

# Globalization and India's ICT Initiatives in Education: Challenges and Prospects

Salima Jan

Educational Multi- media Research Centre, University of Kashmir, Srinagar – 190 006, India

Corresponding author: salimaemrc@gmail.com

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## Abstract

Government of India in recent years has taken a host of admirable policy initiatives in the education sector that could potentially transform the country into a knowledge haven. All these policy initiatives though try to induce a major social change or transformation in the educational sector of India, but there still remains a huge gap between the 'Theory' and the 'Practice'.

This paper will try to give a holistic picture of the efforts that are being made to use ICT for education and also examine why in spite of all these efforts the technology is still on the peripheries of the Indian educational system. The paper will throw light on the challenges and problems that are being faced by the students and as well as the stakeholders in making virtual education a possibility in true sense. How can effective implementation of virtual education be attained so that the goal to enhance the socio- education use of IT to overcome the digital divide is achieved?

**Keywords:** ICT, Education, commodification, knowledge

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In Today's globalized educational scenario we often come across and use a typical commercial word 'commodification'. The word 'commodification' in fact has become a buzz word in every educational discourse. This is because commodification has become a dominant force in commanding social, political, economic, educational and even cultural developments.

Karl Marx talked about commodification of labour in the capitalistic societies. In 1980's Lyotard talked about commodification of knowledge. Lyotard predicted that "knowledge — which has become the major force of production in recent decades -will increasingly be translated into quantities of information, with a corresponding reorientation in the process of research. Lyotard notes that the miniaturisation and commercialisation of machines is already changing the way in which learning is acquired, classified, made available and exploited. Knowledge in computerised societies is becoming exteriorised from knowers. The old notion that knowledge and pedagogy are inextricably linked has been replaced by a new

view of knowledge as a commodity. Knowledge is and will be produced in order to be sold, it is and will be consumed in order to be valorized in a new production: in both cases, the goal is exchange. Knowledge, essentially a continuous process, ceases to be an end in itself, it loses its use- value. Lyotard continues, "knowledge in the form of an informational commodity, indispensable to productive power, is already, and will continue to be, a major — perhaps the major — stake in the worldwide competition for power. It is conceivable that the nation-states will one day fight for control of information, just as they battled in the past for control over territory, and afterwards for control of access to and exploitation of raw materials and cheap labor" (Roberts, Peter 1998)

The predictions put forth by many writers, as above, has resulted in people talking and thinking about knowledge economy. The commodification has given rise to global knowledge societies; packaging and marketing of knowledge

across the continents. Knowledge, we are made to believe, will be a dominant factor for determining the future economies of the world. Knowledge per capita will replace the prevalent income per capita concept. So commodification of knowledge is gaining currency and momentum across the globe.

### **Packaging and Commodification of Knowledge**

The commodification of knowledge in turn is resulting in the increasing industrialization and commercialization of education and knowledge is packaged and sold like a commodity in various forms. We all have experienced that search engines like Google have made accessibility to knowledge resources easier and tons of research material, on all kinds of subjects, is available almost on every topic. The fact however remains that most of the reliable, authentic and certified material on Internet is paid. If you have enough money you can get access to best educational material, best teachers, best educational resources, virtual libraries and online books irrespective of your geographical location. While on one hand availability of online resources are creating a level playing field between east and the west but on a different level it is creating sets of informational and educational have's and have not's. This is happening due to uneven, or not so uniform, availability and use of modern ICT tools. The rich and urban population in India can have easy access to online resources but the poor and a huge rural population in the country are still waiting for the availability of some reliable internet service and the modern electronic gadgets of acquiring knowledge. To add to their problems is non-availability of electricity.

Notwithstanding the moral question raised by many, whether the commodification of knowledge is good or bad, use of ICT for education has important and positive implication on poor countries; poor by the standards of information availability. Given the time and resources available this study is restricted to the role of ICT in changing global educational landscape and India's response to the change.

In present day's social order, when everything is undergoing a swift change and the change is effecting the overall social fabric across the globe, the new international informational order has already come to the attention of academics and social scientists. Our means of communication (from interpersonal to cyber space communication), modes of production (from barter system to industrialization), forms of economy (from subsistence economy to market oriented economy) have changed, thus seeking/imparting education also got changed. In this changing scenario, when privatization, rather commercialization and industrialization, of education is taking place across the globe, very few countries in the world are

adequately investing in public educational system and India is one of them.

