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Lifelong Learning: Helping India to Emerge as a Technology Driven Knowledge Based Society and Economy

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ABSTRACT

The changing landscape of learning is helping India to emerge as a technology driven knowledge based society and economy. The success of any knowledge based society and economy depends on promoting the acquisition of key competences and broadening opportunities for innovative and more flexible forms of learning for every citizen of the country. The necessity to adjust to the prerequisites of the knowledge based society and economy brought about the need for lifelong learning in India. The XI Plan Guidelines of University Grants Commission, India on Lifelong Learning and extension (UGC 2007) states, "The country"s economic performance depends critically on access to and the adoption of new technology and improving the skills of the labor force. Since 92.4% of India"s workforce is in the unorganized sectors, they need regular upgrading of skills to compete in the globalize economy. Equipping the labor force with relevant skills implies the need for creating a variety of learning and training opportunities."

Keywords: *Lifelong Learning; Emerging Society; Lifelong Education; Lifelong Training;, Open Distance Learning.*

1.0 ODL: Open and Distance Learning

ODL is changing the access to knowledge, the process of learning, and the delivery of education and training all over the world including Asian communities. Ramasamy & Selvaraj (2007) suggest that contributions of conventional methods of delivering education had limited success. Innovative open, distance and technology-mediated learning offer a more realistic alternative as it allows for open access to quality education and increases the capacity of the university to respond to growing demands for quality undergraduate and graduate education.

New innovative pedagogical and didactical approaches are needed to take into account the future learning needs and changing skills and competences necessary for employment, self development and participation in a knowledge-based, digital society. ICT provides the means to support personalization, where learners are also considered to be knowledge builders and creators and not just the recipients of transmitted knowledge (Commission of European Communities 2008).

Following these dictums, the need of the hour is that we will focus about possibilities of using key ODL technologies -Print medium, Radio, Television, Mobile Telephony, and Internet and Computer networks for promoting lifelong learning in India. The following strategies may be useful to fulfil this task.

ODL system with its flexibility, cost effectiveness and time-tested methodologies, has passed through a long history resulting in democratizing of the educational opportunities. It is a system which has the capacity to contribute for the improvement of access, equality and quality to meet the growing needs of the educational demands. With the advancement of Information and Communication Technologies for imparting education; Print based learning is being supplemented by Electronic Media-based, Satellite net work multimedia learning. It is a multi-model, multilevel process and learns to coop up with the new technology innovations. Learner is now able to obtain needed learning subject information quickly and efficiently to under stand the subject matter at any time and at place and anywhere.

ODL has become more home-based or work place based than educational institutional based. New technologies have enormous possibilities and potential to make the distance learning more interactive and interesting. Learner"s choice is the mainstay of the distance education. In tune with the changing needs of the students, the open and distance education institutions mould their courses, contents

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media and technology to suit the different learners in Open and Distance Education which becomes a way to pursue lifelong education. Open Learning has an important role to play by exploring new frontiers and developments in Open and Distance Education. The prominent users of this mode are worldwide in general and Asian region in particular. The growth of the ODE system in India and throughout the world has been phenomenal, particularly during the last two decades. Rapid changes have taken place in the practice of Open and Distance Education, mainly driven by changes in Information and Communication Technologies (ICT). The revolution in ICT coupled with the social demand for education for all and the need for lifelong and continuing education have resulted in the new vistas of open learning for knowledge society.

The process of enabling students to achieve their learning goals involves distinguishing between different kinds of learning and different kinds of learners. Education is making shift from individual to group education, to mass education, to global education, to networked education and to distributed education. Open and Distance Learning (ODL) offers quality education to meet the current and emerging needs of the students by widening the access to higher education and by functioning as a catalyst to bridge social, including digital divides and to build a developed India through its technical, vocational, professional and liberal education programmes.

Learners are various types and some of them are

- Persons deprived of admission in the conventional universities.
- People engaged in service, business or agriculture.
- The aged and the physically handicapped who want to improve their qualifications.
- People living in rural and remote areas
- Working people
- Women, especially housewives traditional and custom bound.
- People belonging to deprived sections of the society
- Prisoners desiring to get higher education.
- Army, Navy, Air force employees.

