Information and Knowledge Management
ISSN 2224-5758 (Paper) ISSN 2224-896X (Online)
Vol 2, No.1, 2012

Effectiveness of Open and Distance Education and the Relevance of ICT: A North-East Indian Perspective

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Abstract

In today'sKnowledge Society, it is almost accepted by common agreement that open and distance learning (ODL) has enabled people to develop different levels of proficiency in various fields. The application of information and communication technology, commonly known as ICT in ODL has not only made teaching-learning an interesting activity, but has also helped in inculcating a practical mindset among the learners. ICT-enabled learning as a surrogate system of the conventional ODL has released a lot of avenues for the people. In this context, it is not surprising to find that the relevance of ICT in the education sector of the North Eastern part of India has been being increasingly realized in recent times. The National Knowledge Commission of India too that has laid unprecedented attention on the ICT sector and its use in educational purposes, thereby helping to restore the potentials of ICT to every individual hailing from each and every corner of India. This paper seeks to address some of the assumptions that ICT enabled teaching learning has the potential to drastically change the educational scenario of the North Eastern part of India.

Key Words:ICTs and Open and Distance Learningin North East of India

1. Indian Education: A Brief Survey

As a lifelong process, education has considerably changed the meaning of existence in the contemporary world. Education is termed as the bedrock of our socio-economic development as it providesnecessary and relevant knowledge on various fields, acquaints people with many need-based skills, and directs attention towards an achievable goal, thereby changing the whole socio-economic set-up of a country. In Indiatoo, such an understanding has resulted in the consideration of education as a vital pre-requisite for the development and the welfare of an individual in particular and the entire human society in general. Education is one of the main indicators of Human Capital Formation or Manpower Planning. So, in a democratic country like India, each individual has the basic right to get educated irrespective of all forms of disparities and discriminations. It is important to note that open and distance education has joined hands with the conventional face-to-face mode of education in order to translate the need to extend education beyond all barriers into a reality.

Democratization of education has received further fillip by the Constitution of India under the Article 45, which has made education free and compulsory for all children in the age group between 6 to 14 years. Still, the effect of the motto *Education for All*could not be tuned towardactuality for which the Government of India hadto take necessaryand futuristicinitiatives to bring education to every common household of the country. The Government of India even made provisionsfor making education aFundamental Right under the 86th Amendment of the Constitution in 2002. So, naturally, the achievements are clearly visible in the rapid growth in the number of a strong, literate, robustmanpower in India,a country known for being the largest elementary education provider in the world. It is also to be noted that India is the third largest country having a well-organized system of higher education after USA and China. But, in spite of all developmental measures, the alarming success rate has generated concerns from both the public and private providers of education in the country. While currently India is having a literacy rate of 64.28%, there is still a big gender gap as the male literacy percentage is 75.26% compared to the 53.67%of female literacy(according to the Census Report of 2001). But the gap between the male and the female literacy rate hassignificantlydeclined as seen in the Census report of 2011. Of late, the total literacy rate of India is 74.4% where the male literacy is

82.14% and the female rate is 65.46%, while the gap between the two is reduced to 16.68%. But, the high rate drop-out has posited other challenges in front of the policy makers of Indian education. For instance, the drop-out rates in primary, elementary and secondary level are 26.45%, 49.95% and 61.74% respectively in the year 2005-06. (GOI, 2005-06). In 2008-09, however, these ratesare reduced to 24.93% in primary level, and 42.5% in the elementary level respectively. Besides these, rural-urban disparity, occupational disparity, gender disparity, and inter-state disparity are some other factors hindering the participation of the common people in the education system which has raised serious concerns. Degree inflation has been seen as another big issue producing a large number of graduates without satisfying the required qualification necessary for an employment. Thus, we need such educational programmes as well as delivery processes that canmotivate the learners to upgrade theirskillsand develop human resource in the real sense of the term.

As far as the Indian higher education system is concerned, more and more emphasis is laid on educational planning and formation of a competent human capital. It is mainly because of the fact that the alleviation of poverty, guiding the youth in the right direction, and motivating them to adopt need-based educationetc. can be ensured only through proper manpower planning which will enhance the employability of our human resources. In the present situation however, the Indian education system has attained a high success rate in producing a youth power by enhancing theirskills and capabilities. It needs to be mentioned that demographically, nearly 51% of India's population is under 25 years of age, and 66% of India's population is under 35 years of age (according to the Census Report of India, 2001), a percentage gaining popularity as the demographic dividend.While discussing education as a means of human resource development, Amartya Sen has aptly termed education as "essentially a capacity building and it widens the choice of the people and empower the nation." (Elena Philip, 2008**)** Thus, in India,the major aim of higher education has been realized through the dissemination of knowledge, proper use ofinformation networks and mass media technologies, improvement of productivity etc. which have certainly ensured the prospect of sustainability and employability of the educated lot of the country.