### **Indian Higher Education**

India has been able to create one of the biggest and very impressive higher education system in the world, with over 659 universities and more than 35,500 affiliated colleges, enrolling around 20 million students (Choudaha 2013), yet the current GER of the country in higher education hovers around 18%, as per planning Commission, though it is believed to be around 13.8%, which is almost half of the world average. Developed countries have a GER of 54.6% with USA having 60%. In the Developing Countries it is 36.5%. Though the quality of many Indian institutions is recognized and compared at par with many institutions of higher learning at global level, yet India has failed to create a university that can figure among the 100 top universities in the world. (Chronicle Year Book, 2012)

The huge superstructure for higher education in India is also experiencing a serious human resource crunch in terms of qualified, well-trained and experienced teachers. The Ministry of Human Resource Development (MHRD), Govt. of India, recently confirmed that India is currently having a shortage of 1.2 million teachers. It further said that out of 90 million college age students only 12 % attend colleges and if India wishes to maintain its current GER growth, then 8 million more students should join the colleges by 2014. India targets 30% GER by 2020, which in other words means that around 40 million students shall be enrolled for higher education by 2020. With present standards India will require additional 10,510 Technical Institutions, 15,530 Colleges and 521 new Universities, at an additional Cost of Rs. 9.5 lakh Crores. While money, as they say, is no problem for creation of infrastructure, the question will be where to find the additional well qualified and trained faculty for the new institutions.

Besides this huge demand for higher education, India, as we all know, is quite a big country, both geographically and demographically, with around 75 % population living in remote and rural areas. The country is facing enormous problems of equity in terms of resources and infrastructure. Most of the resources including education are concentrated in metropolitan cities, state capitals, major towns and some selected urban pockets. Indian villages, as such, are experiencing serious limitations in terms of basic amenities like access to water, electricity, healthcare, transport, communication and education etc. In India the urban-rural divide at times is so stark that India is virtually two different countries rolled in one, aptly paraphrased, by Arvind Adiga "White Tiger", as 'India of light and India of Darkness' (Adiga, Arvind 2008).

To conclude, it can be said that Indian higher education system faces challenges on three fronts as writes JhinganAmitabh 2012:

Expansion:

India's GER of 16% was much below the world average of 27%, as well as that of other emerging countries such as China (26%) and Brazil (36%) in 2010.

Excellence:

Faculty shortage - there is 40% and 35% shortage of faculty in state and central universities, respectively.

Accredited institutions - 62% of universities and 90% of colleges were average or below average in 2010, on the basis of their NAAC accreditation.

Low citation impact - India's relative citation impact is half the world average.

Equity:

There is wide disparity in the GER of higher education across states and the Gross Attendance Ratio (GAR) in urban and rural areas, and gender- and community-wise

Inter-state disparity - 47.9% in Delhi vs. 9% in Assam.

Urban-rural divide - 30% in urban areas vs. 11.1% in rural areas.

Differences across communities - 14.8% for OBCs, 11.6% for SCs, 7.7% for STs and 9.6% for Muslims.

Gender disparity - 15.2% for females vs. 19% for males.

In the above backdrop, thanks to globalization, the fast transfer of new technologies and proliferation of information communication technologies across the globe, has created a worldwide market and clear strategic incentives for the adoption of new information technologies; as Friedman in, "The world is flat", makes us believe that technology has made the earth flat in terms of access to information and created equal opportunities for people across the globe. In developing countries, like India with a huge population of marginalized groups, scheduled castes/tribes and other weaker sections, information technologies can comfortably, be used in empowering people with knowledge, as well as equalizing educational opportunities for the entire population on the whole.

This increasing realization, about importance of technology in education and development, has led to serious efforts being made, by the government and non-government organizations,

to make Information and Communication Technology work for human development. Though a lot of endeavors were made by different agencies, which of course are visible to some extent, but the focus of this paper is restricted only on the initiatives taken by the University Grants Commission -the apex body of all the Universities, Colleges and Institutions of higher education in India, in particular and the Ministry for Human Resource Development in general, in use of television and new communication technologies in higher education.

