

Unit 24

Social and Philosophical Foundations of Open and Distance Learning (ODL)

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Learning Objectives

After going through this unit you will be able to:

- Define Open and Distance Learning (ODL);
- Describe the important theories of ODL;
- Trace the evolution of ODL;
- Identify the different forms of ODL; and
- Discuss the emerging models of ODL.

24.1 Introduction

Since you are pursuing your studies at an open university you must be familiar with the term Open and Distance Learning (ODL) and may have some knowledge about the ODL system. In this unit we will be defining the terms “Distance Education” and “Open Learning”. An attempt has been made to give you an overview of the major philosophies that underlie Distance Education (DE). We have also traced the historical evolution of DE through broadly three distinct phases namely, Correspondence Education, Open Education and Virtual Education. Lastly we have discussed the different forms of ODL existing today and also the emerging models in the light of the developments in communication technologies that have penetrated all over the world. After going through this unit you will get a deeper insight with regard to the ODL system.

24.2 Defining Open and Distance Learning

Open and Distance Learning (ODL) can be simply described as “learning/studying at a distance”. The teacher and learner are separated both in space and time. Bridging the distance and guiding the learning process is effected by means of specially prepared materials (self-study (learning) materials), which may be delivered through various media e.g., print, TV, radio, satellite, audio/video cassettes, CD-ROMs, Internet etc. Prof. Kulandaiswamy, former vice chancellor of Indira Gandhi National Open University maintained that Distance Education is the third stage in the evolution of education, the first two stages being the Gurukul system of the past and the Classroom system of the present.

A technological medium replaces the inter-personal communication of conventional education, as two-way communication is possible for both the student and the teacher. This form of education is known by a variety of names, viz., ‘Correspondence Education’, ‘Home Study’, ‘Independent Study’, ‘External Study’, ‘Off Campus study’, ‘Open Learning’, ‘Open Education’, etc.

In Australia, its official name is External System and Extra-mural System in New Zealand. This description carries the vibes of old London External system, which only provided examination but no teaching. The external exam system was introduced by London University in the second half of the 19th century to cater to the needs of higher education of people geographically distant from London. In such a system the learner was not provided any study materials and had to prepare for the exams on his/ her own.

Today two terms that are being used almost inter-changeably are 'Open Learning' and 'Distance Education' and they are often combined to be known as Open and Distance Learning (ODL). Let us understand the meaning of these terms and what they connote.

Reflection and Action 24.1

What do you understand by Open Distance Learning?

Distance Education

Distance education (DE) is an umbrella term, which describes all the teaching learning arrangements in which the learner and the teacher are normally separated by space and/ or by time. Such a form of education transcends the barriers of time, space, sex, creed community and religion, thus breaking the myth of elitism in conventional education.

The most complete definition of DE can be attributed to Keegan (1986; 1996) who characterizes DE as:

- **Separation of teacher and learner**

This is found in many definitions and is central to the whole concept of DE. But Keegan's definition allows for limited face to face contact between the teacher and the learner and among learners themselves and also through other technological media like audio / video conferencing etc.

- **Influence of an educational organization/Institution**

This characteristic has been emphasized by Holmberg (1981) in his definition of DE (which we will be discussing in the next section). Keegan also adopted it to include the influence of an educational organization / institution in the planning and preparation of learning materials that differentiates DE from private study.

- **Use of technical media**

Naturally the separation of the teacher and learner would require the process of communication to take place in some other way, i.e., by print, electronic, mechanical and other devices.

- **Provision of two- way communication**

Moore's (1973) and Holmberg's (1981) definitions of DE stress on this factor that Keegan incorporated in his definition (See 24.3.2 and 24.3.3 for details). DE must involve a significant amount of real non-contiguous two-way communication between teacher and learner for facilitating and supporting the educational process.

- **Separation of learner from peer group**

Obviously when the learner is studying at a distance at his or own place, there will be a separation of the learner from his or her peer group.

- **Industrialization of Education**

This concept stems from Peters (1967) definition of DE. Keegan accepted Peters' view that DE is the most industrialized form of education as compared to conventional oral education.

- **Individualization of Learning/Student Autonomy**

Wedemeyer (1981), like Keegan also emphasized DE to be a form of self-study, as it is based on personal work by an individual learner, more or less independent from the direct guidance of tutors. In other words, a quasi-permanent absence of the learning group throughout the length of the learning process, with the possibility of occasional meetings, either face to face or by electronic means.