Objectives of the Paper: Considering this background and the achievements of the Indian higher education system in general, an attempt has been made in this paper:

- To study the relevance of open and distance education in India, especially in the North East
- To trace the growth and applications of information and communication technology (ICT) in the educational institutions of the North East offering education mainly through the ODL mode
- And finally, to examine how ICT has brought in a remarkable change in the processes of educational transactions in the North East of India.

Methodology or Data Source: The paper is solely based on secondary information collected from different sources like books, journal articles, reports of various organization and commission under Government of India, articles published in national and local news papersas well as the resources available in various websites including www.kkhsou.org and www.idolgu.org.

2. Gross Enrolment Ratio:Still a Big Challenge for India

Although India has huge potential to improve demographically, it has less than 14% GER which is comparatively poor against the increasing population.While India hasset the target to meet 15% GER by 2015, and 20% GER by 2020,theaverage high income countries have a ratio above 60 percent. For instance, the corresponding ratio is above 80% in the USA, above 70% in Sweden, Norway, New Zealand, above 60% in the UK and Australia, above 40%in several European countries, and more than 20% in many developed and developing countries such as Mexico, Malaysia, Thailand, Chile and Brazil. There is even an inter-state variation in the development of higher education in terms of enrolment ratio. Some Indian States have expanded their higher education system fast, but many are still lagging behind. For example, the enrolment ratio is as high as 29% in Chandigarh, but less than 5% percent in Jammu and Kashmir (4.95%), 4.33% in Nagaland, 6.6 % in Assamrespectively. In fact Arunachal Pradesh has the lowest GER of about 3% (CABE Report, Government of India). These details show that the North Eastern Region ofIndia is far lagging behind in achieving thetargeted HR development.What India needs at this stage is to make room for more educational avenues at cheaper cost and with fast access. Therefore, until and unless there is marked reform

in the educational system and its various sectors, the upliftofthe social and economic conditions of this country will remain an unimagined dream. Thus, of late in India, there can be seen agreat demand to create a well managed educational institutions and infrastructure,sothat the dream of building a knowledge-based society soon becomes a reality. Our contention is that ICT-enabled teaching learning has emerged as the saviourin this situation, but the problem is that its capacity has not yet been fully realized, and its resources too have not yet been fully exploited.

So, the picture seems to be clear that demographically India has great potential, yet the growth of manpower and the level of its engagement in productive activities are yet to be fully harnessed. There is a huge gap in manpower planning in the educational institutions, at the same time the government too has failed measurably to provide employment opportunities to those who already have acquired the necessary skills. Besides this, there can also be seen considerable differences among the states and regions in terms of employment, gender differences in all stages of education, regional disparities in Gross Enrolment Ratio and literacy level etc. When we are to achieve the target of Inclusive Growth, the progress towards Millennium Development Goals, the formation of Human Capitalhas to be accelerated.In this context, proper education is the only way to achieve these goals as far as our need and desire are concerned. It is also because the educated people can use the capital more effectively, quickly adapt themselves with new technologies, and learn from their previous mistakes. At the same time, they are more flexible in their approaches and attitudes. That is why perhaps making education accessible to all has thus been considered one of the most important human rights in India backed strongly by the system of open and distance learning.

3. Achievements of Open and Distance Education in India particularly in the North East

It has almost been unanimously accepted that open and distance education is perhaps the most effectivemodeof teaching learning for today's generation. The 11th Five Years Plan has set the target of covering around 40% of the total number of students under the open and distance learning system. This system aims to redress social or educational inequalities and to offer opportunities to those who are deprived of education for reasons more than one,and to those who want to continue their education even after they have finished their formal education in the conventional mode. Open and distance education thus seeks to remove the barriers and restrictions placed on students, as evident in the conventional education system, by opening up learning opportunities in a wider perspective, and enabling learners to learn more congenially and periodically. In open and distance education, content delivery system, **s**tudent support services and a variety of evaluation methods have drastically changed the functioning of an educational institute. It's being a learner-centric approach, along with the print media, a number of non-print media such as radio, telephone, audio cassettes, video cassettes, computer and electronic media etc. haveprovided the scope for both synchronous and asynchronous interactions. Moreover, as a cost-effective mode of education, ODL has covered a wide section of the people in a society in a short while. Open schools and open universities have playedcrucial role in promoting the accessibility of education to all. Subsequently, this mode is also increasingly being termed as 'Independent Learning', 'Flexible Learning' as well as 'Self-Learning'.

