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INTEGRATION OF ICT IN ODL SYSTEM: ONGOING PROJECTS AND CHALLENGES

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Abstract:

Today, open and distance learning programs are gaining significance as an alternative mode of higher education and a strategy for the development of knowledge society. The induction of ICT has initiated a new revolution in open and distance education environment that radically changed its traditional methods and procedures of teaching and learning. The present paper attempts to study the importance of usage of ICTs in open and distance education; various initiatives of ICTs undertaken in India and the barriers and challenges faced by educational institutions in ICT usage, integration and diffusion. The study was carried out using a secondary data essential for the paper. The study found that the high hope and enthusiasm for distance education are inhibited in the nation because of inadequacies in essential services of ICTs namely infrastructures, cost, technical, financial awareness, policy framework, political-cultural environment of the country, sustainability and effective research and monitoring problems. All these required special attention of the educators, policy-makers and relevant governments for effective utilization and integration of technologies for educational purposes.

Key Words: ICT, Open and Distance Education, Initiatives of ICT Usage & Challenges in Integration

Introduction:

The ICT policy in Education aims at preparing youth to participate actively in the establishment, sustenance and growth of a knowledge society leading to all round socio-economic development of the nation and enhanced global competitiveness. ***National Policy on Education, 1992***

Education sector generally consists of formal (regular) and non-formal (distance) forms of education, and both are widely recognized as catalysts of social and economic development; and use of ICTs in the education sector has become a revolutionary agent of transformation.

The role of ICT in distance education has been emphasized since long at international level- UNESCO Report, *'Learning: The Treasure Within' (1997),* UNESCO World Conference on Higher Education (Paris) in 1998, United Nations Millennium Development Goals(MDGs), Dakar Framework for Action (2002),World Bank Strategy Paper on ICT(2002), and the Task Force commissioned under McKinsey & Company in 2003.

A great deal of studies both at national level and at international level supports the positive pedagogic outcomes of integration of ICT in distance education. As distance education is that form of education where the teaching and learning activities are separated in terms of time and space and in order to bridge those barriers of time and space, it must necessarily use a variety of ICTs in the learning processes.*"In the past, people came to the information, and the information was at the university. In the future, the information will come to the people, wherever they are" or in other words, it can be said that in the past people also came to the teaching while in the future; the teaching also will come to the people, wherever they are* (Noam, 1995).The information and communication technology has come to be regarded as the backbone of distance

education methods and procedures. Therefore, a proper mix of new ICTs should be applied and used for enhancing the pedagogic outputs of open and distance learning.

The present paper attempts to delineate the progress of ICT integration in ODL system and to bring out important barriers or challenges encountered while introducing ICT into education in general and distance education in particular in developing economies like India. The study is organized into following sections: Section I outlines the initiatives of the Indian Governments in collaboration with various International Agencies, Non-Governmental Organizations (NGOs), and private sector on the integration of ICTs in distance education; Section II discusses the challenges that inhibit the introduction of ICTs in distance education in the Indian context, and Section III presents conclusions.

Objectives:

The objectives of this study are:

- To study the ongoing ICT programs at various levels of education including distance education in India.
- To study the challenges faced by distance education institutes in the integration of ICT in India.

Data and Methodology:

The proposed study is descriptive in nature; and secondary data and information have been used as per the need of the study. To depict the relevant information simple bar diagrams and pie-charts have been used.

Section I:

Twelfth Plan aims at achieving the target of 30 percent Gross Enrolment Ratio in higher education by the year 2020; and this expansion should be inclusive and quality-oriented. Distance Education is imperative to achieve the objectives of Expansion, Inclusion & Excellence in higher education as it has an enormous potential to spread higher education opportunities beyond the brick and mortar world (National Knowledge Commission, 2009).Even in the sixties, the Planning Commission had acknowledged this fact as it was observed that the Formal Education system was unable to meet the demand for higher education in India(in the sixties).The Planning Commission in its 3rd Five Year Plan (1961-66) had recommended the introduction of distance/non-formal Education at the University level. Hence, distance education was adopted as an alternative mode of higher education and a channel to accomplish the targets of higher GER in higher education. The Open and Distance education system promotes accessibility for the remote areas, flexibility in learning and relaxed eligibility criteria. Therefore, great numbers of people opt for courses/specializations through this mode of learning, as it adds value to their profile and gives wider scope for career progress. The ICT tools act as a key drivers of expanding the quality distance education, and of enabling learning 'anywhere, anytime and anyhow'.

