

REVIEW ARTICLE

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OPEN AND DISTANCE LEARNING (ODL) EDUCATION SYSTEM: PAST, PRESENT AND FUTURE – A SYSTEMATIC STUDY OF AN ALTERNATIVE EDUCATION SYSTEM

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Abstract: The concept of open learning and distance education system focuses on open access to education and training to make the learners free from the constraints of time and place, and offering flexible learning opportunities to individuals and groups of learners. Open and distance learning (ODL) is one of the most rapidly growing fields of education now a days and it has substantial impact on all education delivery systems [1,2,3]. The new ODL system is growing fast because of the development of Internet-based information technologies, and in particular the World Wide Web. The concept of ODL education came from an idea where the learners and the teachers can not be in a class room and they should be separated by some geographical distance or may be they can not come close to each other to make the entire education system flexible. The distance education is not a new concept. In the late 1800s, at the University of Chicago, the first launched major correspondence program in the US in which the teacher and learner were at different locations. It is addressed to a wide range of potential partners, governments, intergovernmental and non-governmental organizations, specialized institutions, associations, industrial corporations, telecommunication companies, and others interested in this field, to seek their co-operation in meeting today's urgent education and training needs, through open and distance learning. After the development of Radio during the First World War and television in the 1950s the mode of instruction outside of the traditional classroom had suddenly found new delivery systems. In the present days we have audio and computer teleconferencing which have influenced the delivery of instruction in public schools, higher education, the military, business, and industry. The objective of the present paper is to review open and distance learning in the context of present challenges and opportunities, examine relevant concepts and contributions, outline current global and regional trends, suggest policy and strategy considerations.

INTRODUCTION

The term open and distance learning reflects both the fact that all or most of the teaching is conducted by someone who is away from the learner, and that the mission aims to include greater dimensions of openness and flexibility, whether in terms of access, curriculum or other elements of structure. Open and distance learning systems can usually be described as made up of a range of components such as: the mission or goal of a particular system, programs and curricula, teaching/learning strategies and techniques, learning material and resources, communication and interaction, support and delivery systems, students, tutors, staff and other experts, management, housing and equipment, and evaluation. The ODL system is used for school-age children and youth those who are unable to attend ordinary schools, or to support teaching in schools, both at primary and secondary level. However, most courses and programs are aimed at the adult population.

In developing countries particularly ODL education for primary and secondary schools is an important method of expanding educational opportunities to the semi-adult and adult population. Teacher training program is an important area where ODL learning has made a major contribution. In developing countries it is found that teacher training at a distance may reach large groups of students and have profound impact on the development of national education

systems. This includes initial training for formal qualifications, in-service supplementary training for formal upgrading, and continuing in-service training in particular subjects and topics. The use of ODL system for teacher education is therefore a crucial strategy when expansion or quality improvement is needed in the public education system. Both private and public providers have made important contributions to the development of industry and trade through programs for technical and vocational education. The basic purpose is to include the ability to respond flexibly to the need for working adults to obtain training, and to provide opportunities for those who are most deprived by existing provision.

The capacity of ODL is to support large-scale campaigns, e.g. in the field of HIV/AIDS education, is significant in the context of continuing education and training. Non-formal education and community development represents other sectors where ODL is increasingly used. Programs at a distance often reach substantial numbers of women, in societies where women lack equal opportunities for participation in conventional forms of education and training. ODL system allows lending themselves to the teaching of many complex issues of the modern world, in which input from a variety of disciplines is necessary. Distance education now functions in two ways. On one hand, numerous single mode open universities have emerged to absorb large numbers of new learners, while, on

the other hand, increasing numbers of traditional universities have begun to offer their programs also through distance education mode.

The tremendous growth in ICT has reinforced this trend. The ODL has the potential to generate new patterns of teaching and learning. There is evidence that ODL can lead to innovation in mainstream education, and may even have effects beyond the realm of education itself. Therefore the ODL plays an especially decisive role in the creation of the global knowledge-based society [2,3,4]. The current trends in ODL shows that open and distance learning will be an important element in future education and training systems. It is approaching acceptance within mainstream education and training in such a way that it will make up part of the range of most educational institutions in the future. In our present study we will try to explore the various issues in ODL system and how this can improve the traditional education system[4,5].