With the introduction of Information and Communication Technologies newer methods of imparting instruction in distance teaching i.e. use of multimedia and Information and Communication Technology based packages in Open Distance Education has become imperative. The Open and Distance Learning Institutions have to search for new ways to educate and keep learners up-to-date and to the brim. The following are some of the methods of teaching used in Distance Education to meet the challenges of fast changing needs of the learner. Print material, telephone, cell phone, Fax / radio, television, audio and video programmes/ computer based education. Learner is in a dilemma with respect to what to learn, when to learn and how to learn in the changing global scenario.

1.1 What to learn

Learner can choose courses and relevant programmes as per his own taste, ambition and future rospects. This is learner-centered education.

1.2 When to learn

Open Learning and Distance Education is a lifelong learning process which is User friendly, Cost-effective, Employment oriented and suits the Learner needs and learning styles

1.3 How to learn

It has flexible admission rules, individualized study, flexibility, in terms of place, pace and duration of study, to provide an alternative non-formal, cost effective channel for obtaining tertiary education to those who seek it. With the impact of emerging technologies, we are moving in cyber age of education where the students and the teachers will share their roles. Learning becomes an interactive process, where the learner guided by the lecturer and the facilitator initiates the learning process, gaining direct access to various sources of information through the use of the new technology tools. Learning, is a lifelong process, is effective by adding quality to learning practices, managing inherent skills to plan resources and schedules and adopting the right strategy at the right time. Learners in the Distance Education mode are able to select the mix of study modes that best suit their own learning needs and study preferences. The main mode of delivery has been print material supported by face-to-face contact sessions, radio and audio cassette tapes, video tapes and TV programmes. These are the media, which have been readily made available to learners in their own homes. The unprecedented development of distance education programmes at universities of several countries that have an advanced communication infrastructure is recognised and appreciated. ODE develops structures and courses to

suit to its learners" needs. The possibilities of new vistas of learning in virtual space and flexibility of teaching- learning in the ICT aided ODL. The ICT based ODL by way of introducing virtual learning would pave the way for a new era of distance learning in the world.

2.0 Earn while you Learn

It is an innovative course being offered by the School of Distance Education, Andhra University in association with the HSBC, Visakhapatnam. The novelty of the Programme is that students start earning from day one of their enrolment in the School. The HSBC pays them a stipend of Rs.3, 000/- per month in the first year of the programme besides paying their tuition fee to the extent of Rs.10, 000/- per annum to the School. The candidates have to pay Rs.10, 000/-in addition as tuition fess per annum. After completion of the Course, the student will be employed by the HSBC, if found suitable. The main objective of the Programme is to equip the students with necessary skills to face the highly competitive business environment with confidence. Towards this end the students are exposed to practical training in a corporate environment wherein their theoretical knowledge is reinforced by practical exposure. Doubly rewarding - gaining valuable work experience, and earning while pursuing education. (SDE, 2006) In the competitive world Open Universities are also providing more number of courses to the learners to learn while earn. (Parameswara. Rao, 2005)

Table 1: The following are Educational Technology Gadgets Creating the Environment for Effective Teaching – Learning in the Open and Distance Education

Sl. No	Instruction	Mode
1	Print Media	SLM Booklets, Posters, News Print
2	Audio /Visual Media	Telephone, Cellular phone Fax Radio, Microwave Broadcast Audiocassettes/CD
3	Television	Videocassettes/CD/DVD Tele courses
4	Computer/Internet	E-mail Internet - On line learning World Wide Web access Soft ware Programme/ CD-ROM
5	Satellite Delivery Media	Digital Radio/Television Video/Teleconferencing Mobile - learning

Source: Government of India, IGNOU Delhi University, promotes and survey for lifelong education and open distance education in India.

