the Paper : Impediments to Bringing Education to ALL

By

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INTRODUCTION

Technological innovations have significant impact on all aspect of higher education i.e.,

- Research to communication
- Teaching learning process
- Concept of classroom learning
- E learning
- Distance learning
- Expanded Internet Access, Open Educational Resources, Massive Open Online Courses, are changing access to quality education world wide.

- For instance ‘Harvard and MIT universities have lately invited the entire world to their free online courses” Creating a possibility of realizing LINC’s Dream “with today’s computer and tele communications technologies every young person can have quality education regardless of his or her place of birth or wealth of parents”.
- The time has now come to test / research new innovations i.e., online courses for bringing quality in all our lives through education.

India, being developing country, should not be apprehensive about technology. If we refuse to see the potential of new ideas and technology we shut ourselves from all the possibilities the technology offers. For instance extending educational opportunities for everyone of us.

Impediments foreseen and experienced

Challenges related to colleges and Universities



- The emerging online electronic Universities will expose our strengths and weaknesses of our colleges and Universities.
- Regular Universities may lose their intake due to poor quality in teaching and research.
- Provides opportunities for us to identify the needs of our communities and learners. Envision solution by identifying technological resources and programmes.
- Demands quality education at less cost causing burden to Indian Universities.

- Continuous technological development and application of social network has been creating dramatic challenges and unlimited potential for innovations, requirements for knowledge and skills to function in global society.
- Demands quality education at less cost causing financial burden to the Indian Universities.
- Online courses offered by the electronic University will create a challenge of Allocating funds for the expansion of Universities.

Barriers in the implementation of online courses.

Teacher related challenges

Highlights from the Research studies

- Higher Education Institutions and students are enthusiastic about the online courses.
- Faculty seems to be lacking interest.



For instance Nachimuthu (2012) identified

- Teachers attitude
- Resistance to change
- Poor administrative support
- Poor fit with the curriculum
- Poor scheduling difficulties
- Poor training opportunities
- Many professors poorly use the technology due to their low capability.

Suggestions to overcome the above challenges

- Universities have to work towards net working of teaching technologies ; redesign the curriculum ; and learning experiences to homogenize higher education system in the country.
- This requires finance, modern attitude of the authorities and teachers enthusiasm to implement web based teaching.
- Institutions will have to make sure of the IT access to the students from the underdeveloped and remote areas and low socio economic status.

- Learners will have to be made familiar with the use of IT in the classroom .
- Preparation of students for a new web based teaching environment necessary.
- It requires developing adequate infrastructure.
- Uma Joshi and others (2002) have identified challenges of web based technology, in higher education.
- Teachers readiness and training to use online facilities of teaching.
- Teachers preparation to guide the students to use the surplus sources of knowledge constructively.

- Teachers develop required competencies in the digital world.
- Teachers will have to choose the right alternative while planning web based teaching i.e, to use. Web based teaching integrating with classroom instruction or distant mode or combination of both but not side lining the pedagogy.
- At Government and institutional level policies for online courses have to be created to provide facilities and services for online learning for the students in the institutes.
- Research review of Dr. Goel and Chhaya Goel (2013) have identified issues related to teachers role in digital age.
- A large number of teachers are ICT illiterate.

- Teachers have knowledge poverty despite of information explosion and media impulsion in all facets of life and living.
- Teachers do not know how to access information. They lack skills of surfing- selecting, skimming, scanning, switching and authenticating.
- Technology has only “Guest appearance” in our Education.
- Teachers at all levels of Education are not Techno-savvy, Info-savvy and Net – savvy.
- Our education system is totally indifferent towards techno culture.
- Our education radio, educational television, computer, Edusat SIETs have lost Education identities except EMRCs.

- Most of the libraries have hand books and journals. There is need to equip the schools colleges and Universities with e-books, e-journals, e-news letters, CDS, DVDs and digital networking. As information explosion and constant geographical space demands storage of the learning resources to be in the digital form or e- form.

Teachers learners related challenges

- Pathaneni Sivaswaroop (2003) has enlightened us (citing from Moore 1997, Gehring, 2002 and others with the views of online learners.

- Online courses should provide a good joyful learning experience not just information.
- This requires a team of specialists along with the best faculty.
- Investing in faculty training, technical support and student support are the key requisites for the success of the online courses. Investing in more technology can be a sheer waste. (Gehring 2002).
- Online courses need to be learner centered as they reach the drawing rooms, work places, their own places, pace and convenience.

- Online learners need to know how to access to the technological hardware, support system and get them to work well. They may have to spend considerable time in learning how to use them (Davison 1996) .
- Learners need adequate support and later It can be reduced as in scaffolding (Oliver 1999)
- The students need to be briefed before they start studying on online.
- Some of the students feel lecturers on line are rather boring than video conference.
- They feel isolated as there is limited scope to interact on online courses.

- Eastmand (1993) has suggested that online courses need to be vibrant as interactive with careful instructional designs.
- Several studies have shown that online courses are not only feasible but also have several advantages over traditional class room such as the convince of asynchronous participation a permanent record of classes and plethora of analysis tools.
- Like any new technology the implementation and optimization of online learning environment needs research and experimentation over a period of time to avail the maximum potential that the technology offers.