Today, the Indian distance education institutes aim at expanding at the rate of 24 percent during the period 2011-12. With the growing application of ICTs in distance education, the quality and credibility in terms of pedagogy has also improved. The boundary between the real and virtual environment is slowly beginning to fade with the new-age educational aids and tools. The online distance learning has become an enriching process with ICT as it has the potential to widen access to educational resources, improve the quality of learning, and improve management efficiencies of the education system. In addition, it is also essential that the country in order to reap the benefits of ICTs, than it must have a strong and robust network, which will be capable of providing secure and reliable connectivity to all participating educational institutions.

The ICT tools can be visualized under two categories i.e. Information Technology and Communication. In India, the growth of both these sectors has been commendable in the past few decades. India is considered to be pioneer in the software development and a favorite destination for IT-enabled services. Even Indian telecom has become the second largest wireless network in the world after China. Hence, it generates the curiosity and need to study the integration process of ICT in education sector in India.

Notable Initiatives on the Integration of ICT in Distance Education in India:

Over the last forty years, India has actively promoted the use of information and communication technologies (ICTs) in education (both formal and non-formal) and it has become an important part of policy framework on education. Since the early 1950s, Indian policy-makers have identified the need to use multi- media for promoting development and, implicitly for education also. The subsequent policy and plan documents on education, prepared from time to time, have chalked out a role for technology tools, especially in the distance education sector. Today, both the Central and State level decision-makers, have chosen to explore the use of computer and Internet based ICTs for education, and for distance learning. A large number of Initiatives using ICT have been taken for different levels of education in India, at state and national levels. The present section delineates the major initiatives taken at school and higher levels of learning since 1937 from the popular media radio, T.V, satellite, INSAT series to present day computers and internet.

School Radio Broadcasts Project - The foremost ICT sources to be used in India was the *radio*, through which school educational programs were started simultaneously in Delhi, Bombay, Calcutta and Madras far back in 1937. However, due to regional disparity in school curriculum, this project had not been successful for long. After independence, the *radio* proved to be a major educational medium for School Educational Broadcasts, Adult Education Projects**,** Farm & Home Broadcasts, University Broadcasts and Language learning Projects etc.

Gyan Vani–This is an educational FM *radio* project which was launched by IGNOU, NCERT, UGC, IITs, open universities, and by various Ministries. Through FM channels it reaches in 40 cities around the country for the purpose of educational development. Electronic Media Research Center (EMRC)is its nodal agency for proper implementation of the project and efforts are underway to create a global Gyan-vani project.

Gyan Darshan– As a collaborative effort of MHRD and IGNOU, Gyan Darshan has come to stay as a major innovation in educational *television*. The Electronic Media Research Center (EMRC) is the coordinating and transmitting agency for the programs. Regular transmissions of programs are made with a view to reach the remotest areas of the country.

Satellite Instructional TV Experiment (SITE) - This experiment was made in the year 1975 and concentrated on the broadcast of two types of programs namely development related programs related to health, agriculture etc. and educational programs in Hindi, Kannada, Telugu and Oriya.

Indian National Satellite Project (INSAT) -The INSAT, INSAT-1A and INSAT-1B were other important landmarks in the promotion and development of ICT aids in educational sector. Educational television broadcasts were inaugurated through the INSAT series of satellites with an objective of bringing the rural population into the national mainstream.

Country-wide Classroom Program- It was initiated by the apex body of higher education namely University Grants Commission. Nearly 10,000+ programs have been produced and telecast on National Television with an aim to upgrade the quality of

education in the country. The production of programs under this scheme is undertaken by the Electronic Media Research Centers (EMRC) located at various spots in the country.

Eklavya-It is a computer-aided self-learning project which uses internet and television to promote distance education in India. It provides multimedia software based on textbooks, which has been loaded on touch screen computers.