3.0 Differentiated Instruction

ODL system with its flexibility, cost effectiveness and time-tested methodologies, has passed through a long history resulting democratizing of the educational opportunities. It is a system which has the capacity to contribute for the improvement of access, equality and quality to meet the growing needs of the educational demands. With the advancement of ICT for imparting education print-based learning is being supplemented by Electronic Media – based, Satellite net work multimedia learning.

Table 2: Option to the Learner to Choose

Course Materials	Courses
Printed Study material	Most of the Courses
Audio tapes	Music and Language Courses/other courses
Video tapes	Science and /other courses
Diskettes	Statistic courses
C-D ROM or online study **M**aterials	Computer courses/other courses

Source: Lifelong Learning Education Department, IGNOU India

It is a multi-model, multilevel process and learns to coop up with the new technology innovations. Learner is now able to obtain needed learning subject information /knowledge quickly and efficiently to understand the subject matter at any time and at any place and anywhere.

Print media is one of the well established educational medium in India. As a result of the increasing rate of literacy, the number of people reading newspapers and magazines are increasing in India. Taking advantage of this situation, following strategies may be adopted to utilize print medium for promoting lifelong learning in India.

A. Print medium based learning

- News papers and magazines may publish specific "Lifelong Learning" sections on regular basis. Through these sections, they may provide details about institutions offering lifelong learning programmes, training opportunities, lifelong learning guidance and other relevant information to the learners.
- Print media can make a difference by giving prominent news coverage and dedicated space to the lifelong learning. The magazines may also publish specific lifelong issues targeting adult learners and workers.
- Print media may also play an important and determining role in educating, creating awareness and transmitting crucial information about lifelong learning issues so that adult learners and workers become aware, remain alert and take measures to learn on continuous basis.

Print medium is the core medium for distance learning. Besides this the ODL Institutions adopt multi-media approach for Teaching –Learning strategies. In the initial stages the learners receive teaching material 80 per cent print-based, 10 per cent broadcasting (Radio and Television) and 10 per cent face-to-face mode of learning (R.K. Rao, 2005). At present the increased availability and accessibility of Distance Education enable the learner to choose the right medium for the right teaching for the right structure of the programme.

There are now multiple communication tools available to the student community. Open and Distance Learning networks have a very great role to play in realising this opportunity for all. Radio technology was the first to be employed for distance learning followed by television and satellite communications. However, it has been the advent of the computer and micro-computer and computer networks, especially the internet that has revolutionised the practice of distance learning with World Wide Web access. E-mail and software programmes have changed the distance-learning environment. Communications, using these new technologies, are less expensive, more interactive and more powerful.

Media selection is largely based on needs of programmes and courses within the programme. The media that is believed to be most effective is usually selected, hence the use of both cheap (Print) medium and expensive (Video conferencing) medium to achieve the most effective delivery.

Learner has more options to choose what he likes to educate by himself. Learning methods vary from individual to individual in distance education depending upon the time and space.

B. Radio programmes based learning

Radio broadcast, both for information and education, is fairly old in India. Expansion of radio transmission has been rapid, and today there are over 197 radio stations, including 184 full-fledged stations, 10 relay stations and three exclusive commercial radio stations reaching 97.3% of the population and 90% of the geographical area (GOI 2002; 2003). The radio has immense reach in India and radio listening still remains an important source of information for a large number of listeners particularly in rural India.

Considering the popularity of radio, following strategies may be adopted to offer radio supported lifelong learning.

- Phone-in-programs by Radio particularly on *Gyan Vani* may be helpful to create awareness and provide information about lifelong learning. These programs will help learners to put up their learning needs and queries with anchors/experts.
- These programs will further help subject experts to offer lifelong learning counseling to the willing learners.
- Government and other agencies may also use radio to popularize and advertise about existing lifelong learning programmes and opportunities to masses.
- About seventy percent population of India lives in rural sector and they mainly require lifelong

information about agriculture and related occupations. Radio can help a lot in this aspect as radio listening is quite popular in rural India. Taking this trend in side, programs based on different aspects of lifelong learning programs may be aired on Radio on regular basis.