Open Learning

Open learning covers a wide range of innovations and reforms in the educational sector. It is generally regarded as being a learner-centered system, which is far broader than distance education. Open learning systems aim to redress social or educational inequality and to offer opportunities not provided by conventional colleges or universities. Educational opportunities are planned deliberately so that access to education is available to larger sections of society. Hence there is flexibility with regard to entry, place, method, but also with regard to the choice and combination of courses, assessment and course completion etc. The larger the number of such restrictions left unobserved, the higher the degree of openness.

Thus DE stresses the means by which education is achieved, the latter the objectives and the character of the educational process. As Prof. Ram Reddy (1988) the founder of Indian Open Universities said, “the idea is to provide educational facilities to a larger number of people scattered all over, i.e., providing greater access to education”. Several countries of the world have adopted the open learning philosophy and have started open universities to provide innovative education and to strengthen distance education. The main features of open universities are:

- like conventional universities, they are autonomous bodies and are free to take their own decisions;
- they use multiple media for instructional purposes, and for supporting distance learners in their learning endeavours;
- they have a strong learner support system;
- high quality materials are prepared by a team of experts;
- entry qualifications are flexible and relaxed;
- the learner can study at his / her own pace, place and convenience;
- there is uniformity on the quality of education as students have access to the same high quality education from wherever they want to access it. (Reddy 1988).

Reflection and Action 24.2

Reflect on the main features of Distance Education. Compare the functions of conventional universities to that of Open Universities.

24.3 Philosophical Foundations

Several theorists have developed their own theory about ODL. Let us discuss some of the well known theories pertaining to DE.

Industrialized Form of Education

An influential theory is that of *Otto Peters* (1973) who described DE as rationalized form of industrial production: a division of labour with each individual in the course team having a different role in the production and dissemination of knowledge; mechanization, as the dissemination of knowledge was achieved through assembly line production; mass production, since there was theoretically no limit as to the number of copies of the same course that could be produced or students who could study the course once it was produced.

Independent Study

Yet another theorist who was influential in the 1980s was Charles Wedemeyer (1977) who regarded DE as an optimistic enterprise in the provision of lifelong learning in which learners are independent of teachers, which he defined as “independent study”.

Michael Moore (1973) also confirmed the notions of Wedemeyer (1977) and he further sharpened them by stressing on two critical characteristics of independent study, namely, dialogue and individual study. For Moore dialogue may be interpreted as academic interaction aimed at effecting teaching and learning. Individualization is a measure of the extent of the responsiveness of a programme to the objectives of an individual learner. According to Moore, the distance between a teacher and a learner should not be measured in spatial terms but in terms of the degrees of dialogues and individualization. The higher the degree of both these components the less they are distant pedagogically and conversely a low degree of both variables will make a course / programme greatly distant.

He further pointed out that a distance learner was an independent learner as he/she was relieved from the tyranny of attendance and could study at his/her own pace, place and time. This type of study could be described as self directed learning whereby the learner develops a sense of maturity. The focus of this type of education is more on learning than teaching. Hence, it is said to be a learner centered system.

Guided Didactic Conversation

Another significant theorist of DE was Holmberg (1981) who propounded the theory of teaching learning conversation in DE. The idea that he projected was that a DE course represents a communication process that is felt to have the character of a conversation, only then the students will be more motivated and successful than if it has an impersonal text book character. The conversational character is brought about both by real communication through tutor comments on students' assignments, or comments over the telephone/fax/e-mail/post etc. by the teacher and by adopting a conversational style in printed and recorded subject matter which attempts to involve the students emotionally and engage them in a development and exchange of views. Just as a lecturer in a class-room tries to provide instructions or deliver content in an understandable manner and so to say adopts a conversational approach with regard to presentation of content. It is exactly in the same manner Holmberg refers to adoption of conversational style in the development of self-learning materials for distance learners, what many refer to as building the teacher in to the text.

He regarded it as a form of guided didactic conversation and who considered seven postulates to DE namely: creation of personal relationship between teaching and learning parties; well developed self instructional materials, intellectual pleasure in the exercise, language and conventions should foster friendly conversation, message received by the learner should be conversational intone, conversational approach should always be used and lastly planning and guiding are necessary for organized study. Holmberg's approach is therefore more humanistic than Peter's analysis.