- For instance the following research evidence from a tele learning centre Indira Gandhi Open University, New Delhi, India.
- The research findings reveal that online courses should concentrate on providing better. Learning environment, student support services and training to faculty and online facilities.
- Vikas Taneja and Sakshi Parashar 2011 citing the survey of Song. Singleton and others revealed the challenges identified by the participants of online learning such as.

- Difficulty in understanding instructional goals and
- Technical problems.
- Hence for the success of the online courses the design should focus on the goals, objectives and expectations for the learners and assisting students with establishing community or feelings of connections on online is essential for the success of the online courses.

Language Related Challenges

- Languages may interfere with the quick comprehension of the online learners and respond on asynchronous discussion. Timid learners may find difficult to enter the online discussion may be due to English as a second language background or lack of technical skills

Culture Related Challenges

- Understanding the examples by heterogeneous population i.e., learners with varied cultures.

Locale Related Challenges

- More than 2/3 of Indian population lives in village and most of them are illiterate and struggle for livelihood and dignified living.
- However it not easy to take IT to rural areas due to
 - Rural environment
 - Lack of infrastructural facilities
 - Lack of instructional facilities
 - Lack of awareness
 - Lack of financial support
 - Lack of coordination in allocation of resources
 - Illiteracy

- Lack of knowledge of English language
- Disinterest of professionals to go to villages as they feel that there is not much scope, they prefer to go to cities.
- School teachers are not keen to learn computers as there is no incentive for extra work.
- They feel that computer literacy increases workload
- No cyber cafes in villages
- Due to lack of funds Indian Government has provided one or two computers which doesn't help much
- Villages need internet connection, phone facility and extra funds for maintenance

- Schools and colleges cannot afford such facilities
- Lack of co-ordination from near by private institutions and other universities
- Due to lack of English knowledge students in villages hesitate to learn computers

Heterogeneity Related Challenges

- The contemporary higher education systems are aiming for the acquisition of technological skills as part of core education systems
- Given the wide disparities in access to ICT between different groups, the use of ICT / the introduction of ICT when done without careful deliberation can result in the further marginalization of those who are already disadvantaged (on economic, social, cultural, geographic and gender lines)

Technical Related Challenges

- Impediments related to web based teaching in Indian context.
- Limited bandwidth and slow modems hamper the delivery of sound video and graphics therefore learners need to be well versed in coping up technical difficulties.
- The proliferation of databases and websites demand information management skills.
- Access to the internet is still a problem for some rural areas and people with disabilities in India.
- Social isolation can cause passivity in online courses
- Online courses without support services can be a uphill battle for many students.

- For instance, formative and summative evaluation to use grade essays and performance assessment, students require certain amount of personal interaction and communication
- In the new digital environment adaptive capability is the key to survival and growth
- Universities in developing countries like India face obstacles such as paucity of funds; material resources, capital equipment infrastructure.
- This require careful planning by all the stake holders which will certainly pool resources and exchanging expertise in the area of shared interests.

Despite the various impediments India has success stories too with reference to

- Technology initiatives
- Policies related to web based education
- Learning related initiatives
- Best practices in colleges of education
- Govt schemes and policies in higher education

Success Stories Technological Initiatives in India

- India is making use of powerful combination of ICT's such as
 - Open source software
 - Satellite technology local language interfaces
 - Easy to use human computer interfaces
 - Digital libraries etc with a long term plan to reach the remotest of the villages
 - Community service centres have been started to promote
 - e-learning throughout the country

For Instance

- IGNOU introduced ICT in higher edu – a concept similar to the open courseware initiative of MIT – use of internet and television technologies
- Ekalavya Initiative ICT – used to promote distance learning
IIT Kanpur has developed Brihaspati, an open source – learning platform;
- IIM Calcutta with NIIT – has been providing through virtual classrooms
- Jadavpur University in using mobile – learning centre

- IIT Bombay – started centre for distance Engineering Education Programme has emulated classroom interaction through interactive satellite technology.
- One laptop for a child has been introduced – 2007 in Maharashtra

Policies related to web based Education

Various policies have been launched to improve access equity and enhance quality of education across the country.

e.g.,

1. National project Shodhganga publishers. Theses in open access format as per UGC notification across the 525 Indian Universities.
2. Microsoft has launched exclusive website for teachers in India and other 107 countries to develop online connection to share their education initiatives

Learning Related Initiatives

Easy access to learning resources :

- Through ICT students can now browse through e-books; results on the net; online admission counseling; distance education virtual classrooms; online textbooks; scholarship information; online sample examination papers; overseas education educational loan; easy access to mentors; experts; researchers and professionals and peers all over the world. Recent innovations are online common entrance examination; facilitating students to select the institutions and branches of their choice through web based counselling

- Atano a company has money back policy has launched an Educational E-book for assisting the students in CBSE and ICSE Board Examination. Many publishers are manufacturing online content for students
- Class-net an online learning portal facilitates interaction with professionals and other institutions. Online learning involves quizzes, projects and workshops and library, group studies, special classes and test activities.
- Material on GRE and GM ant too available on online.