Radio as an instructional media has many merits as much more up to date information can be disseminated to the learners through broadcasting. It is particularly useful for those living in remote areas. Even the illiterate and the blind can follow and get benefited by radio lessons. Radio broadcasting is considered to be a highly important and cost effective material to large number of people.

Radio lessons form supplementary part of the course material of most Open Universities and Distance Education Institutions, which are found to be effective means of instruction for the distance learner i.e., music lessons. A well-coordinated network of radio programmes would greatly help the successes of distance education. In recent times, radio lessons are gaining much popularity among the distance learners.

This is a common, cheaper and effective communication media. The radio programmes are arranged for the learners in various forms such as talks, interviews, dramatization and quiz etc. The radio has been used in this country to supplement class room teaching in distance education (Parameswara.Rao,2004). It is an instrument, which can reach distance places, places which even the postal system cannot reach.

Open universities are using radio programmes in different ways in distance education in India. IGNOU broad casts audio lessons through its Gyan Vani programmes. Gyan Vani (the educational FM net work of India).Gyan Vani aims to enhance and supplement the teaching-learning process by reaching the learners through a low cost mass medium using interactive formats. As many as 26 FM radio stations are devoted exclusively to education and development through regional production and broadcasting and interactive radio counselling also.

This facility is being offered to bridge the gap between the institution and the learners through instant response to their academic and administrative queries.

Dr.B.R.Ambedkar Open University, Hyderabad is also using interactive radio counselling for delivery of radio programmes since 1983 on Hyderabad "B" channel. Kota Open University has started phone-in radio counseling, Dr B.R.Ambedkar OU also using interactive radio counselling for delivery or radio programmes.

Netaji Subhas OU is also conducting Radio counselling.(DEC,2001) Thus Open Universities are using radio programmes extensively when compared to the dual mode distance educational institutions in India. A few conventional correspondence institutes are also using radio programmes through Gyan Vani to clarify subject doubts and also administrative queries.

Interactive radio counselling: (IRC)

Radio is considered as one of the earliest communication technology, which provides interaction and live counselling to distance learners. Radio broadcast in distance education is becoming a popular means of communication, because of its universal accessibility.

For the benefit of the learners Distance Education Institutions introduced the Interactive Radio Counselling. Learners have the opportunity to interact with resource persons from phone to clarify subject doubts and also to obtain up-to-date information. There are already 110 million radio receivers available in India of which one-third are covered by FM Radio transmission.

More than two-thirds of FM Radio stations are covering rural areas. Spreading education and information in the field of agriculture and allied areas like rural development, animal husbandry, community welfare, environment, energy conservation, natural resource conservation and management etc. The target audience can be classified as

-Farmers, extension workers, field-level functionaries
-Agriculture scientists, researchers and policy makers
-The general public.

The IGNOU offers one hour of „live" Phone-in counseling programme weekly through the National Net work of All India Radio (AIR) and

Gyan Vani stations where studio invited experts clarify students" queries put across to them from their home via telephone.

This value added services is presently being offered through nearly 188 AIR stations every Sunday from 4.00 to 5.00 p.m and toll free conferencing facility is available to the learners in 80 cities to interact freely with the experts.

This facility is also extended by various distance education institutions in India with the assistance of Gyan Vani Radio stations.

Broadcast through electronic media for the dissemination of knowledge, According to an assessment, there are approximately 81.6 million T.V. homes in the Country of which 38.7 million are rural TV homes which would be benefited by Doordarshan Programmes. There are 41.1 million exclusively terrestrial homes including 25.4 million rural homes where only doordarshan programmes can reach and a cable TV base programme will not have much impact.

C. Television based learning

As per the TAM Annual Universe Update (2010), India now has over 134 million households (out of 223 million) with television sets, of which over 103 million have access to Cable TV or Satellite TV, including 20 million households are DTH subscribers. In Urban India, 85% of all households have a TV and over 70% of all households have access to Satellite, Cable or DTH services. TV owning households have been growing at between 8-10%, while growth in Satellite/Cable homes exceeded 15% and DTH subscribers grew 28% over 2009. It is also estimated that India now has over 500 million TV channels covering all the main languages spoken in the nation.