Cooperative Learning

Today with the onset of online learning (which is a subset for DE) we have cooperative learning propounded by Johnson and Johnson (1990) and Mc Connell (2000), wherein the learning process is not seen as an individual pursuit but as a part of a social process where learners help each other develop understanding of content in an enjoyable and stimulating process and at the same time construct knowledge which would not have been possible individually

but only in a group. This type of learning is particularly possible in computer supported learning environments or web based education/online learning/e-learning.

Thus DE is no longer a one-way transmission of knowledge as it was in correspondence education, that implied student passivity. Cooperative learning is the best example of how DE has evolved over the years and culminated into a dynamic interactive process with its focus more on the learner and his/her learning.

Reflection and Action 24.3

Describe various forms of transacting process of education. Which according to you is most suitable for India and why?

24.4 Historical Evolution

The history of the evolution and growth of ODE is closely linked to the growth and expansion of technology. It can be broadly divided into 3 distinct phases: Correspondence Education phase, Open Education phase and Virtual Education phase, that we have discussed below.

Bos 24.1: Quote

A forerunner: "Apostle Paul, who wrote the famous epistles in order to teach Christian communities in Asia Minor how to lead a life as Christians in an adverse environment. He used the technology of writing and transportation in order to do his missionary work without being compelled to travel. A technology based but a pre-industrial approach." - Otto Peters

Correspondence Education Phase (mid 19th century - present)

Correspondence study is the oldest form of ODL. Its origin can be traced to the 1840s when Sir Issac Pitman came up with the ignominious idea of delivering instruction through penny post. Thus ODL originated in the private sector as a means to provide teaching service to home-based students. Within a few decades (by the end of the 19th century) private correspondence colleges were established in many countries. For example, Skerrys College, Edinburgh (1878); Foulks Lynch Correspondence Tuition Service, London (1884); University Correspondence College Cambridge (1887) (taken over by the National Extension College in 1965); Diploma Correspondence College (1894) presently known as Wolsey Hall, are some of the well known institutions that came up in England (Dinsdale, 1953). The other famous correspondence colleges, were Hermods School, Sweden (1868) (now Hermods-NKI, in Skolan) (Gadden, 1973); Illionoise Wesleyan College (1874) (Correspondence University Ithaca, N.Y., (1883) and the University Extension Department of Chicago University (1890) in USA (Mathieson 1971).

The 20th century witnessed the continuing expansion of commercial correspondence education, which can be distinguished from the 19th century by the growth of interest in DE on the part of national authorities as a means to reach out to those students living in isolated places. Hence during the first half of the 20th century DE made significant development in countries like USA, Canada, Australia, New Zealand, Russia, France, etc. This form of provision suited countries with large national territories and sparse populations. It was therefore not surprising that initially European governments remained relatively uninterested with the exception of France, which took to it due to the disruption caused mainly by the outbreak of the Second World War (Rumble 1989).

DE took deep roots in several countries in the 1930s. The founding of the International Council of Correspondence Education in 1939 is indicative of the

fact that the idea caught the attention of educationist throughout the developed world. The first world conference of this council was held in Victoria, British Columbia, in August 1938 and 88 delegates mostly from Canada and the USA attended the conference. Australia, New Zealand and Scotland were also represented (Srivastava and Reddy 1998)

It was only a matter of time before the principle of egalitarianism was expanded to cover not just those who were unable to attend a normal college / college at the normal age but those who earlier in life lacked the opportunity to do so. Such concerns arose after the Second World War not only in developed countries but also in the developing countries as well, soon after they achieved their independence. In the developing countries of Africa and Asia (1960s - 70s) and South America (1970s - 80s) the problem was not only of numbers due to population growth but also that of increasing participation rates. Correspondence education emerged as a viable alternative to meet the enormous demand for access to formal education following de-colonization. This burgeoning demand created a consequential requirement for trained teachers, DE came to be seen as a way of doing both these things (Manjulika and Reddy 2002).

Reflection and Action 24.4

What was the most primitive form of ODL and where and when did it commence in India?