Education Satellite (EDUSAT)-The first Indian satellite designed and developed exclusively for serving the educational sector was launched by the Indian Space Research Organization (ISRO). This system was primarily for school and college education, but beside the formal sector, it was also supposed to enhance the system of distance education in the country. Many projects have been initiated to impart education through this interactive satellite system.

Network Resource Centers -The University Grants Commission also started several schemes, like the setting up of Network Resource Centers in higher education institutions to encourage and promote the usage of ICTs in curriculum development, to enhance teaching learning activities and to prepare the next generation for better adaptation in knowledge society.

Computer Skill Development Projects - The Government of West Bengal has initiated a number of computer skill development projects for the school and college levels students, as part of their vocational education curriculum, along with a broad-based computer awareness and training program for disadvantaged groups (SC,ST, OBCs, minorities) as part of their social welfare objectives.

Head-start Program-It is a joint venture of United Nations & Government of India in the state of Madhya Pradesh. The program aims to enhance education and literacy through computer-enabled multimedia for students and teachers in rural community schools that are set up under the Education Guarantee Scheme.

Tata-literacy.com - The Government of Andhra Pradesh is actively engaged in a partnership with Tata Group & Tata Consultancy Services on Tata-literacy.com, a portal designed to provide literacy in some of the poorest districts of the state of Andhra Pradesh.

Project Vidya-As a collaborative effort of Ministry of Human Resource Development, Government of India and Intel Corporation, it seeks to improve the quality of educational input and to provide both ICT access and training to students and teachers in selected government schools of the country.

TARAHaat-It is a developmental project, initiated by NGOs with an aim to increase literacy through ICTs tools and to provide quality education at affordable prices. The learner's age under this program ranges from 8 to 35 years which includes school and college students, unemployed youth, professionals, and women.

National Knowledge Network - The National Mission on Education launched with an aim to leverage ICTs for enhancing the teaching learning processes and for connecting the country's major research and educational institutes, colleges, and universities. The Mission has two main components namely the content generation and providing connectivity for students and institutions. The existing sources like the National Program of Technology Enhanced Learning (NPTEL) and the Multimedia Educational Resource for Learning & Online Teaching (MERLOT) contribute in this mission.

Sakshat Portal - It is a single window portal launched by the MHRD for all education-related needs of students, teachers, and lifelong learners. It provides a range of services like educational informational as well as interactive services like a discussion forum, one-on-one sessions with teachers, career counseling, and video conferencing facility.

The content is developed by representatives from institutions like IGNOU, Delhi University, National Institute of Open Schooling, and NCERT, as well as prominent academicians in the field.

Free and Open Source Software in Education (FOSS) - This software which is available free of cost, provide a database which help the educational institutions in tapping the full material or information's available in the open source domain. In this direction, FOSS.IN -is one of the largest Free and Open Source Software (FOSS) events of India in the world, which focuses on FOSS development and contribution. Further, the Ministry of Communications and Information Technology, Government of India also set up the National Resource Centre for Free and Open Source Software (NRCFOSS) with an aim to bridge the gap of digital divide in the country.

Media Lab Asia (MLA) –It is a not-for-profit Research & Development organization, set up by the Department of Information Technology, Government of India and works with academic and R&D institutions, and NGOs with an aim to develop relevant technology and culturally appropriate solutions for healthcare, education, empowerment of the disabled and rural connectivity etc. Some of the key education-related projects undertaken by MLA are like (1) Gyanpedia- is an interactive portal, initiated with the support of Digital Empowerment Foundation (DEF). It aims at boosting e-learning and e-education efforts in the country. (2) Virtual Laboratories for Life Science Experiments- started in collaboration with Centre for Development of Advanced Computing (C-DAC). It applies technologies (such as CDs and multimedia cards for mobiles) with a view to simulate a virtual classroom environment. Many other small-scale initiatives are also directed towards development of quality education in collaboration with Indian Institute of Technology and other research organizations in different states of the country.

Education & Research Network (ERNET) - It was set up with the help of UNDP as the leading education and research network in India interconnecting major higher education institutes of India. At present it is largest terrestrial and satellite network in the country with the objective of not only to provide connectivity, but to meet the entire educational and research needs of the institutions.