## ICT Initiatives for education

### UGC Countrywide Classroom and VYAS

The journey, of use of technology for higher education, began in 1984 when UGC launched a project called 'Countrywide Classroom'. Under this project 17 media centers, then called AVRCs, were established across India with the objective of producing educational television programmes. The idea was to create a window for the learners in distant areas to benefit from quality teachers, laboratories and libraries located in the urban areas. Enrichment and syllabus based Educational Television Programmes were made or imported from developed countries and telecast on national Network of Doordarshan. The aim of this project was to take quality education to the doorsteps of students, living in remote parts of the country, by using TV technology. The programmes were shown on Doordarshan but as happens in most of the educational schemes, the telecast on Doordarshan was first shifted to late night or early morning slots, reducing the viewership and later completely shelved due to Doordarshan's commercial reasons. In 1990s, when media landscape started changing, due to economic reforms in India, UGC also launched a 24-hour higher educational Satellite TV channel namely Vyas. Syllabus based ETV programmes, educational and enrichment TV documentaries produced by UGC media centers are telecast on this Satellite TV Channel. Till date UGC media centres have produced over 20000 educational television programmes, covering about 49 subjects.

### EDUSAT

With the growth of satellite industry and availability of transponders, the use of satellites for higher education in India started in September 2004, when Indian space Research Organization (ISRO), launched EDUSAT, which was the first satellite built exclusively to serve the educational sector. Using EDUSAT connectivity Satellite Interactive Terminals, also known as Virtual Classrooms have been set up across India. Experts deliver lectures from a particular teaching end, which is received by all the Virtual Classrooms across the country.

This added a new dimension to the academic environment of the universities/colleges because the best teachers available in the country are able to reach a vast heterogeneous community of students through virtual classrooms and share their expertise.

#### NME-ICT Project

During the 11th plan, MHRD, Government of India, initiated a major NME-ICT project for making use of ICT for sharing and distribution of knowledge resources. Under the project efforts are on to digitize the universe of knowledge in various electronic forms and connect the institutions of higher education with high bandwidth Internet connections and develop easy and affordable devices, like Aakash2, for accessing the knowledge resources. Development of e-Content based on the UGC model syllabus on all the subjects involving the best teachers in the country is going on at a fast speed. The idea is to provide a robust educational portal, in the name of SAKSHAT Portal, where students can get access to best educational resources directly relevant to their field of study. The material will help them broaden their mental horizons, increase their understanding of the subject matter and also help them pass exams with good grades. So far, e-courseware on eight subjects- Mathematics, Botany, Anthropology, History, Environmental Science, Vocational Studies (Photography), English and Hindi, have been completed and launched on the SAKSHAT Portal. The e-contents in another 61 subjects are under process at various stages. The content is being developed by the university and college teachers, vetted by senior Professors in respective subjects and reviewed at two stages, local and national, before it is launched on the portal. The e-contents include Videos, animations, graphics, glossaries, references, Frequently Asked Questions (FAQs), Quize, besides written material of about 15 pages. Once launched on the portal, blogs and discussion boards are added to facilitate interaction between the teacher and the end users. The students, for use at their own pace, can also download the entire e-content material.

#### The INFLIBNET

To bridge the digital divide Government of India also initiated a scheme aimed at making e-libraries, e-journals and e-books available to students enrolled in various educational institutions in the country. INFLIBNET (Information and Library Network) was launched to implement & maintain connectivity, facilitate access to e-material in the form of e-journals, e-books etc. UGC also started InfoNet, Information Network, connecting institutions with high bandwidth Internet. This has now shifted to NKN, National Knowledge Network, connecting Institutions for knowledge transfer and sharing. NKN targets to connect

all institutions engaged in generation and dissemination of knowledge in various areas with high bandwidth fiber optic cables. These institutions include: Research Labs, Universities and other Institutions of higher learning. Till date NKN is reported to has connected over 925 institutions, 89 labs connected. The NKN in collaboration with some centers of excellence have developed around 800 virtual experiments that are available on NKN network for simulation.

#### Issues and concerns

While technology and teachers together with other players are making a significant contribution in generation and dissemination of authentic knowledge resources for creation of a credible and vibrant knowledge society there are some serious issues and concerns that need attention.

VYAS TV channel of UGC is a satellite TV channel that can be seen only through DD, DTH and DishTV or cable. While penetration of DTH is still very low, the cable operators hardly carry this channel. So a very small %age of people benefit from this high quality educational TV programming.

Though the costs of electronic gadgets are coming down, the availability of technology and connectivity, especially in rural India, is still a problem. "Aakash Tablet, promoted by Government of India as part of an initiative to link 25000 colleges and 400 universities in an e-learning system was officially launched on 5<sup>th</sup> Oct. 2011. MHRD in April 2012 announced an upgraded second generation model called Aakash 2. But as of Nov. 2012 many customers who put in orders still had not received their tablets and were offered refunds. As of Feb. 2012, Datawind had over 1400000 orders but had only shipped 10000 units, i.e. 0.7 % of the order" (Wikipedia). Even at the beginning of 2014 we do not see the prevalence of these tablets in ordinary students' hands as was aimed. The transformation of India into knowledge haven can take place when each one of our students will have equal access to knowledge resources.