THE ODL SYSTEM IN ASYNCHRONOUS MODE

Asynchronous mode issues have been thought to be quite complex because they usually are fundamental for the correct educational and functional procedure. They involve both programming and installation techniques that demand extreme customization during development according to the projects special requirements. The learner has to keep in mind that educational matters are extremely delicate and that makes database structure rather complicated at first place. The services that are offered contained quite a few troubling issues in the database management and data transfer level. All asynchronous discussions are stored in a special database that keeps log for all participants and their statements. The database structure required careful design and implementation to hold with integrity the raw information of the participants (trainers and trainees) on line behavior. The database had to keep track of users as objects and be able to categorize their statements both in users' personal data and in discussion data during the whole process of the discussion.

THE ODL SYSTEM IN SYNCHRONOUS MODE

In the synchronous mode in ODL system the issues are totally different from asynchronous study and this is to be dealt separately. The components of the system were coherently stuck together and troubling issues were focused in logging and scheduling features. Synchronous component data accounting is centralized mainly to record different states of file and discussion sessions and not the data exchanged. Things tend to be simpler but in no way less delicate than the previously described procedures and problems. Logging for file transfer and chat-like communication had to be provided. The logs had to be explicit especially whatever concerned the members involved in the communication. Special care had to be taken for the detailed view and archive recording of the system file exchange. They had to be written down explicitly also the chat requests just for the record. · Scheduling of the meeting had to be available. The meeting-time database had to update the announcements and the calendar of the instructor. Fundamental feature for the correct workflow of the meetings and conferences is an appropriate calendaring

system. Therefore, the data system logging has to keep track of system and user time in order to give information and to announce the meeting for the synchronous meeting so that all members would be in time updated.

THE USER AND LESSON DATABASE ISSUES

The user and lesson database issues had also an important role and needed special attention especially as far as the educational part is concerned. The database system had to take into consideration all the educational aspects that were imposed by the academic view of the project. The bureaucratic process had to pass into an electronic system of invitations, submission forms and responds that the database system had to keep track of. The elements of user registration requests had to be handled with an open-minded way because they involved comparisons and logging of two language words and phrases. Transformations had to be made in a formalized way so that everybody has an ASCII-based login name for the web access better compatibility. User database had to keep wait state status when registering a student for the cross certification with the secretariat of the department involved. Moreover, the database had to be ready for annual rebuilding and or re-utilization prepared for the next academic year. That means exhaustive packing and updating of all data of the past year from the main database.

At that time all outdated data had to be moved to the back up database keeping in mind all issues that may be needed in the following year for better indexing and quicker access and retrieval. In the new academic year, everything has to be ready to accept all the new data recording without, though, losing the capabilities to search and link to older elements especially records of grades, statistics and answers to sets of tests and exercises. It is important that the database system provided easy and consistent access to every annual database because it is consisted of both scientific and other educationally vital information for the better designing and organizing of the academic year to come.

INTERNET AND WEB-BASED EDUCATION

The emergence of the Internet and related networks such as the World Wide Web has had and will increasingly have radical effect on the transformation of education and training in all sectors. The impact is already significant in all developed countries, and the great majority of developing countries are despite difficulties and fears seeking to take part in the emerging global educational community. The Web offers a worldwide forum in which to teach courses that can be dynamically updated in ways never before possible. Each student has an enormous range of resources available, free from limitations of time and space. There remains considerable work to be done concerning searching and sifting techniques within these resources for learners and teachers alike. These resources are reconfiguring the ways in which students learn, and new approaches to networked learning are evolving. The trans-cultural nature of the Web also creates problems of legislative and public control, with fears that local culture can be threatened by the international culture of developed countries. While the use of the Internet and the World Wide Web in open and distance learning is predominantly represented within higher education, it is also beginning to be used in schools.

UNESCO'S INITIATIVES IN ODL SYSTEM

United Nations Educational, Scientific and Cultural Organization (UNESCO)'s initiatives in open and distance learning are based on its overall priority to ensure the right to education for all [6,7,8]. While the use of distance education was given early support by the Organization, new developments in information and communication technologies, in particular the Internet and the World Wide Web have radically increased the demand for lifelong education but also provided new means to meet the demand. Facing the educational challenges of the 21st century, UNESCO continues, through its support of open and distance learning, to contribute to the construction of knowledge societies in a lifelong learning context. Within its overall priority, UNESCO focuses on fostering basic education for all to meet the commitments of the Dakar World Education Forum, encouraging and supporting action in its Member States with special emphasis on co-operative efforts to develop open and distance learning systems and programmes to the benefit of those deprived of basic learning skills. Great attention is given to open and distance learning to meet the educational needs of the adult population, with a view to providing new and alternative learning opportunities for those who were initially deprived of them, or who, for one reason or another, did not make use of them. UNESCO continues to strengthen the role of ODL in the diversification of educational delivery systems, notably, for technical and vocational education, encouraging co-operation and partnership between enterprises, professional bodies and distance teaching institutions. Support is also given to ODL to meet the special needs of the disabled, migrants, cultural and linguistic minorities, refugees, populations in crisis situations, who cannot be efficiently reached by traditional delivery systems.