Information and Library Network (INFLIBNET) and Developing Library Network (DELNET) - Both are computer-aided networks for linking libraries and information centers in universities, deemed to be universities, colleges, UGC information centers, institutions of national importance, R&D institutions etc. in order to promote resource sharing among libraries in India

Multimedia Educational Resource for Learning and Online Teaching (MERLOT) - It is a free and open resource intended mainly for teaching staff and students of higher education. It provides online teaching and learning materials and allows sharing assistance and information with educational experts.

Commonwealth of Learning (COL) - It is an intergovernmental agency for promoting access and quality of distance education and open learning systems. It is voluntarily financed by the Commonwealth countries and India is third major donor after United Kingdom and Canada. The agency focused its attention on activities of developing study materials, telecommunication technology, and training and information service.

Akash (tablet PCs) Project- The ICT-enabled education in the form of Akash aimed to assured proper network access especially to rural areas and empowering student-community by providing quality based e-content. It is one of the most prestigious projects undertaken by MHRD in collaboration with different IITs, particularly IIT Mumbai, and the telecommunication major, Bharat Sanchar Nigam Limited (BSNL).

Section II:

Challenges facing in Distance Education:

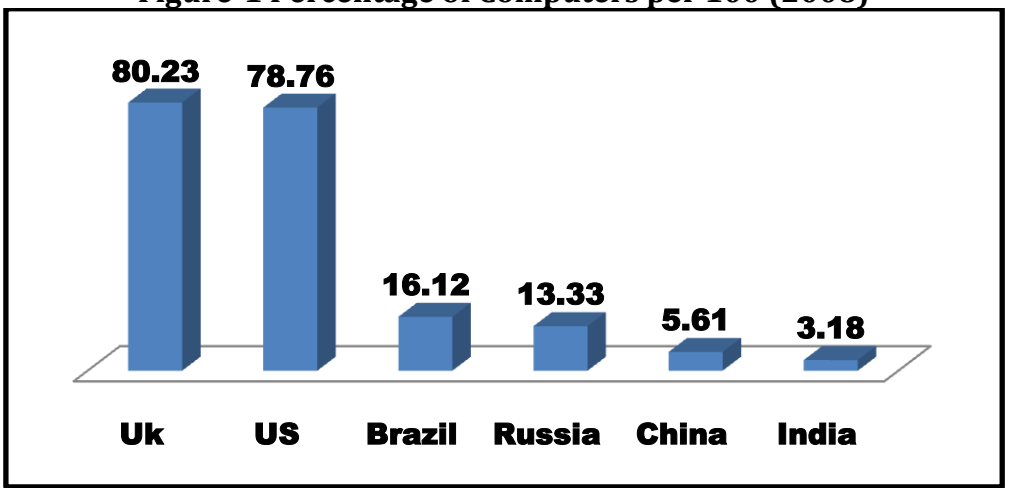
India faces a number of unresolved issues and challenges for the adoption of ICT particularly in the education sector. Although underserved communities in India are gaining access to computers and the Internet, their benefits are limited because of various barriers like infrastructural constraints, political and government policies, low quality networks, higher costs of machines, complex software, lack of trained professionals, lack of awareness regarding ICTs and shortage of funds for the effective development of technologies etc. All these issues and challenges need an in-depth study as they are the probable impediments in the effective roll-out and implementation of the ICT programs especially for educational purposes. Some of these bottlenecks and challenges have been discussed in this section:

Infrastructure-related Challenges:

The National Policy on Education in 1992 has emphasized on the use of ICT technologies to improve the quality of education (both formal and non-formal). At present the penetration to telephone is 48 percent and the radio is almost 100 percent in the country. Today, the IT and telecom sector have made noteworthy progress and it is ranked at 121st position during 2012 in the ICT development index (International Telecommunication Union –Measuring the Information Society, 2013).

Theoretically, availability of ICTs is prevalent in large parts of the country but on practical grounds it is surprising to see that the access to computer and internet especially in rural areas is very limited as well as very low as compared to other countries of the world. The low levels of computer and Internet penetration in India are clearly visible from the data presented in the figures 1 to 3.