The above statistics clearly reveal that television offers number of opportunities to promote lifelong learning among masses in India. The following strategies may be adopted to utilize the immense potential of television for lifelong learning in India.

- People in India love to watch soap operas. This tendency of Indian viewers may be exploited for the cause of lifelong learning. The program producers for television may be requested to especially portray workers and adult learners in their soap operas and show the importance of lifelong learning in their life.
- The teleconferencing mode of television may also be utilized to provide information and counseling about lifelong learning. The television channels may also invite lifelong learning experts to answer about lifelong opportunities to masses in India.
- Now-a-days reality shows on television in India are very popular. These shows have been used to encourage and excel people in different walks of life. Considering this success, reality shows for lifelong learning practitioners‟ and workers may also be organized. These shows will motivate people to indulge in lifelong learning activities for benefit of society and economy.

D. Mobile telephony based learning

Talking about role of mobile phones in the non-formal and informal context among rural women from resource poor communities, Balasubramanian et al. (2010) suggest that the transition from powerlessness to empowerment is possible in non-formal learning settings and low-cost technologies offer means to accelerate this process in the context of social capital.

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Mobile telephony is one of the most used communication means in media. The Indian Mobile subscriber base has increased in size by a factor of more than one-hundred since 2001 when the number of subscribers in the country was approximately 5 million to 635.51 Million in June 2010 (TRAI 2010).

Agarwal (2005) observes that phone networks, including cellular phones, leading to “silent” communication revolution enabling millions to overcome the literacy barrier in communication.

Companies and organizations are using mobile signals to endorse their products, services and messages. Considering these observations, following strategies may be adopted to use mobile phones to promote lifelong learning in India.

- Mobile in India has been frequently used for Short Messaging Service (SMS) and Multimedia Messaging Service (MMS). These messages are also available in national and regional languages. The government agencies, educational institutions, and other related agencies may send „lifelong learning opportunities messages‟ to mobile users with a request to spread these messages to potential lifelong learners.

- Mobile companies offer the facility of mobile alerts to their customers. Under this facility, companies alert their customers about e-mails, latest events and other required information as per the need of the customers. The lifelong learning providers may use this feature to provide regular information about lifelong learning and training opportunities to learners.

Teleconferencing

Live interaction or teleconference is yet another and the latest intervention in the Distance Education System. It provides human face to the otherwise isolated and distant learner. The viewers can directly access the teacher/experts in the studio during an ongoing programme, express their views and clear their doubts regarding specific topic issues as the programme goes on.

Teleconferences are regularly held for various educational needs like tele-counselling, tele-teaching, tele-collaboration, educational seminars, etc. As far as the interaction between the teaching and the learning ends is concerned during an ongoing sessions, this is done through communication, via STD telephone/FAX/e-mail installed at the learning ends, that, is received in the studio at the up-linking end, so that the resource persons can respond to the learning in real time.

In order to infuse interactivity in distance learning, one-way video and two-way audio (satellite-based interactive system operating on the C-Band of INSAT 3C) teleconferencing facilities is being offered through Gyan Darshan 2.

Important nation-wide programmes for the IGNOU learners, lectures by eminent experts/dignitaries, discussions with RC staff,. Besides, tele-counselling sessions are conducted for select application oriented programmes such as nursing, information technology, MBA etc., which the students get ample opportunities to interact with the faculty. Besides the IGNOU, many other institutions also use this facility for reaching out cost-effectively to their learners scattered all over the Country.

E. Internet and computer networks based learning

The researches world over shows that internet has immense potential and is one of the best medium to spread lifelong learning. Jullien & Branchet (2010) noted that the Internet is a significant source of an increasingly diverse body of knowledge, a sort of "one-stop shopping paradise" for those seeking to learn: theoretical knowledge like foreign language or music theory or practical, hands-on skills. A few examples might include someone seeking guidance concerning a cooking recipe, an individual attempting to solve a technical problem related to his personal computer or someone needing to repair his washing machine.