Great importance is attached to ODL in teacher education, notably, for in-service teacher training but also for the training of teacher educators. The potential contribution of ODL to the development of higher education is fully recognized and supported by UNESCO. UNESCO gives great importance to international, interregional and regional co-operation for the promotion of open and distance learning.

MAJOR CONTRIBUTIONS OF ODL

Open and distance learning is used for a wide range of purposes. Now we will summarize those areas:

General Education:

Distance education can be used at primary and secondary education levels to provide both in-school and out-of-school programmes. In-school distance education programmes are used to support teaching in schools when learning materials are lacking, or where enrichment is thought to be desirable. They may also be used where teachers do not have formal qualifications, or to support subjects where the number of pupils is too small to be able to organize conventional teaching. A variety of approaches are used, including Interactive Radio Instruction (IRI), schools radio, educational television through terrestrial and satellite networks, multimedia schemes delivered through satellite, and Web-based delivery of multimedia schemes. The

materials may be designed for young children or for adolescents and adults. Distance education is used in out-of-school programmes both at primary and secondary level to educate school-age children and youth who are unable to attend ordinary schools, including those who are disabled, suffering from long-term illness, or living in remote areas or living outside their own countries.

Teacher Education:

Teacher education is an important area where distance education has been used extensively to provide pre-service teacher preparation, upgrading of academic qualifications, and in-service continuing professional development in particular subjects, content areas and instructional methods. The distance learning initiatives in countries such as Burkina Faso, Chile, China, India, Mongolia, Nigeria, and South Africa to prepare new teachers or upgrade skills of the existing teaching force. The use of open and distance learning for teacher education is therefore a crucial strategy when expansion or quality improvement is needed in the public education system. Distance education may play an increasingly important role during this decade in helping address the growing shortage of teachers, educational administrators and other educational professionals experienced in both developing and developed countries. Internet serves as the principal or supplementary means of providing both pre-service and in-service teacher education.

There is a growing number of high quality Web-based professional development resources available for educators globally. The Web also provides opportunities for online mentoring and support of novice teachers during their first year of teaching and to develop online communities of practice. Virtual Web based environments for teachers now enable them to seek help from other teachers, locally, nationally, or globally in solving classroom problems, sharing lesson plans and materials, interacting with experts in particular fields, and in planning collaborative curriculum development projects. Distance education may also play a major role in upgrading the knowledge and skills of teacher educators both in higher education and educational agencies.

The advantage of distance education is that it makes teacher preparation and professional development programs accessible to indigenous peoples and others located in remote, rural areas who do not have convenient access to higher education institutions and where there is often a shortage of well-prepared teachers and other educational professionals.

Vocational and Continuing Education:

Technical and vocational education have in recent years played important roles, not only in contributing to the improvement of productivity of a national labour market, but also in assisting individuals to improve their employment prospects in rapidly changing socio-economic conditions. In this context the ODL system has the role in the field of technical and vocational education to respond effectively to the growing demand of working adults or any others who have difficulties in getting training in conventional education because of lack of flexibility in the timing and location of courses. Open and distance learning in the field of technical and vocational education makes up a mixed and complex picture. It may include experimental

work and hands-on training as an integral element. It has often been developed by private institutions and enterprises, and makes an important contribution to human development.

Non-formal Education:

The distance education has been used to considerable effect in the non-formal and community development sectors of education. The basic adult education grew in the 1960s and 1970s just as technology began to be used more widely in education. Mass communication methods, often linked with some kind of group meetings and face-to-face support, were seen as one way of delivering a wide range of educational and skill based program to support agriculture, health and nutrition, political education and development and employment-related projects, to large numbers of adults. This approach was used in India and Ghana. Radio campaigns were another early and influential model. The idea was to deliver short, highly intensive campaigns to support major development ends. Botswana, for example, used the approach in 1976 to raise awareness on a new policy for cattle on tribally owned land, and there was another project run by the cooperative movement in Zambia in 1982. There is much subjective evidence of the effectiveness of small-scale non-formal education projects using radio . for example, to support health care in Sudan and rural women in Mongolia. Latterly radio and television dramas have been used in countries such as Gambia and Nigeria as a means of educating people about the concept of ODL system. Indeed, radio in particular has a powerful role to play in non-formal education.