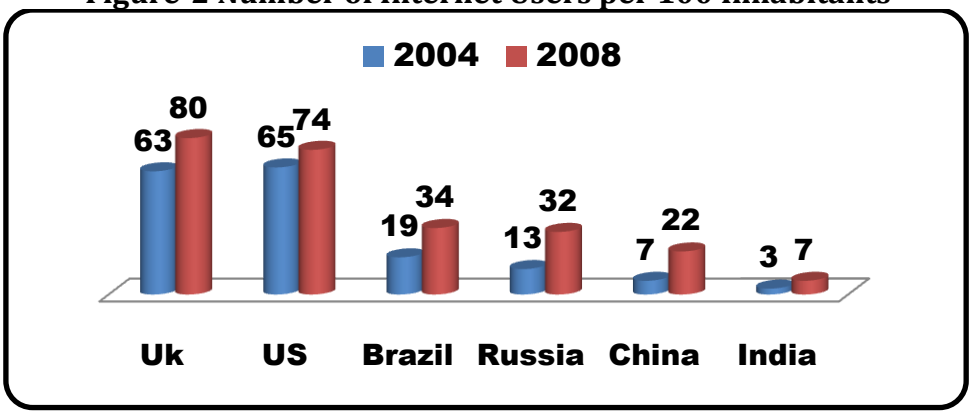
Figure-1 Percentage of Computers per 100 (2008)



Source: Calsoft

The glance of the figure no-1, on the number of computers per 100 persons reflects that the access rate of computers in India is 3.18 percent, which compares unfavorably with countries like UK (80.23percent), US (78.76percent), Brazil (16.12percent), Russia (13.33percent) and China (5.61percent). The same scenario holds true in case of percentage of Internet users as shown in figure no-2. There is just nominal increase in number of internet users per 100 in-habitants from 2004 to 2008 in India (from 3 to 7 in numbers) as compared with UK (63 in 2004 to 80 in 2008), US (65 in 2004 to 74 in 2008), Brazil (19 in 2004 to 34 in 2008), Russia (13 in 2004 to 32 in 2008) and China was7 in 2004 to 22 in 2008 (Calsoft, 2012).

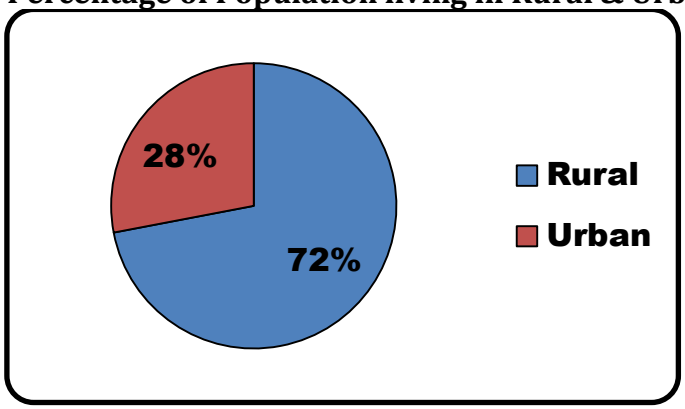
Figure-2 Number of Internet Users per 100 Inhabitants



Source: Calsoft

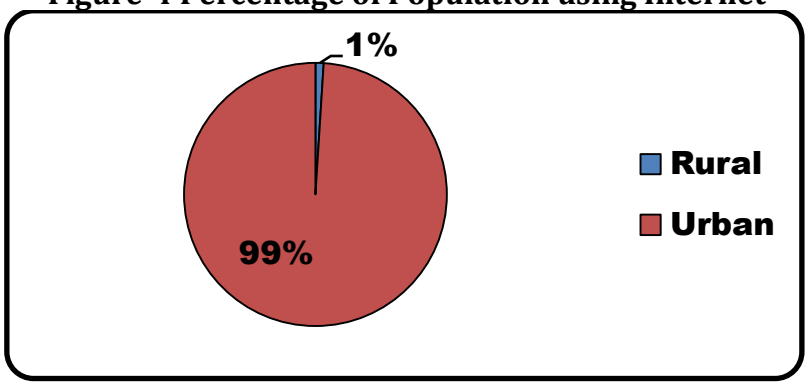
Next, the figures 3 and 4 on percentage of population living in rural and urban areas depict that around 72 percent people reside in rural areas that have only 1 percent access to internet whereas 28 percent are residing in urban locations that have mass access (99 percent) to internet (Calsoft, 2012).