- A limitation is most of the ICT initiatives by IIT's have online programmes in science and technology unlike MIT, Harvard and Yale Universities which offer over 200 online courses in subjects including art, humanities, library science and environment besides sciences and engineering. Country like India should avail this facility to overcome the limitation mentioned above.
- Software companies have been using online learning extensively to improve training costs of their employees. There is great deal of standardization e-learning platforms bring into training modules.

- Online learning infuses great deal of discipline among the employees
- Online learning is the best way to gauge employee's capabilities and improve the gaps through online programmes
- Only limitation is one cannot underline the text to complete the process so some students prefer the print

Best practices in colleges of Education

- Emphasises technology enabled education in the process of teaching and learning

Government Schemes and Policies in Higher Education

India has promoted ICT in education from radio to Satellite based interactive television

Several national and state precise schemes have been evolved to improve the quality of education at school and higher education levels.

The twelfth five year plan has been proposed to align Indian higher education with industries and global practices to make higher education research centric, teaching and vocation focused ones.

Suggestions for the success of the online courses

- Content chosen for the online courses
- Feasible solutions for solving global problems
- Upto date research methods need to be undertaken by centers of Excellence
- Should improve and complement existing higher education institutions.
- Eliminate the fear of depersonalization caused by technology

- E university should become 'transpersonal' to address the needs of all the world ' children for 'Health care, Education, Food, Clean air, Water, Feelings and Ideas must be shared across the world.
- Electronic universities should facilitate electronic exchange of education affordable by reducing communication costs in online courses
- Developing and receiving software for every school and home at affordable costs

- Provide vouchers to the poor and underprivileged to connect electronically to the best possible education. This kind of aid could be offered by Japan, Europe, Australia and North America to the world's poor.
- The stakeholders should be convinced about the need for technology for teaching and learning.
- The consistency of the equipments and its integration in to the classroom should be convinced
- Establish clear lines of accountability of inspection and maintaining quality contract of classroom technologies

- Maintain supplies appropriately and take new approaches (including staff training) to guarantee speedy responses to breakdowns.
- Offer training programmes and launch particular launch particular venues for the faculty to come together and share their experiences about the usage of software used for instruction.
- Universities should reorganize institutional support programs as efficiently as possible
- To facilitate the finest opportunities for the students learning the university needs to guarantee system that can deal with range of problems

Maximising students' learning through ICT Pedagogy

- It is essential that research should explore not only the development of ICT to be used but also the role of effective pedagogy that can maximize students learning using ICT tools.
- Harnessing the power of ICT requires appropriate learning strategy to harmonize effectiveness in learning with technology
- Since face to face instruction is equally important, there is a need for tapping the wide applicability of online learning with face to face instruction. Blended learning i.e., Blending of face to face instruction with various types of non classroom technology mediated delivery has been practised.

Government and National Support

- Successful implementation of ICT requires Government, National support and local support from relevant institution and education authorities
- Cost is an important issue that decides, guides the adoption and growth of information and communication
- In developing countries it is observed that the institutions which are granted public status and are supported by government funds, since adoption of technology involves high fixed costs institutes did not upgrade it as time progressed

Teachers need constant support in using and integrating ICT into the curriculum and teaching best the teachers who use technical difficulties may tend to revert to the older teaching (non-ICT based methods)

Conclusion

I, the author of this paper strongly recommends such as Harvard and MIT through online courses should be permitted and encouraged in India to enhance quality of higher education for all regardless of his or her birth or wealth of their undoubtedly the technological educational opportunity is going to create a number of challenges and an eye opener for the developing countries to introspect each one's quality of education and to take some measures to provide quality education at low cost lest they may lose their intake due to online courses.

Indian universities are motivated to prepare a perfect plan to provide better learning environment student support, training faculty requesting electronic universities to grant a number of projects in this context. However electronic universities can utilize the expertise from the developing countries to design curriculum learning modules to make the online courses effective learner centric learner and learner friendly considering language and cultural related issues.

Universities can motivate the government of India to issue the loan with no interest to purchase the computers with internet facilities. They should all see that telephones are technically improved to have better and easy internet access and they should make local calls free to make internet accessing affordable.

It is advisable to electronic university to think and work together with well established universities to extend their educational facilities through a number of projects to the aspiring youth, needy and under privileged.

For improved quality of education in online courses 'learning teams' need to design 'educational modules' that are adaptable from every country to country to improve the quality of instruction. To sustain higher quality, a contribution of international access connecting both students and teachers to the places where the best quality exists. The global higher education network should work as a window on the world helping everyone to get connected to an electronic learning center for all ages, a place for guidance, testing, tutoring, counseling and acquiring the skills in using the electronic technology that one uses to learn at home and at work.

Online courses should nurture our minds, our capabilities beyond levels of literacy to new levels of understanding and intelligence. They should empower the learners as better thinkers learners and problem solvers; Electronic university should transform it self as a 'Global village Green' where we meet to explore how to be better human beings and care for ourselves, our culture and our planet. Online courses should create safe, supportive and vital learning community so that they listen to each other with care and compassion, work in coordination.