Experiences in India has it that open and distance education provides greater scope for experiments and innovation for which flexibility can be inserted into the system to cater to the needs of a heterogeneous group of learners conditioned by the changes of time, and the requirements of the society. For example, choice-based credit system and convergence approach are the two relatively innovative means bringing home the advantages of open and distance mode of learning. These means have successfully assisted a modern learner to get educated even through the joint cooperation of both the conventional and ODL modes of education by enabling them to transfer their credit at their best choice andaccording to their own convenience. Thus, open and distance education at a higher level,has played a central role in bringing multifaceted human resource development and enabling learnersto adapt themselves to the paradigm shift in education in contemporary times, and providing various opportunities to get absorbed in the job market and self-employment.

In India, at present, we have 14 open universities out of which one is national and other 13 are state open universities. Besides, it has 12 open schoolsalong with 140dual mode providersof higher education. Indira Gandhi National Open University (IGNOU),the only central open university of India, was established by an Act of the Parliament in 1985, with the major objective to widenaccess to higher education. In the North-East of India, there was relatively lower number of enrolment in IGNOU in 1987, when the IGNOU regional center was established in Guwahati, Assam. But today, IGNOU has more than twenty two thousand students in the North East alone. But other than IGNOU, at present in the North East of India, we have total 12 conventional universities out of which six of them provide education through dual mode. These are

- Institute of Distance and Open Learning (IDOL), Gauhati University, Assam
- Directorate of Distance Education (DDE), Dibrugarh University, Dibrugarh, Assam
- Center for Distance Education (CDE), North-East Hills University, Shillong, Meghalaya
- Institute of Distance Education (IDE), Rajib Gandhi University, Arunachal Pradesh
- Directorate of Distance Education (DDE), Sikkim Manipal University, Sikkim
- Directorate of Distance Education (DDE), Tripura University, Tripura

If we take the case of the NE State like Assam where the history of ODL is not more than 15 years old, open and distance learning has solved many of the problems of outreaching. In Assam particularly, we have found that the system of open and distance learning was successfully introduced for the first time by the Institute of Distance and Open Learning (Formerly known as Post Graduate Correspondence School) in the Gauhati University campus in 1998. IDOL Gauhati University has contributed immensely to the HR development of India by producing more that 10,000 post-graduates in various disciplines. In recent times, Krishna Kanta Handiqui State Open University, the only state open university of the North East, established in the year 2006, is yet another ODL institute which has provided educational opportunities to the learners in a successful rate. It has been successful in motivating a total of 10,383 learners in 2010-11 to take admission in the Bachelor Preparatory Programme (BPP), and a total of 14,373 in all Bachelor Degree Programmes in 2008-09. (In 2010-11, the total no. of students taking admission in Bachelor Degree Programme being 15,033).This university has played prominent role in providing education even to the inmates of Guwahati Central Jail, Jorhat Central Jail, Abhyapuri Jail and BiswanathChariali Jail. Thus, in a democratic country like ours, we have to enjoy the basic human rights like the right to education, and the authority (the Government) should ensure education for all people by adopting the convenient mode of education system that will benefited this country in a large scale. ODL institutes in this region of India, have thus rendered great services to mass education in a large scale.

4. ICT and Its Use in Open and Distance Education:

Information and communication technology has rendered great services in the field of open and distance education in the whole of India. It has been realised that democratisation of education is possible only when the applications of ICT is ensured to its optimum level. Defined as a diverse set of technological tools and resources used to communicate,create, disseminate, store, and manage informationICTs have made the processes of teaching-learning interesting, and has also inculcated a practical mindset among the learners. In fact, the use of ICTs hasbroken the trends of the conventional ODL system by providing learners and experts comfortable places to discuss, share and exchange knowledge and information on various topicsthrough a global network. As we all can see, the growth and penetration of digital technologies in recent years have greatly influenced education and the educational practices in India. The proposed 11th five year plan suggests the allocation of more than 600 hundred crores of rupees specifically for integrating ICT in school education. The Indian Government also has plans to spend abundant resources on information and communications technologies (ICT) aimed at enhancing access and at improving educational quality in India through both the regular and the distance mode. As the Government increases its investments in ICTs for education, continued efforts, must be made to ensure that investments in technology positively impact all aspects of education, including intangible aspects such as community development, psychological and

cognitive developments, development of social skills, and development of critical and creative faculty.