Figure-3 Percentage of Population living in Rural & Urban Areas



Source: Calsoft

Figure-4 Percentage of Population using Internet



Source: Calsoft

Though distance education widen the access to educational opportunities to all the sections of the society and thereby help to combat the difference between rich and poor, but if the delivery of distance education is increasingly depending on ICT infrastructure, or on digital technology then it may result in widening the Digital Divide or gap between haves (those having computers and connected to the Internet) and haves-not's (those who do not have computers/Internet connectivity).

Therefore, while integrating the ICT programs in the country in general and in the educational system in particular, the educational administrators and planners

should take into account the practical realities of delivering different levels of access to ICTs programs, namely, the foremost and basic telecommunication infrastructure, appropriate rooms or buildings for the use of the technology, awareness of technical options proper electrical wiring, regular maintenance, safety and security etc. would be needed in the distance education systems.

Teacher-Related Challenges:

In India, according to the District Information System for Education (DISE) flash statistics (2009), less than 40 percent teachers have received in-service training during the period 2005–06 to 2007–08 in the use of ICTs in education. It represent that the aspect of the ICT capacity building of teachers is still lagging behind and pose serious hindrance not only in enhancing their skills and updating their knowledge with the new areas of teaching and learning but also impeding the absorption of new developments in educational technology. Teacher's capability in the choice and utilization of a particular application and program influences their confidence to implement ICT program into the educational curriculums. Insufficient understanding of the scope of an ICT resource in the knowledge-society leads to inappropriate or superficial uses of technologies in the development of educational curriculum (Punie & Cabrera, 2005).

However, all this can be improvised with proper and sincere policy-strategies of training teachers in the use of ICT programs, and their pedagogical application. Moreover, the teachers need to be convinced of the value and utility of ICT-enabled learning programs in the distance educational systems which enhance their teaching-learning activities.

Capacity-Building Related Challenges:

Educational administrators play a strategic role in the integration of ICT programs in distance education as they are among the important ones who provide the necessary conditions for the ICT initiatives and resources. Training programs and workshops are needed for improving the skills of the administrators and getting them involved in the process of integrating ICTs in education, thus, making improvement and enhancement in the teaching and learning activities (Farrell, 1999). Further, Pelgrum (1999) recommended the continuous training in the process of regular up-gradation of skills with the development of ICTs. The need of the hour is to sensitize the educational administrators with regard to their own responsibilities and to inspire them to inculcate the use of ICT tools as a part of their capacity-building programs. Hence, to make it more effective and sustainable; administrators themselves must have a broad understanding of this technology and about the various dimensions of ICT tools in distance education.

Technological & Technical Challenges:

The selection of appropriate media or technology and its efficient application in distance education act as another serious bottleneck. For example, in India during the late 70s and 80s, when TV was used as a medium of education and with that the Country-wide Class-room program was initiated by UGC for the benefit of the college students. But the access to TV sets acted as a major problem; and the end result of that program was that UGC generated a utilization of CWC rate of less than 10% (Rajesh, 2003).

Further, after the selection of particular technology, there are certain other factors that need the concern of policy makers, such as organizational and handling issues that often act as constraints before the smooth growth of ICT. Because, for this training is an important requirement but many developing countries lack enough skilled personnel's and technical facilities which in-turn hinders the growth of ICTs in distance education programs.

Hence, another logjam in the integration of ICT resources in distance education is the lack of proper technical support facilities in the institutions. Thus, if technology becomes the determining reason for the growth of ICT programs in distance education system then technical support is an important part of that program.