ODL system in India:

Open and distance learning in India started around 1960s. By the 1980s there were 34 Universities offering correspondence education through departments designed for that purpose. The first single mode Open University was established in Andhra Pradesh in 1982, followed by the Indira Gandhi National Open University (IGNOU), and subsequently in Bihar, Rajasthan, and Maharashtra, Madhya Pradesh, Gujarat, Karnataka, West Bengal, and Uttar Pradesh (established throughout the 1980s and 1990s). The establishment of these single mode distance education universities was stimulated by the government's intention to democratize education and make it lifelong.

The initiative did not discourage the expansion at the same time of correspondence programs in dual mode universities. The year 1995 witnessed the enrollment of 200,000 students in open and distance learning, accounting for 3% of total higher education enrollment. Most open and distance learning universities in India follow the model of the UK Open University. They co-ordinate communication and collaboration through the Distance Education Council (DEC), founded in 1992. DEC is responsible for the promotion, co-ordination, and the maintenance of quality and standards. A range of factors including emerging ICTs, liberalization, privatization and globalization have amplified the demand for open and distance learning. While the government is responsible for more than 90% of open and distance learning funding, plans are underway to involve the private sector more closely, especially through permitting the increase of fees.

Conclusion and Future Scope:

UNESCO's role in international co-operation for spreading ODL system which consists of both intellectual co-operation and technical assistance.[6,7]. Great importance is given to international interregional and regional co-operation for the promotion of open and distance learning, such as awareness, confidence and capacity building, mapping of relevant experience, success and failures, networking between key players in distance education and educational technology, piloting and adapting educational technologies in different settings, shared development of learning systems programs, and learning materials involving inter-country and industry-country exchanges and joint ventures, technology assessment, examining the actual costs and impact of alternative delivery systems, and support for the development of system wide policy and planning on new technology in education. Co-operation is pursued with intergovernmental organizations such as other UN system agencies, the Commonwealth of Learning, the World Bank, the Commission of the European Union, the Organization for Economic Cooperation and development, regional development banks, private and public sector partners, non-governmental organizations, notably with the International Council for Open and Distance Education (ICDE).[9,10,11,12].

Which are competent to act in this field. With the advancement of technologies, learning and collaborative work in the future can become radically different from what it is today. Although no one can expect that educational networks will totally replace the traditional lecture. The traditional lecture has some drawbacks: students have to attend at a fixed time, the needs of students with different backgrounds cannot be met and students have no control of their learning pace or environment. Many web-based training and learning platforms have been developed. However, none of these platforms offer an integrated and open platform for learning according to our requirements. Some of them do not support all the necessary ODL services (synchronous, asynchronous and collaborative learning). The ODL system is now a fast growing subject. The time is not far from now when the entire education and training system will be fully controlled by ODL system. In India especially IGNOU is doing key role in this area.

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Online vs. Traditional Education. The spread of computer technology has stimulated the emergence of innovative educational systems and active development of distance forms of education. Today, many people who want to pursue a higher education face to a hard choice: either to be trained in a traditional high school / university, or to receive education virtually, communicating with a bearer of knowledge and information using the own computer. The decision of a particular student may be affected by various factors, and the main purpose of this paper is to examine these factors in the frames of both online and traditional education. Distance learning can be used in higher education, as well as for advanced training and retraining of specialists. Taking into account the territorial characteristics and the growing needs of quality education in the regions, distance learning currently occupies a strong place in the market of educational services. Training courses are accompanied by game situations, are equipped with terminological vocabulary and open access to the main domestic and international databases. A distinctive feature of distance learning is to provide trainees with the opportunity to obtain the required knowledge themselves, using advanced information resources. Distance education, also called distance learning, is the education of students who may not always be physically present at a school. Traditionally, this usually involved correspondence courses wherein the student corresponded with the school via mail. Today, it involves online education. A distance learning program can be completely distance learning, or a combination of distance learning and traditional classroom instruction (called hybrid or blended). Massive open online courses (MOOCs), offering...