The Government has taken a host of admirable policy initiatives in the education sector that could potentially transform the country into a knowledge haven.

The emphasis on education in the budget has been on the rise in the last one or two years but a subsequent hike in the Budget 2013-14 has been different. "The budget proposes a fund outflow of *Rs 65,867 crore for education in 2013-14*. The Department of Higher Education has been provided an allocation of *Rs. 16,210 crore*. This amount also includes provision for various higher and technical institutions.

UGC has been provided Rs 5,769.00 crore, which is inclusive of allocation for Central Universities and Deemed Universities. For the "National Mission for Education through ICT", a provision of Rs. 400.00 crore has been made and IGNOU, which has been in the forefront of distance education, has been provided Rs.125.00 crore. There is a provision of Rs. 7,299 crore for Technical Education that includes assistance to IITs, NITs, IIMs, etc. Out of this, Rs.2,400.00 crore for IITs, Rs.1,300.00 crore for NITs and Rs. 350.00 crore for IIMs— this allocation is including new ones. Indian Institutes of Science Education and Research (including IIS, Bangalore) has been provided Rs. 859.50 crore.

Apart from the provisions for various ongoing schemes in the Technical Education sector, a provision of Rs. 700 crore has been provided for Polytechnics in the States" (Berlia, Sushma, 20014). These figures seem impressive, however at present only 4% of GDP is spent on education.

In the budget curtailment, the hardest hit this financial year will be two key initiatives of the human resource development (HRD) ministry,

One is the National Mission on Education through Information and Communication Technology (NMEICT), which aims to promote quality through technology-enabled learning. The low-cost Aakash computer tablet is a part of this mission. The Aakash project's Rs.700 crore budget could be cut in half. (Nanda, Prashant k. Jan.2, 20013)

So the enthusiasm with which then Minister for HRD Mr. Kapil Sibal announced the launch of Aakash and how an ordinary student will reap the benefits of technology seem shattering.

Currently India is experiencing a shortage of qualified and trained faculty, as around 1.2 million (OR 3 Lakh) posts of teachers are vacant in universities and colleges (MHRD report 2012) and the student/faculty ratio in India is 21:1 as against 12:1 required by University Grants Commission for postgraduate and 15:1 for undergraduate. (Chronicle Year Book). The main area of concern therefore, is the manpower crisis that higher education is facing and need is to ensure quality teachers. There has been no mention in the budget as to how it will be possible to bring in good quality faculty for the new institutions.

The use of virtual classrooms through Edusat is in true sense capable of removing the disparities of access to good teachers and remove the faculty deficiency in the institutions, but unfortunately it remains still under utilised even after 8 years of its launch. In the institutions where virtual classroom have been setup, the return path is usually blur and unclear, making the interaction very difficult

Statistics speak loudly and clearly. About seventy percent of India's population lives in villages without the basic amenities and infrastructure. While over 74% of the population is considered to be literate, note that the relevant definition of literacy that supports this statistic is being able to read and write simple words in any language, acquired with or without formal schooling. (Census of India) This criterion is so basic, that it is almost irrelevant in the context of Modern Technological education.

How can we expect equality of educational opportunity with the introduction of television, computer, internet etc as foremost gear for information dissemination and communiqué in contemporary global India? When India's 32.8% households don't have access to electricity, 52.8% households are without Television, 90.6% don't acquire computer's, Only 3.1 % households have Computer with internet connections, and only 63.2% have access to Landline or Mobile phone (Hindu. March.14, 2012). The inclusion of information technologies will further alienate the majority of India's population, and will provide only a shift from no accessibility to education to disparities inside the education. Compartmentalization and fragmentation of means of knowledge with E-learning, Online-Courses, and Online-Exams are now contributing to sustain the pre-existing social exclusion, and eliminate the marginalized sections of society from rat race of quality education.

Accreditation and certification of the e-content material remains a challenge. There is no system in place to properly evaluate the e-content and certify it with proper gradation. For marketing of e-content certification is a prerequisite.

## Conclusion

Today when India is making significant advances in knowledge networking and creation of e-resources, the benefits are not yet reaching effectively to people in distant areas. Non-the-less a good beginning has been made but what is important is to ensure that the benefits of technology reach to educational have not's. Then and only then can turn India into a vibrant knowledge society and benefit from the knowledge economy at the global level.

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