Open and Distance Education (1969 - present)

A century's worth of research into cognition gave birth to pedagogical method and the concept of providing effective support to distance learners emerged. The increased desire to use more media (specially radio and television) and also the desire to open up higher education to larger segments of the population by eliminating entrance requirements and offering higher education at affordable prices gave birth to the first open university namely the Open University (OU) of UK (1969). It introduced new elements in DE such as the use of course development teams; use of tutor counsellors; regional and study centers; and the inclusion of audio/video material into course materials. OUs employ media in many forms and to varying extents. It includes mail, fax, radio, TV, satellite broadcasts, video/audio tapes, teleconferencing, computers and recently the Internet. Since the 1980s more interactive technologies began to be employed.

The founding of the OU, UK was a major landmark in the history of ODL. It raised the profile of DE, bringing DE from the margins closer to the centerstage of higher education. As thenceforth DE institutions emulated the example of the Open University (OU), UK and provided distance learners with opportunities for interpersonal communication and feedback, which was almost absent in correspondence education. It was not only the course materials developed by OUs but also the learner support services and feedback provided by these universities that enabled ODL to come of age. In the two decades following the establishment of OU, UK, several such OUs were set up across the world. Today there are more than 50 Open Universities, of which the maximum are in Asia (Reddy and Manjulika 2000).

Thus the period from 1969 onwards has been the most progressive period for the development and credibility of ODL in the world. The list of Open Universities established in different parts of the world is given below in Table 1.

Table 1: Open Universities of the World

Asia

1. Allama Iqbal Open University (Pakistan)
2. Al-Qudds Open University (Palestine)
3. Anadolu University (Turkey)
4. Arab Open University (Kuwait)
5. Bangladesh Open University (Bangladesh)
6. Central Radio and TV University (China)
7. Dr. Babasaheb Ambedkar Open University(India)
8. Dr. Bhim Rao Ambedkar Open University (India)
9. Krishna Kant Handique Open University (India)
10. Hanoi Open University (Vietnam)
11. Indira Gandhi National Open University(India)
12. Karnataka State Open University (India)
13. Korea National Open University (Korea)
14. Kyong Open University (South Korea)
15. Madhya Pradesh Bhoj Open University(India)
16. Nalanda Open University(India)
17. Netaji Subhas Open University(India)
18. Open University Hong Kong (Hong Kong, China)
19. Open University Malaysia (Malaysia)
20. Pandit Sunderlal Sharma Open University (India)
21. Payame Noor University (Iran)
22. Shanghai TV University (China)
23. Sukhotai Thammathirat Open University (Thailand)
24. Tamil Nadu Open University, India
25. The National Open University (Taiwan, China)
26. The Open University of Israel (Israel)
27. The Open University of Sri Lanka (Sri Lanka)
28. The University of the Philippines Open University (Philippines)
29. Tianjin Radio and Television University (China)
30. Universitas Terbuka (Indonesia)
31. University of Air (Japan)
32. University of Distance Education (Myanmar)
33. UP Rajarshi Tandon Open University, India
34. Vardhman Mahavir Open University, India
35. Yashwantrao Chavan Maharashtra Open University, India
36. Yunnan Radio & TV University of China

Africa

1. Nigeria Open University
2. The Open University of Tanzania (Tanzania)
3. University of South Africa (South Africa)
4. Zimbabwe Open University (Zimbabwe)

Europe

1. Consorzio per l' Universita a Distanza (Italy)
2. Fern Universitat (Germany)
3. Jutland Open University (Denmark)
4. Open Universiteit, (The Netherlands)

5. Centre National d' Enseignement a Distance (France)
6. The Hellenic Open University (Greece)
7. The Open University (UK)
8. Universidad National de Educacion a Distancia (Spain)
9. Universidade Aberta, (Portugal)

North America

1. Athabasca University (Canada)
2. Open Learning Agency (OU and OC)
3. Open University of British Columbia (Canada)
4. Tele Universite (Canada)

South America

1. Universidad de la Sabana (Sabana OU, Columbia)
2. Universidad Estatal a Distancia (Costa Rica)
3. Universidad Nacional Abierta (Venezuela)

Source : <http://www.icdl.open.ac.uk>

Reflection and Action 24.5

What do you think have prompted the development of open and distance system of education in India?

Virtual Education (1990s - present)

With the widespread availability of personal computers, two new forms of technology became viable for DE purposes: multimedia (specially CD-ROM) and computer networks. The rapid developments in information technology, specially the Internet, promises greater learner centeredness, facilitates more constructivist methods and better quality interaction (synchronous as well as asynchronous); the advantage of time space independence of asynchronous communication; and unlimited access to information. This computer-mediated communication (CMC) is providing an antidote to the main weakness of the correspondence as well as Open University systems of education.