Overall, 71 million users accessed Internet in India in year 2009, with 52 Million “active” users who accessed it at least once in a month. Small towns contributed to only 5% of internet usage in year 2000, which over a period of 9 years has grown to healthy 36% and for the first time has overtaken the Internet usage in Urban areas (Prabhudesai 2010). Considering the reach and popularity of Internet in India, following strategies may be implemented to use internet and computer networks for lifelong learning in India.

- The apex agencies involved with lifelong learning in India may launch „Lifelong Learning Portal‟ in national and regional languages. This portal may be used to provide different kind of information related to lifelong learning and lifelong learners.
- Agencies may also use Internet to offer on line lifelong learning program/training mainly focusing to equip learners for new skills and demands of labour market. The agencies will be required to regularly review and update these programs according to the need and demands of learners.

The use of internet will also provide number of opportunities to lifelong learners to share their expertise, wishes, concerns and demands about lifelong learning by using e-mails, chat and blogs This exchange of views will empower learners to practice lifelong learning via cooperative and active learning.

4.0 Computer Conferencing

Computer conferencing is also known as audio-graphic conferencing and it requires electronic e-mail as one of the interactive medium. Computerconferencing is a communication by written message stored in PC and is accessible by a target group of students at any time. (Ashok K. Kalia & Sanjeev Tomar (2004)

5.0 Computers Application in Distance Education

Now-a-days computers are very common in learning process. Computer technology is gaining ground very fast. This medium is used for transmission of knowledge and information. Information technology, Management courses and science courses use a variety of teaching-learning strategies that are participatory and interactive. More and more learners are getting access to computers and Internet. Computer applications for distance education fall into four broad categories

Computer assisted instruction (CAI) uses the computer as a self-contained teaching machine to present discrete lessons to achieve specific but limited educational objectives. There are several CAI modes, including drill and practice, tutorial, simulations and games, and problem-solving.

Computer managed instruction (CMI) uses the computer‟s branching, storage and retrieval capabilities to organize instruction and track student records and progress. The instruction need not be delivered via computer, although often CAI (the instructional component) is combined with CMI.

Computer mediated communication (CMC) describes computer applications that facilitate communication. Example includes electronic mail, computer conferencing and electronic bulletin boards.

Computer – based multimedia Hyper card, hyper media and a still-developing generation of powerful, sophisticated, and flexible computing tools have gained the attention of distance educators in recent years. The goal of computer-based multimedia is to integrate various voice, video, and computer technologies into a single, easily accessible delivery system.

Computers increase access. Local, regional, and national networks link resources and individuals, wherever they might be. In fact many distance education institutions now offer complete under graduate and graduate programmes relying almost exclusively on computer-based resources. Http ://www.uidaho.edu/eo (1995) The technology is changing rapidly.

Computer technology evolves so quickly that the distant educator focused solely on innovation –not meeting tangible needs -will constantly change equipment in an effort to keep pace with the “latest” technical advancements. With access to the Internet distance learners can use the e-mail, bulletin boards, World Wide Web to acquire basic knowledge and understanding to upgrade their education qualifications and to develop their skills to acquire better positions in their work place.

Electronic mail (e-mail) like postal mail, e-mail issued to exchange messages or other information with people. Instead of being delivered by the postal service to a postal address, e-mail is delivered by internet software through a computer network to a computer address. By using e-mail for informal one-to-one correspondence. Feedback from the instructor can be received more quickly than messages sent by mail. Students can read messages at their convenience and easily store them for later reference.

Bulletin boards – many bulletin boards can be accessed through the Internet. Two common public bulletin boards on the internet are USENET and LISTSERV.

USENET is a collection of thousands of topically organized “news groups”, covering everything from super computer design to bungee cord jumping, and ranging in distribution from the whole world to single institutions.

LISTSERV is discussion forums on a variety of topics broken out by topic or area of special interest.