Thus, while dealing with the issue of using ICTs in Open and Distance education, one cannot but refer to what the National Knowledge Commission (NKC, 2009) of India has to say. It has stated: "The biggest challenge in higher education, therefore, is the provision of quality higher education to the greatest number, at the lowest possible cost to the learner." What is also important is that the fact that the National Knowledge Network (NKN) also aims at establishing a strong and robust Indian network which will be capable of providing secure and reliable connectivity to all participating educational institutes. It is hoped that using NKN, all vibrant institutions of India will be able to transcend space and time limitations in accessing information and knowledge, and derive all associated benefits for themselves and society. Print media, Audio media, Audio-Visual media, Telecommunication and Multimedia Communication are the different stages of the use of ICTs in India,which are being experienced in educational transaction in all higher educational institutes throughout India.

The application of ICT has helped in spreadingeducation in two obvious ways—one is access, and the other is effective teaching-learning. It has given the facility to reach out to a large number of people effectively in no time. For example, with the help of transmission networks and satellite based communication systems an institute can access a large number of the population. After telephones, fax machines and mobile phones, and now computers have brought technologies closer to people. The latest trends in teleconferencing which includes—audio conferencing, video conferencing and computer conferencing, have made the application of ICTs much more productive and efficient. Subsequently, there emerged various other technologies to suit the requirements of the content being used for teaching.Electronic mail or E-mail so to call it has become the order of the day. Of late Web 2.0 technologies have greatly transformed the educational environment with various tools like Blogs, Wikis and Rich Site Summary (RSS) as student support services irrespective of the mode in which one is conducting the teaching. Other than these,E-portals and Social Networking Sites within the educational institutions are gaining tremendous popularity in bringing together all those concerned with a meaningful educational interaction. Communication technologies have, to a great extent, replaced both the teacher and the text books by placing the learners at their own in the learning process.The point we are discussing here seeks to address to what extent the ODL mode in India has adapted itself with the use of ICTs for enhancing the teaching–learning processes.

5.ICT-based ODL in the North East of India:

In an economically underdeveloped and educationally stagnant Indian region like the North East where ODL still needs expansion, ICT-enabled education may be considered a solution to the various problems of outreaching. As we all can see, the growth and penetration of digital technologies in recent years have greatly influenced the educational practices in North East India as well. Of late, the North-East, like the other parts of India, has experienced tremendous growth in the use of technology to enhance learning through the distance mode. Indira Gandhi National Open University (IGNOU) provides multi-channel, multiple media teaching-learning packages for instruction and self-learning. The educational radio and television channels like GyanDarshan, a fully digital 24 hour exclusive Educational TV channel, GyanVani, a unique Radio Service of IGNOU, have played a prominent role in supplementing the teaching-learning process. This exemplifies the feasibility of using ICTs to effectively enhance the learners support services even in the North Eastern part of India.

In the context of entering into ICT-based learning in Assam, the Institute of Distance and Open Learning (IDOL), Gauhati University as well as Krishna KantaHandiqui State Open University (KKHSOU), Guwahati, have taken a number of visionary initiatives. IDOL, GU has launched the first e-portal of the North-East namely www.bodhidroom.idolgu.org on November 13, 2009. This portal has thus become a key tool for the delivery and development of educational contents to be used by teachers, experts and students not only from the North-East but also from other parts of the world. Similarly, K. K. Handiqui State Open University has earned a distinction in the North East region by promoting the use of ICTs in higher education through its initiative to produce audio and audio-visual materials for the learners. It is also planning to launch its web portal shortly. Rightfully proposed to name this portal as **e-dristi**, this portal is intended to provide a

number of facilities like provision of audio book and e-radio service, audiovisual programmes and so on. Besides these, various social networks (such as www.snkkhsou.org, facebook, twitter) are gaining tremendous popularity among the students community. Of late, Community Radio has attracted many students from the Mass Communication sector. The first Community Radio Station of the North East of India "Gnan Taranga" has been set up under the auspices of KKHSOU, Guwahati. This is followed by "Radio Luit", which has so far been the second CRS of the NE set up by Gauhati University under the Institute of Distance and Open Learning (IDOL). Such marked developments bear testimony of Assam's looming large as a 'knowledge community' in a technology driven world. Other institutes, as far as the latest information goes, are also making their own ICT-based systems prevail very shortly. Such initiatives are sure to have a direct impact on quality of education as well as on the increase of Gross Enrolment Ratio in the North Eastern Region.