The increasing diversity in demand for education from different quarters had made virtual education a popular model for the 21st century. Concepts of life long learning, individualized / personalized learning and time-free, space-free "just in time" learning arrangements are emerging to provide opportunities to learn on the job, professional upgrading of employees, staff development and training, teaching, extending classrooms to remote and rural areas, adult education, curriculum enrichment, and a convenient choice for full time learners. New alliances have emerged between education and industry and among universities and other educational institutions. Many new providers of higher education have entered the market, such as private enterprises (e.g., Phoenix University and Jones International University, USA; NIIT, Aptech, Zee Education, India), corporate training networks, specialized service organizations and textbook publishers (e.g., IBM Global Campus and McGraw Hill Learning Infrastructure); business corporations (e.g., 9 Universities have joined Next Ed on the online company in Hong Kong that produces technology for DE to form the Global University Alliance) (Manjulika and Reddy 2006).

The US is undoubtedly the world leader in the use of ICT in education and in demonstrating virtual education. Some 170,000 American students took online courses in 1998 and the number would have tripled by the end of 2002. USA also boasts of several new alliances between education and industry and consortia of universities offering virtual education (e.g., NTU Consortium of 51 universities; AT&T Learning Network, WGU, etc.).

The ICT boom has also enveloped Europe and Australia. The European Union has been a major driver of virtual education. However, the UK has led in the

way in Europe. Like in North America and Europe, in Australia too, a number of universities have set up virtual campuses to attract students from across the globe. In Latin America, ITESM is a private institution located in Mexico with 29 Campuses across Latin America and North America linked via satellite and digital integrated network.

In Asia and Africa, as compared to North America and Europe, the proportion of population participating in the Internet revolution is small, but the rate of growth is rapid. A few open universities namely, OUHK, Hong Kong, KNOU, South Korea and IGNOU, India have taken the lead. In Africa the World Bank has taken the lead in setting up the African Virtual University in 1997, which provides high quality education to countries of Sub-Saharan Africa (Reddy and Manjulika 2002).

Reflection and Action 24.6

What can be attributed as the major reason for the growth of Virtual Education? What is the future of virtual education in the context of aims of open and distance education?

24.5 Different Forms of Distance Education

The oldest form of distance education is the “correspondence education model”, i.e., a student studies in isolation from the other students and from his/her teacher/instructor, primarily through printed materials sent by post. (e.g., Correspondence Course Institutes attached to conventional universities in India)

The next form of distance education is “multi-media model”, wherein besides print other technologies such as audio/video tapes, radio and television broadcasts, telephone, teleconferencing etc., including limited face to face sessions, began to be used for instruction as well as for supporting the distance learner (e.g., UKOU (UK), IGNOU (India), Fern Universitat (Germany), etc.).

The third form is the “tele learning model”, where in institutions began to use TV to reduce campus space pressures by delivery of courses to students at home. The basic tele-learning model involves three elements, in text, a study guide and a series of video lessons and occasional on campus meetings (e.g., Central Radio and TV University, China).

The fourth form is the “distributed learning model”, which is greatly stimulated by the arrival of interactive telecommunications. This model is based on real time delivery system. Secondly the technological infrastructure is pre-determined by the sponsoring institution. This institution retains control over the time and pace of study, wherein the instruction is highly spontaneous, interactive with emphasis on instructor centered, lecture-based approach that characterizes most classroom instruction (e.g., Video based extension of face to face teaching at National Technological University, USA and a technology based distance teaching done at Project, Canada).

The latest form of DE is the “flexible learning model”. The primary technological agents that have led to this model are computer based communications – from electronic mail to the worldwide web and CD-ROM, with others already being used in DE, offer students the opportunity to study anytime anywhere. It also provides them a much richer environment for interaction both synchronous as well as asynchronous, but also greater control over the subject matter and over the pathways through that subject matter, creating a new kind of learning community. These key characteristics – asynchronous interactivity, resource-based, learner-centered, spontaneous and at the same time autonomous independent learning is reshaping the curriculum as well. It is giving rise to a new concept namely that of customized or personalized learning, allowing the

learner to tailor the curriculum in accordance with his or her own needs that the institution readily provides. The defining characteristics are no longer geographic distance, and learner autonomy, but learner control, an active learning environment that emphasizes learner interaction with resources, with other learners and with the instructor. (e.g., Virtual/Online Universities of the World). A list of some of the prominent Virtual Universities of the world is given below in Table 2.