Web-based learning

In distance education, in web -based learning, the distance learner is interacted through web. The web based learning has an advantage to the learner has the freedom to learn any time, at any place and at his own pace and convenient to him. The major thrust of flexible learning is the use of the World Wide Web to support teaching- learning in the following ways:

Web- based – where the course is dependent on the content and activities on the website.

Web- supported – where the web site plays a significant role in the course by providing analternative means of accessing learning materials and communication channels.

Web- enhanced – which improves the learning experience by enrichment and interaction in a way not available through other resources In developing web resources for teaching and learning, it is considered important to maintain a recognizable look, feel and navigation, while providing the maximum opportunities for materials to customize to meet the specific needs of individual programmes and courses. Learner can access course material, receive assignments, submit response sheets and seek feed-

back through internet/CD (Web instructions emulated on CD). CD- based video support programmes to facilitate the teacher and the learners.

The support of tutor is also available through Internet to facilitate learners and web casting to broadcast the contents of the classes studied web boards for students to exchange ideas and opinions, web forums for Lecturers to answer questions by those who needed help e-Library for students to search for information, etc.

With a large number of developing multimedia being used in the present days, a lot of tools are use to aid e- Learning such as TV and radio programmes and web casting to broadcast the contents of the classes studied. The Internet is also a large pool of information which offers knowledge to students in their own free time so that they can work while studying, students can work at their own pace while having personal mentors to help them through the process.

Asynchronous learning:

An asynchronous learning network is a form of computer-based instruction, taking place without the confinement of location and time. The central focus of an asynchronous learning network, according to Hiltz and Willman (1997), is a teaching and learning environment, designed for any time/place use through computer networks.

E – Learning

The word e -learning stands for learning by electronic means and the Internet is the technology of choice because it is readily available. It will make all persons equal in terms of the possibility of acquiring equal amount of knowledge from the webs. The main advantage of e- Learning that it is for anyone, anywhere and anytime.

Further, E-learning is useful particularly for Open and Distance universities in which a large number of study centers are distributed in remote areas and there is a wide network of study centers. E-learning is collaborative as students learn from one another. It is primarily based on internet and interanet technology. In E-learning the content material is delivered through electronic media including internet, intranet extranet, satellite broadcast, interactive TV and CD- ROM.

E-learning is the ideal mode of imparting education in open learning.Students learns at their own pace; decide on their own method of learning, all with a choice of payment options. Just register as a new student and select a course from of on-line prospectus. Work on-line or print out course materials and get started right away on a new educational experience. E-learning has some added advantage as it is cost effective and it cuts the duplication of efforts. The only step taken towards the use of informational communication technology in Distance Education is the posting on the web or publishing on CD-ROM of the course material conceived for hard copy delivery. Although such a step reduces the printing costs of course material for the faculties, the costs on the students‟ part is going to increase. They must have access to computers with CD-ROMs or Internet connection and they have to print the course materials themselves.

Online learning

Online learning provides a convenient and flexible learning environment to distance learners without restriction of learning space , distance and time(Albrechtsen et al,2001). Online resources vary widely, from minor enhancements of the printed material to fully-online learning activities. The level of online enhancement is usually determined by the nature of the target group, the unit learning objectives and the teaching interests of staff. Online resources frequently take the form of discussion forums, self tests and quizzes. Fully online units where all teaching and learning resources and activities occur online are becoming more popular. The learner also has to have certain learning skills like: to contact the lecturer; to read the material; to specify; to react; to analyse; to summaries to acquire the course, programme.

M Learning

Instead of the computer, mobile phone may be used for learning and, hence the term m Learning is for mobile learning. So while traveling or waiting for something, you can use a mobile phone to connect to the Internet and continue learning.(Srisakdi Charmonman and Natanicha Chorpothong, 2005). IGNOU started planning for programme delivery to its learners using mobile phone technology (Dikshit, H.P., 2006)

Satellite

With the progress made in the area of communication satellites both at the national and international levels, it has been possible to operationalise the concept of distance education. It is more effective among dispersed population and vast physical dimensions. It can be used in two ways: telecast or pre-recorded educational programmes and the live telecast of programmes with two-way interaction i.e., through teleconferencing and the telephone mediated instruction.