The applications of NKN, National Program on Technology Enhanced Learning (NPTEL), National Mission for Education through Information and Communication Technology (NMEICT), SIRD linked with Satellite hub for with SITs (Satellite Interactive Terminal) in the North East can bring in a marked difference in the functioning of the educational institutes of this region. KKHSOU is the first among the Universities of the North East to be connected with NKN. Following the Government announcement in the Budget Speech of 2008-09,an initial amount of Rs. 100 crores the year 2008-09 was allocated for establishing the National Knowledge Network with an objective to bring together all the stakeholders in Science, Technology, Higher Education, Research & Development and Governance. This has been a major boon in the education of the North East as it can be extensively used in areas like Agriculture, Education and Health. National Knowledge Network (NKN) will facilitate creation, acquisition and sharing of Knowledge resources among the large participating Institutions; collaborative research; country wide classrooms (CWCR) etc. and help the country to evolve as a major Knowledge Society in the true sense.

6. Measures to be taken for Ensuring ICT-based Education in the North East of India:

Information and communication technology is a very useful way to reach more and more people in less time. Besides, the basic purpose of open and distance learning is to make learning and knowledge reach the unreached. Therefore, the application of technology has a commendable impact in open and distance learning system. But the accessibility, equity, sustainability and the use of effectiveness should be considered while using technology for educational purpose. Therefore, some effective measures must be taken to ensure and extend the use of ICTs in open and distance education particularly in the North East of India. The measures should invite response not only from the administrators of education and policy makers, but also from every stake holder concerned with a sustained growth and penetration of ICT -based education in the NER of India. The following may be seen as some of the measures to be adopted for enhancing ICT-based education in the North East of India.

- It should be ensured that all ODL institutions of the North East of India are well connected with NKN and NPTEL networks. Through such networks all the institutes of can share knowledge and expertise.
- The Ministry of Human Resource Development of India has launched the project i.e. the National Mission for Education through Information and Communication Technology (NMEICT) for giving quality education to the learners in the shortest possible time so that it will be helpful in creating aknowledge-enabled working population. In North East, various courses have been designed by using such technology for the educational purpose. Besides, National Programme on Technology Enhanced Learning (NPTEL) provides E-Learning through on-line web and video courses in Engineering, Sciences and Humanities subjects. Although this mission of NPTEL is intended to enhance the quality of Engineering education in the country providing free online course ware, local institutes like Krishna Kanta Handiqui State open University and the Institute of Distance and Open Learning, Gauhati University can very well tie up with the premiere institute like the IITG (Indian Institute of Technology, Guwahati), the provider of resources through NPTEL, so that students can utilize those resources.

- The State Institute of Rural Development, particularly in Assam, has developed the satellite hub for spreading information and enhancing the capacities and skills of the people living in the state. Krishna Kanta Handiqui State Open university is the first open university in the north east, to think of launching some interactive educational programmeswith the link of Satellite Interactive Terminal of SIRDfor the benefit of the learners of the state.
- Content development is another crucial area that is too often overlooked. The bulk of existing ICT-based educational material is likely to be in English. Apart from this standard language, there is a need to develop original educational content in the vernacular languages too. Radio Programs, Interactive Multimedia Learning Materials on CD-ROM or DVD, Web-based courses etc. should adapt existing content, and convert print-based content to digital media. These are tasks for which educational content development specialists such as instructional designers, scriptwriters, audio and video production specialists, programmers, multimedia course authors, course editor and web-developers are needed. The audio and video cassettes which are developed by KKHSOU for the education purpose are to bemade available in websites like www.youtube.com.
- Various courses should be launched by using available ICTs in order to utilize the local resources in a productive form. Open universities as well as different directorates of ODL can play a significant role in the formation of functional literate (trained manpower) of the masses in the society.
- It is observed that in India, at present, there is a dire need to develop and rejuvenate the manpower through training for those who are mostly engaged in agriculture sectors. ITI for development of small scale industries, electricity, construction, servicing in motor vehicles and other services are other areas of concern in which there is dearth of trained manpower. It is observed in the NE that by enhancing such capabilities, the viability of the workforce can be boosted up in the authentic way for developing the productivity of the nation. These types of training can be held through the both conventional and distance modes by using proper application of ICTs. Therefore research should be conducted (before using ICTs) on the availability and quality of the physical and human resources for enhancing and accelerating the manpower in the society.
- Another challenge to meet is quality improvement and how it can be addressed through modernisation, research, and networking of the universities and other educational departments in this region through ICTs. Networking through local area network (LAN), wide area network (WAN), Information and Library Network (INFLIBNET) would also lead to increased academic activities and research.
- And finally, the universities of Assam and the NE must be able to remain autonomous in bringing in innovations in teaching-learning through Open Educational Resources. The emphasis should also be laid on conferring autonomous status even on the colleges of Assam so that they can provide means to interact across geographical boundaries of institutions, to improve infrastructure and to start mutual collaboration and cooperation among the higher educational institutes for optimum utilisation of available resources.

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