Table 2: Major Virtual Universities of the World

1.	African Virtual University, www.avu.org
2.	Bool Virtual University, www.bool.tit.ac.kr
3.	British Aerospace Virtual University (UK), www.bac.co.uk
4.	California Virtual University www.california.edu
5.	Canada Virtual University
6.	Contact North, www.cnorth.edu.on.ca
7.	CU Online (Colorado University), www.cconline.org www.cuonline.edu
8.	Cyber ED (University of Massachusetts Dartmouth), www.umassd.edu/cybered/distancelearninghome.html
9.	Digital Think, www.digitalthink.com
10.	Edu.Com, www.educum.edu
11.	Knowledge Online (Mind Extension University), www.mcu.edu/meu/
12.	Korea Virtual University Consortium, www.knou.ac.ka
13.	National Technological University, www.ntu.edu
14.	Net Varsity, www.niitnetvarsity.com
15.	Online University, www.uol.com
16.	The Global Learning Network of NKI (Norway), www.nettakolen.com
17.	Virtual Online University (Athena University) www.athena.edu
18.	Virtual University Enterprises (Netherlands), www.vuc.com
19.	Virtual University of Hagan (Germany), www.femuni.hagen.de
20.	Western Governors University, www.wgu.edu

24.6 Emerging Models of ODL

What is emerging today is a very complex educational mosaic. Institutions offering distance education courses can be arrayed on a continuum from physical to virtual. The growth and development of virtual education is fostering the emergence of new organizational forms. Some of which are described below :

Model 1: Networked Model - Institutions that use digital networks synchronously / asynchronously for the delivery and tuition of courses. Learner support is also provided online. They draw upon the best resources wherever they are located. Examples: African Virtual University (Africa), Australian Universities overseas campuses, and all Virtual Universities of the world.

Model 2: Advanced Open Distance Education Model - Institutions that adopt Internet based instruction and support to strengthen the existing courses already being taught at a distance. Examples, UKOU, KNOU, IGNOU etc. Some of dual mode universities of Australia would come under this category that have adopted third generation distance education technologies for offering both instruction and support to their distance learners.

Model 3: Consortium Certification Model - Pooling together of distance education courses offered by different institutions. Such a consortium does not provide instruction but are authorized to award credentials and to provide a variety of services such as registration, assessment, learning records etc. Examples are Regents College (US) Western Governors University (USA) Open Learning Agency (Canada), etc.

Model 4: Consortium Service Provider Model - This is yet another consortium that offer a pool of courses offered by different institutions but do not have the right to confer certification / awards. Example California Virtual University (USA), etc. (Manjulika and Reddy 2006).

Reflection and Action 24.8

Keeping existing models and emerging models of ODL in view, what should be the focus of Open Universities?

24.7 Conclusion

From a near total reliance on print based courses, over the years, technology used in distance education expanded to include a plethora of technologies, shifting the emphasis from single technology delivery systems to integrated approaches. Also with respect to the teaching-learning methodology there has been a paradigm shift. Correspondence education totally lacked live communication or for that matter any type of communication besides the course material. Later radio and TV broadcasts offered lecture aspect of the classroom but not the interaction opportunities. The adoption of interactive technologies like audio conferencing, teleconferencing offered limited learner participation mainly through telephone communication, though two-way video conferencing simulates a class-room situation and real time synchronous interaction. The latest computer mediated communication provides “real time” multimedia interactive communication through the “virtual” equivalent of the regular classroom experience.

24.8 Further Reading

Reddy, G. Ram 1988. “Distance Education, What, Why and How?” In B. N. Koul., B. Singh and M. M. Ansari (eds.) 1992. *Studies in Distance Education*. Association of Indian Universities and IGNOU: New Delhi

Reddy, Venugopal and Manjulika S. (eds.) 2000. *The World of Open and Distance Learning*. Viva Books Pvt. Ltd.: New Delhi

Srivastava, Manjulika and Reddy, V. Venugopal 1998. “Distance Education: A Global Perspective”. In Tilak R. Kem and Rubi Esirgen (eds.) *Reengineering of Distance Education*. Aravali Books International: New Delhi