The launch of the EDUSAT (a dedicated satellite for education) has ushered in the era where

both internet and intranet can be used for transmission, interaction, dialogue, digital repositories, digital multimedia content, and for virtual education and research. The Electronic Media Production Centre (EMPC) of the IGNOU has already established 134 SITs (Satellite Interactive Terminals) across the country with the two way interactive facility. The teleconferencing sessions on Gyan Darshan – 2 are simulated on the EDUSAT network. The greatest benefit of Edusat based network is its fast and wide reach by which the best teachers and teaching methods are accessible to a large variety of target groups.(Gyan Vani,2006). New technologies have enormous possibilities and potential to serve the distance learners.

The time has come for collaborative effort to establish multilateral cooperation to further strengthen and consolidate the distance education system.

Virtual learning

Virtual Learning is relatively the unique distance learning operation in the world today. Utilizing a wide variety of technologies, students to interact internationally, even globally, with faculty members and other students.

The Internet, for example, can be used to broadcast live events, perform simulations, hold group discussions and interactive chats, create virtual communities, provide Web sites, and exchange e-mail.

Video-via satellite or fiber optics broadcasts important synchronic qualities. It puts the teacher in front of students. Therefore, it is invaluable to collaborative learning, as it gives great flexibility to both students and professors.

Having access to a variety of technology allows us to combine video and Internet, so each program has the right balance.

Large scale technology adoption, has also in the first instance favoured the well-heeled rather than the common learner. E-learning, internet, mobile learning and soon have in other countries extended the reach of education.

But in India Open Universities is more access to new technologies to adopt and apply in the field of education. The sharing of the resources is the need of the hour with dual mode distance education institutions in order to strengthen and to provide quality education to the learners.

Technology-based, ICT would be accessible to practically every type of learner. Technology in fact might hold the key to making this possible. The expectations are that over time, education technology will lower the costs still further by sharing of resources.

6.0 Results

The Universal design for learning is the need of the hour in order to strengthen the Open and Distance Education. The use of Information Communication Technologies in Distance Education is different in dual mode distance education institutions and Open Universities. Open Universities are advanced in imparting learning through modern teaching methods when compared to dual mode distance education institutions in access, adaptability and financial aspects.

However, the learners will be attracted by the appealing Innovative Teaching-Learning methods to meet the global competition. ODL has become more home-based or workplace based than educational institutional based. New technologies have enormous possibilities and potential to make the distance learning more interactive and interesting. Learner‟s choice is the mainstay of the distance education. In tune with the changing needs of the students, the ODE institutions mould their courses, content media and technology to suit to the needs of different learners in Open and Distance Education which becomes a way to pursue lifelong education.

The global knowledge economy is transforming the demands of the labor market throughout the world. It is also placing new demands on citizens, who need more skills and knowledge to be able to function in their day-to-day lives. Equipping people to deal with these demands requires a new model of education and training.

The researcher has a belief that adoption of proposed strategies to use „ODL technologies for lifelong learning‟ will be helpful to meet out the unmet lifelong education needs of Indian citizen in best possible way.

This research review shows that acquisition of critical learning skills is not an objective in rural Asia where occupational skills are valued. Only in the highly developed centres such as in Hong Kong, Korea, Singapore, and perhaps Shanghai, is there a keen objective to develop students with these critical thinking and analytic skills for personal growth. In Korea for example, computer-mediated communications are used for effective learning through collaborative tutorial interactions – though

they still find their Asian students want and need an initial face-to-face real meeting in order to establish a basis for a later on-line community of learners (Jung, 1999; 2002). Most research reports in Asia see the need for greater dialogue as the key to successful earning. Research finds students in Asia preferring to not become embroiled in the analytic argument through collaborative processes and theorising, but to reflect on their own context and then move directly using human interactions among the tutor and other students to experiential learning for personal relevance. This avoidance of hypothesising and questioning the text - seeing learning critical thinking skills as an unnecessary element – characterises education and training in Asia.

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