Content-Related Challenges:

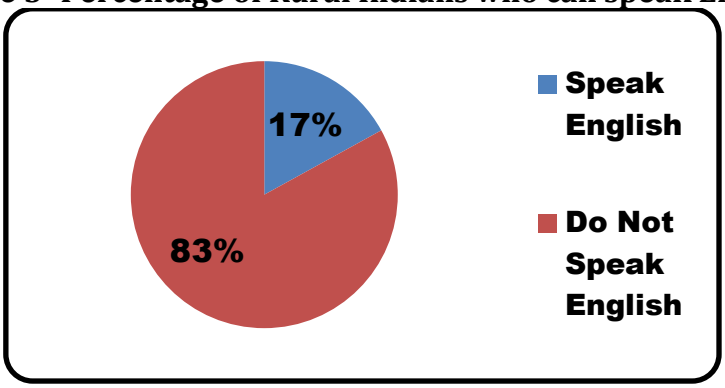
With the growth of enrolment rates of the scholars at a very fast pace, the dissemination/transformation of original educational content through digital media (e.g. radio and television programs, interactive multimedia learning materials on CD-ROM or DVD, Web content etc.) is a must. Therefore, like technical support, the educational institutions need the skilled content development specialists in the form of instructional planner or designers, scriptwriters, audio and video personnel, multimedia course programmers or web-developers etc. Naturally, this will add to additional cost problems in the implementation of ICT in distance education especially in developing economies like India.

Language-Related Challenges:

Language is another serious obstacle in the way of ICT incorporation in distance education. As English is the leading language of the internet and the bulk of the web-based educational material is available in English and this make it very difficult to develop the content-material in the regional languages especially in the developing countries where most of the students receive education in their native languages from the teachers who are also more comfortable in teaching in the vernacular medium. Moreover, the teachers (due to their excessive work-loads and limited time) resist in developing local need based content-materials.

As evident from the figure no- 5, that only 17 percent of the literate rural Indians (368 million totals) can speak English. Hence, linguistic barriers need to be overcome to improve the ICT adoption and diffusion.

Figure 5- Percentage of Rural Indians who can speak English



Source: Calsoft

Cost Related Challenges:

As ICT programs in education require large amount of long-term capital investments. The developing countries need to make judicious decisions regarding the type and level of models of ICT to be used in the education sector and thus maintaining economies of scale in the country. Hence, it raises the issue of cost-effectiveness of ICTs.

The cost of internet access for Indian homes accounts for Rs.30 per hour. Therefore, higher user charges of most of the modern ICTs make their use for open and distance education, a very costly affair (Rajesh, 2003).The distance education system has been targeted to enhance enrolment in higher education by an additional one million in the 12th Five Year Plan (GOI, Planning Commission, 2012). Therefore, the Directorates of Distance Education must also be strengthened in the usage of ICT to provide quality

higher education. Consequently, the technological infrastructure and cost-efficiency of the ICTs acts as a major roadblocks in its application in distance education. Therefore, the policy-makers in developing economies need to find out sustainable alternatives for ensuring cost effectiveness and easy accessibility of these technologies to the target group and also to help in the fulfillment of all the expected functions of educational system.

Inadequate Funds:

In India it is very difficult to accurately determine the government's funding allocations and expenditures for ICTs, since the money comes from budgets of various sources namely the Indian Space Research Organization, Agriculture Ministry's budget and from the Ministry for Human Resource Development. Therefore, a lack of data on proper amount of expenditure done by various sources in itself creates another barrier in integration of ICT in distance education. Moreover, emphasizing on the need of completion of Local Area Network (LAN) connectivity work, MHRD asserted that unless institutions across the country wake up to the inevitability of ICT, it would be difficult to allocate funds for them under the 12th Five Year Plan period. Following the recent trends of financing higher education in the post-reforms period in India, the distance educational institutions can enter into both short-term and long-term partnerships with the business sector, particularly with the IT industries, in order to help maintain operation and financial viability of ICT-based education programs. In this connection, it is important to note that though the government is also making resource initiatives for the integration of ICT in distance education, yet it still recognizes the fact that there are still some innate challenges that calls for immediate attention and action.

Time-related Challenges:

Application and usage of ICT tools in distance education is very tedious work because multimedia presentations are more complex than straight lectures, the preparation of that requires extra time which affects the academic environment of distance education. As it is very difficult for teachers to respond on all the queries, online comments and communications of the students; and on the other hand, students also find it monotonous to make in writing all those points and questions that would take a few seconds to say. Thus the delivery of education through distance mode with the help of ICTs seems to be effectively only if the distance educational institutions provide appropriate infrastructure to support online teaching-learning activities. Otherwise, students as well as teaching community will continue to prefer conventional methods of campus courses for learning at distance education institutions.

Systemic Approach-Related Challenges:

Lack of systematic approach in the implementation of ICTs in distance education is also a challenging task for the educators. As integration of ICTs is a complex process that needs complete conceptualization and well-defined goals from the beginning and this element is not always present in many higher education institutions as most of them have incorporated the ICT tools in education process without clear plans to guide the way. Hence, the proper and systematic procedures are the essential requirement for the application of ICTs otherwise lack of organized approach not only impedes the growth and development of quality educational process, but also tends to deter the effective utilization of even the existing ICT facilities and services and their importance in relation to their specific tasks.

Awareness-Related Challenges:

Transformation of distance educational institutions through ICTs, requires proper knowledge, complete awareness and full involvement of all those who are

directly or indirectly connected with educational programs and in the implementation process of ICTs. The problem of awareness and attitude issues regarding technologies may act as a crucial element in ICT usage. *'There is widespread belief that ICT can and will empower teachers and learners (…) However, there are currently very limited, unequivocally compelling data to support this belief.'* When examining the integration of ICT in support of achieving educational objectives, it can be said that, *after almost one decade of using ICT to stimulate development, it is still not fully integrated in development activities and awareness raising is still required (World Bank's Info-Dev Program, 2002).* Therefore, properly organized awareness programs, seminars, conferences, workshops, field visits, and short-term training courses etc. in the application of ICT tools in education can contribute maximum in raising the awareness and bringing change in the attitude of the people towards ICTs facilities and services. Because effective integration of ICT requires a revolution in thinking process about teaching and learning activities i.e. changing the way higher education institutions are planned, managed and organized.

Research and Evaluation Related Challenges:

The integration of ICT in distance education involves the issues of technology sustainability, comprehensive research, and regular monitoring and evaluation. Technological sustainability involves choosing technology that will be effective over the long term. In a rapidly changing technology environment, this becomes a particularly tricky issue as planners must contend with the threat of technological obsolescence. Thus, it is imperative that investment in technologies require in-depth research with proper monitoring and evaluation.

In developing economies like India, there are wide ranges of educational tools and technologies are available, but not all of them include a monitoring and evaluation component. Therefore, suitable research review, monitoring and evaluation procedures on the use of ICT for education and development have emerged as the prominent issues.

Government Policy & Political System Related Challenges:

The growth and application of ICT especially in distance education depends greatly on the insights and interest of the political system and on the degree to which government and policy-makers recognize its importance in promoting knowledge based society. As all types of educational system has to work under the political policies of existing governments. Thus, the ICT should always be selected in accordance with its end result that is the extent to which it can bring about positive academic out comes.

The Government of India has emphasized the incorporation of ICT in education with "Vision 2020" and in this direction; MHRD undertook several initiatives to ensure spread, development and optimization of ICT tools in Indian classrooms, integrating them with traditional frameworks of knowledge-dissemination. However, the ICT initiatives of the Government of India will reveal the considerable progress in the integration of ICT in education programs, but there is still a huge abyss between the projected progress and hard reality. Effective implementation of ICT in education is not merely a vision. Rather, it needs a proper plan, policies, and implementation.

Hence, a stable, committed and visionary political system and a strong government support is the essential pre-requisite for the adoption and dissemination of ICT throughout the length and breadth of the country for socio-economic as well as for distance education development.

Conclusion:

In nutshell it can be concluded that Distance Education has emerged as a powerful instrument for enhancing the opportunities of higher education or raising the Gross Enrolment Ratio of higher education to 30 percent by 2020. Moreover, ICTs

would act as a catalyst in the delivery of distance mode and procedures. Therefore, a well-planned and integrated policy approach of incorporating new-age technologies into learning environments is the need of the hour. The effectiveness of ICT-enabled distance education would depend on the efficacy of the system to deal with various barriers and challenges facing ICT integration into the system. It will set the pace of change and determine the degree to which distance learning becomes the foundation for a new instructional paradigm.

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